Final Technical Report 2005-DA-BX-K102

DNA-based identification of forensically important Diptera, 2005-DA-BX-K102, Ronald W. DeBry

Abstract

Flies (Diptera) from three families (Calliphoridae, Sarcophagidae, Muscidae) are normally the first insect visitors to an exposed body. Many species of dipterans either lay eggs or deposit live larvae into a body within hours of death. By determining both the species identity and the age of larvae present at a human death scene at the time of discovery, it is possible to estimate the post-mortem interval. With regard to species identity, common practice requires collection of live larvae that are maintained until they achieve adulthood, at which time they can be identified to species using morphological characteristics.

Purpose: The purpose of this project is to develop a reference database of DNA sequences that is suitable for species-level identification of forensically relevant Diptera from the 48 contiguous United States. We focus here on flies in the families Calliphoridae and Sarcophagidae. This reference database will be suitable for querying DNA sequences obtained from larvae collected at a death scene.

Goals and Objectives: Goals of this project were to: 1) Collect reference adult dipteran specimens from across the 48 contiguous states. Specific attention was to be given to collecting specimens from widely spread geographic localities, with an emphasis on the margins of the relevant area. 2) Identify a genetic locus that is suitable for discrimination of relevant species in a phylogenetic analysis. 3) Develop a reference DNA database. The database will have associated with it all original physical specimens preserved as vouchers, with sufficient morphological features retained so as to allow future re-examination of the specimens.

Research subjects: The research subjects for this project are flies (Diptera) of the families Calliphoridae, Sarcophagidae, and Muscidae.

Research Design: The project is divided into two phases. In Phase I, we examine a range of possible genetic loci from a limited number of species and individuals, in order to assess the relative performance of the different loci (and regions therein) at discriminating among species. In Phase II, data are collected from a large number of species and individuals for the locus determined in Phase I to be best for discrimination among forensically important species.

Methods: Adult flies were collected both using traps baited with meat and by sweep netting. Specimens were identified using morphological characteristics. Those flies from the forensically relevant families were identified to the species level. A small portion of each specimen (usually 1-3 legs) was removed and used for DNA extraction. Loci of interest were amplified by the polymerase chain reaction, and the DNA sequence was determined for the resulting product. The utility of the final reference database was assessed by phylogenetic analysis with bootstrap resampling using 1000 pseudoreplicates.

Results: Over 2,500 flies were collected and identified from 84 different counties in 20 different states. In Phase I, it was determined that any region of the mitochondrial genome was likely to be sufficient for discrimination among most forensically relevant species, but that a region within the mitochondrially encoded gene Cytochrome oxidase I was best for discrimination between a particularly closely related pair of species. In Phase II, DNA

sequence for the chosen locus was obtained for a total of 504 individual flies representing 106 distinct species.

Conclusions: The reference DNA database is suitable (based on bootstrap support values >95%) for correct species identification of 16 of the 18 species that are most important for forensic investigations. One pair (*Lucilia coeruleiviridis* and *Lucilia mexicana*) are indistinguishable, apparently for any mitochondrial locus. A further 16 of 20 species represented in our database that are deemed to be of lesser forensic utility can be unambiguously identified using phylogenetic analysis of the reference database, with two species pairs (both in the genus *Ravinia*) being indistinguishable.

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Executive Summary

Synopsis of the problem. A fundamental task in death investigation is determination of the post-mortem interval (PMI). One tool that can sometimes be used for PMI estimation is the developmental stage of carrion-feeding insects (forensic entomology). During the relatively early stages of decomposition, the primary entomological evidence is obtained by determining the developmental stage and species identification of larval flies (Diptera), primarily of the families Calliphoridae, Sarcophagidae, and Muscidae. Species identification is crucial, because different species develop at different rates under the same environmental conditions. Species identification by gross morphology requires adult flies in a large proportion of cases, because larvae of many species at many age ranges often do not carry sufficient distinguishing characteristics.

Existing practice requires collection of live larvae, with (generally) transfer of those larvae to an established forensic entomologist, who will rear the larvae to adulthood (ca. 1-2 weeks in most cases) and then make the species determination. Possibly in large part because of this step, entomological evidence is generally under-utilized in death investigation in the United States. For a number of years, an important goal in forensic entomology has been to

develop a method capable of providing accurate species identification directly from the dipteran larvae.

Purpose. The goal of this project is to provide the tools needed for quick, reliable species identification of forensically important flies directly from larvae. To accomplish this goal, we have developed a database of DNA sequences from a known-identity reference collection. The original reference collection consists of adult flies that have been identified to species by an expert in the taxonomy of the group, and is maintained as vouchers for future morphological study, should the need arise. The functional part of the identification database is the set of DNA sequences generated from those vouchers. It is presented as an appendix to this report. We have further developed PCR primers that are useful for amplification of a DNA segment that is appropriate for discrimination among the large majority of the species of Diptera that are likely to be encountered in an early-stage forensic setting in the contiguous United States.

Research design.
Development of a list of the primary forensically important species of Diptera: We examined a large variety of relevant literature for lists of dipteran species that had been identified either as being encountered in a forensic investigation or as having a life cycle that is associated with large animal carrion, with the focus being on flies that are likely to be among the earliest colonizers of a corpse. That process led us to develop the list of forensically most important species, which are shown in red boldface in Table 1 of the main body of this report. In total, we identified 11 species of Calliphoridae (blow flies), 6 species of Sarcophagidae (flesh flies), and 2 species of Muscidae (house flies) as being the dipterans most likely to be relevant for a forensic death investigation in the contiguous United States.

Sampling strategy: Our sampling strategy had the following goals:

1. Maximize the probability that we will obtain samples for all of the species of primary forensic importance in the contiguous United States.
2. Ensure that we also sample species that, while not of primary importance, have been reported as being associated with large-animal carrion.
3. Maximize the geographic coverage for those species of primary forensic importance that have large geographic ranges.
4. Maximize the total species coverage of the reference database. A reference database for species identification should include as many species as possible that both are found in the relevant geographic area and are phylogenetically related to the species of interest.

Goals 1 & 2 were addressed in two ways. First, we undertook a number of collecting trips to a wide variety of regions of the country, and to a diversity of habitats. Second, we focused our collection procedure on trapping adult flies that were attracted to a meat bait (normally chicken meat obtained from a local grocery store). This bait was not only highly attractive to those species that are of greatest forensic interest, it would also attract adult flies that were simply searching for a protein meal (as compared to the flies of primary forensic interest, which would be attracted to the bait to deposit eggs or larvae). Such "incidental" visitors to the carrion bait would likely include many or most of the species represented by Goal 2. Goal 3 was addressed by our choice of regions in which to collect reference samples. We focused our effort on the margins of the continent. So, for example, we undertook collecting trips to New York, Maine, New Mexico, Florida, Wisconsin and Oregon. If a widespread species of primary forensic importance did have geographic variation in mtDNA

haplotype, those differences would be expected to be largest between widely separated populations. Goal 4 is important for the reduction of instances in which a query to the database is made that is, in fact, a species not represented by any reference specimens. Thus, in addition to the primary collection effort using bait and traps, adult sarcophagid and calliphorid flies were also collected at most locations using sweep nets.

Collection of fly reference specimens We undertook 6 major colleting trips. Flies were collected at a total of 84 different counties in 20 different states over a three year period. As most species can only be reliably identified using morphology as adults, we collected only adult flies. The geographic coverage of these trips was specifically designed to maximize the geographic diversity of our samples, particularly for those forensically important species that can be found throughout North America. In this way, we would maximize our chance to observe geographic variation in DNA type within such widespread species. The primary means of capture used for this project were traps set above a bait (usually consisting of raw chicken). In addition, adult flies were caught by sweep netting in the vicinity of the chicken bait.

Flies were identified by our consultant and collaborator, Dr. Gregory Dahlem of Northern Kentucky University. Some particularly problematic specimens (primarily in the genus *Lucilia*) were sent to Dr. Terry Whitworth for confirmation. More than 2,500 individual flies were collected and identified for this project (Table 3), and we also included a small number of additional flies that we had collected prior to the initiation of this project. Once identified, each fly either: had 3 legs removed (with the legs placed in EtOH for later DNA extraction), while the remainder of the specimen was pinned as a standard insect specimen or, in some cases, the entire fly was preserved in EtOH. DNA was extracted from individual legs, using either a commercial kit (DNEasy, QIAGEN) or by sonication for 30-300 s in 50ul water in a centrifuge tube placed into a sonicating water bath. All flies identified for use in this study have been retained as voucher specimens (either pinned or in EtOH). All vouchers for individuals for which we obtained DNA sequence data and, thus, are part of the reference database will be deposited in the Florida State Collection of Arthropods by July 2012. A complete list of specimens and their identifications, collecting localities, and associated information is provided as an Excel spreadsheet attached to this report.

Molecular methods. Loci of interest were amplified by the polymerase chain reaction (PCR), using primer sequences either obtained from the literature or newly designed for this project. PCR products were sent to the High-Throughput Genomics Lab at the University of Washington for DNA sequencing.

Phase I: Phase I of the project was intended to identify the specific locus on the mitochondrial genome (mtDNA) that would provide the best level of species discrimination. In Phase I, data collection consisted of a small collection of 28 individuals representing 8 commonly encountered, forensically relevant species. We amplified and determined the DNA sequence for these specimens for the entire coding region of the mtDNA genes Cytochrome Oxidase I (COI), Cytochrome Oxidase II (COII) and NADH dehydrogenase subunit 4 (ND4). The Phase I data were analyzed in sliding 600-bp windows to determine if there were substantial differences across regions in the ability of a 600-bp region to allow successful discrimination among species. For most species pairs in the Phase I analysis, any 600-bp segment resulted in complete segregation of the individuals belonging to each species. The exception to that pattern was the pair of species *Lucilia cuprina* and *L. sericata*. These two species were known from previously published work (Wells, Wall, Stevens 2007) to be extremely closely related and particularly difficult to distinguish using mtDNA data. For *L. cuprina* and *L. sericata*, we

found that only the 3' end of the COI gene provided nucleotide characters that could reliably distinguish between our samples of those two species. We therefore chose a pair of primers that produce an amplicon that includes the best 600-bp window for use in Phase II.

Phase II. Phase II consisted of amplification and sequencing of the target locus for a total of 504 individual flies representing 106 distinct species. Our original PCR primers covering the 600-bp target locus actually amplify a 1,100-bp amplicon, so the full 1,100-bp region was amplified and sequenced for Phase II. Raw sequence reads were collated and aligned with the aid of the computer program BioEdit (Hall 1999). Because the target locus encodes part of the Cytochrome oxidase protein complex, there was essentially zero variation in the length of the target region, so generation of the multiple alignment was trivial.

The aligned data were transferred to two different standard data formats: Nexus (used by the computer package Mesquite, among others) and MEGA (used only by the computer program MEGA 4). Mesquite was used primarily for data storage and retrieval. MEGA 4 was used for most of the phylogenetic analyses reported below.

Bootstrap resampling followed by phylogenetic analysis of each pseudoreplicate data matrix was the primary analysis performed on our data and the primary means used herein for assessing whether or not the DNA sequence database achieves the stated goal of being sufficient for the identification of the forensically important Calliphoridae and Sarcophagidae of the contiguous United States. Bootstrap resampling is a standard non-parametric statistical technique for assessment of levels of variability when the underlying sampling distribution is not known, and is a generally accepted approach for species identification in forensic entomology (Wells, Williams 2007; Wells, Stevens 2008; Meiklejohn, Wallman, Dowton 2011b). For the purpose of this report, we define successful species discrimination in the following way: The reference samples of the species in question must form a *monophyletic group* on the phylogenetic tree. That means that all sampled individuals of that species must be traceable back to a single node on the tree, and that there must be reference samples from no other species subtending that same node. In addition, the ancestral node so defined must be supported in the bootstrap resampling analyses in at least 95% of the pseudoreplicates generated and analyzed. Potential shortcomings and alternatives to this approach are discussed later in this report.

Findings

Main findings

Classification of species according to forensic importance: Based on literature reports, we designated 18 species as being of primary forensic importance (Table 1). We designated an additional 20 species as being of possible forensic importance.

Traceability of this database: A major feature of the database we have compiled is that all of the reference specimens were collected specifically for this project. No data were obtained from GenBank, or other publications. All species determinations were performed based on adult morphology by Dr. Greg Dahlem, a widely recognized expert in the groups of flies involved (see below), and all reference specimens are maintained in a single collection. This last point is extremely important should any of the species identifications come into question, or should future taxonomic changes affect the use of entomological evidence, and is the primary reason why we used only specimens that we have physically in our possession.

Collection success: We successfully collected samples for 18 of the 19 species that we designate as being of primary forensic importance. Of the 22 species of lesser forensic importance, we were able to collect or obtain specimens for all but 2 species. The forensically important species that are reported to occur in the 48 contiguous United States that we do not have represented in our reference database are: *Compsomyiops callipes*, which is found in the southwestern U.S., *Lucilia eximia*, which is commonly found in the forensic setting in Central and South America, but is only rarely found in the United States (Whitworth 2006); and *Sarcophaga ruficornis*, which is commonly found in Hawaii, but is rare in the western contiguous United States (Whitworth 2006). A summary of the samples included in the reference database for species of primary and secondary forensic importance can be found in Table 4, in the main body of this report. For most of these "most forensically important" species, we were able to collect specimens from widely distributed geographic locations. This latter point is critical. The presence of substantial variation in the DNA sequence within a species across its geographic range would be of considerable importance. On the positive side, it would, perhaps, be possible to infer the general geographic origin of an individual fly, based on its DNA sequence (although this presumably would be of forensic relevance only in the case in which a victim was transported across a substantial fraction of the continent). On the negative side, finding substantial geographic variation would necessitate development of a much larger, more comprehensive reference database, in order to ensure adequate geographic coverage. From that perspective, it is fortunate that we identified only a very small number of instances in which there is substantial geographic variation within a single species.

In addition to those species denoted as being of primary or secondary forensic importance, we also collected specimens from an additional 68 species. These additional species vary in their direct relevance to the forensic entomology database. Some have been rarely reported as having been found either in an actual forensic investigation or as fauna associated with large-animal carrion. Those reports may be the result of incidental appearance at a crime scene, or the result of misidentification, or the result of taxonomic confusion on the part of the authors of the report in question. Although they are unlikely to be of direct value in forensic investigations, it is critically important that these species be represented in a DNA database for forensic entomology. Others of the "additional" species probably are of no forensic importance. Presumably, their capture (by us) was incidental to the presence of the carrion bait. These samples, however, are also important to have represented in the database, because they could also be collected as incidental visitors at a death scene. We captured them either directly using traps baited with meat or by sweep net in the vicinity of such a trap (a similar procedure might be followed as part of a forensic investigation). Consequently, their inclusion in the reference database will greatly reduce the chance that an unknown sample being queried to the database will, in fact, be a species that is not represented.

Phase I

Results of Phase I: Phase I of the project had the goal of choosing an appropriate genetic locus on which to base our reference database. For our in-depth analysis of a larger region of sequence data, we examined a series of 600-bp sliding windows across the complete COI+COII region. We found, for most comparisons in the limited taxonomic sample, that any 600-bp region is adequate for discrimination. Only for the very closely related species pair *Lucilia cuprina – L. sericata* does the ability to discriminate vary across 600-bp windows (Fig. 1). For that pair, a region extending from position 1800 – 3000 is superior (with the numbering system being based on the GenBank sequence for the complete mtDNA genome of *Drosophila yakuba*). We therefore undertook to collect data from that region for the larger part of the project (Phase II).

Phase II

Overall scope and success of the DNA sequence reference database: For Phase II, we collected, identified, and obtained the DNA sequence for the 1800-3000 region of the COI gene for 504 individual flies, representing 106 different species (33 species from the family Calliphoridae; 71 species from the family Sarcophagidae; and 2 species from the family Muscidae). The full phylogenetic analysis will be presented as Fig. 10 in the main body of this report. For the 18 species of primary forensic importance, 16 of them appear to be reliably distinguishable using the database. Of the 20 species of secondary forensic importance, 16 appear to be reliably distinguishable using the database.

Geographic variation: If there is substantial geographic variation within any of the forensically important species, then any reference database would need to be much larger (sufficiently large so as to include a representative sample from a large number of populations across the full species range. We find only two species to have substantial levels of intra-specific variation with any hint of a geographic pattern. Larger samples from these two species (*Lucilia mexicana* and *Sarcophaga bullata*) would be warranted.

Species-specific findings: Nearly all of the forensically important species in our database exhibit reciprocal monophyly with respect to all other species in the database. Here, we discuss the exceptions to that generalization:

Lucilia cuprina – L. sericata: These two species were known in the existing literature to present a particularly difficult problem for DNA-based identification (Stevens, Wall, Wells 2002; Wells, Wall, Stevens 2007; DeBry et al. 2010). We collected and sequenced both species intensively, and find that our preferred locus is successful at discriminating between these two species (see Fig. 10 in the main body of this report). In our main phylogenetic analysis, each is supported as being monophyletic with bootstrap values > 95%. We have reported on this specific issue in a publication – DeBry et al. (2010).

Lucilia coeruleiviridis – L. mexicana: Of all the species of primary forensic importance, these are the two that cannot be distinguished using DNA sequence from the mtDNA locus that we chose for construction of our database. As seen in Fig. 10, a large preponderance of the mtDNA haplotypes for these two species are intermingled. In many regions of the country, only one of these two species is found (with *L. coeruleiviridis* having the much larger range). They do co-occur in the Southwest, so many of our sequenced specimens are from New Mexico. The impact of the inability to distinguish between these two species will depend primarily on two factors: 1) how common they are in the forensic setting (if they are only of minor importance, it is likely that other species (that can be identified using mtDNA) will be present as well, so any PMI estimates could be derived from the species with the more certain identification; 2) how different are the developmental profiles of the two species in the area in which they co-occur.

Ravinia: There are two pairs of species within this genus that present considerable problems for DNA-based identification using our database. The impact is likely to be minimal, however, as the species in this genus have larvae that primarily feed on animal dung and they are of limited forensic utility. In addition, according to our consultant (Dr. Greg Dahlem, a

recognized expert on the biology of *Ravinia*), even the morphologically defined limits of species are uncertain in these particular cases.

Sarcophaga bullata: one specimen, our only example of this species from California, sometimes groups with a different species, *S. polistensis*. This causes the bootstrap support for monophyly of *S. bullata* to fall to ~83%. This result is, however, very unlikely to be of any import in the forensic context. This is because *S. polistensis* is a highly specific parasitoid whose larvae only develop within the bodies of large wasps of the genus *Polistes*.

Therefore, of the 18 species of greatest forensic importance, only the pair *Lucilia coeruleiviridis – L. mexicana* cannot be identified to a reasonable degree of confidence using our database.

Additional findings

Sonication of legs is a fast and inexpensive method for extraction of genomic DNA for use in PCR.

Main Body of the Final Technical Report

I. Introduction

STATEMENT OF THE PROBLEM

A primary task in death-scene investigation is estimation of the post-mortem interval (PMI). Beyond approximately 24-48 hours post mortem (Fatteh 1973), a major forensic tool is the presence and developmental staging of larvae deposited on the corpse by various species of carrion-feeding flies (Hall 1990). By applying information regarding species-specific colonization times and maturation rates, it is possible to estimate of a window within which the corpse was initially exposed to colonization (Greenberg 2002).

Accurate species identification of dipteran specimens is the first step in using those specimens for PMI estimation (Greenberg 1985; Smith 1986). Without this information, there is the significant risk that any further insight that could be gained from the specimen will be flawed. For example, very closely related carrion fly species can have substantially different growth rates (Kamal 1958) or diapause response (Ash, Greenberg 1975). Misidentification of one species as another might then lead to substantially different estimates of time since colonization, which in turn is often used to provide a minimum estimate of PMI. Diagnostic anatomical differences to identify carrion fly larvae to the correct species are simply not known.

Traditional practice in forensic entomology has been to collect live larvae at the death scene, and transfer that evidence to a qualified forensic entomologist, who will rear the larvae until they achieve adulthood, and then identify the individuals to the species level using traditional morphological characteristics (Amendt et al. 2007). This practice is both time-consuming and time-critical (the live larvae will not wait for a crime lab to find the time to process the transfer of the evidence to an entomologist).

Beginning with the pioneering work of Sperling, Anderson, Hickey (1994), it has been recognized that DNA could be used to identify forensic specimens to species. Because a larva

has the same DNA that it will have as an eventual adult, DNA-based species identification can be applied directly to the larvae. Further, DNA sequencing does not require live larvae. So long as the larvae are correctly preserved at the time of collection, they can be stored indefinitely.

DNA-based species identification requires that there be a suitable reference database against which to compare the unknown specimen. In order for the species identification protocol to have the maximum utility, the reference database must meet the following criteria:

1. All species likely to be encountered in a forensic setting for the geographic region of interest should be represented.
2. Each forensically important species should be represented by a large number of reference specimens, from throughout the geographic range of the species, or throughout the geographic rage covered by the reference database.
3. The physical reference specimens should be maintained in a publicly available collection

Point 1 is important because most approaches to DNA-based species identification can sometimes produce ambiguous or unpredictable results if presented with a specimen from a species that is not included in the reference database. If a reference database is intended to be used over a specified geographic area, then reference samples should be included from all target (forensically important) species *and* from all closely related species that might be attracted to carrion, even if not to breed. Therefore, any species that might be encountered as an accidental visitor to carrion should be included in the reference collection. Most existing DNA databases for forensic entomology include only the forensically most-relevant species.

Point 2 is critical (Wells, Stevens 2008) because of the variability inherent in natural populations. A larger number of reference specimens will have a correspondingly greater probability of including low-frequency genotypes. Further, the variability within a species might represent geographic structure (genotypes that are rare in one part of a species' range might be common in another). Early DNA databases for forensic entomology typically included only a single exemplar for each forensically important species, but more recent studies have substantially increased the number of reference samples per target species.

Point 3 is also critical. The original specimens should be available for examination, should anyone wish to challenge the correct species identification of a specimen used to construct the reference database, or should future taxonomic work change the number of recognized species, or change the morphological definition of a species, or even simply change the name applied to a species. The existing record for forensic entomology DNA databases is mixed. Most papers describing databases make no mention of the current disposition of the reference specimens.

Our goal in the present project is to address all three of these important/critical points. We include in our reference database all but 2 species found in the contiguous United States that are generally considered to be of primary forensic importance (and neither of those species are widespread or common). We also include all species within the families Calliphoridae and Sarcophagidae that were attracted to our baited traps, whether or not they are recognized as species of forensic interest. For those species that are of primary forensic importance, we include a relatively large number of reference samples. In addition, we specifically target specimen collection for a wide diversity of geographic locations across the contiguous U.S., thus maximizing our chances to discover any geographic pattern to intra-species variation. Finally, we maximize the future utility of our reference specimens by using only 3 legs for DNA extraction (thus preserving the body parts that are most important for

morphological species identification), and by retaining all voucher specimens. We will deposit all reference specimens into a recognized, publicly available natural history museum (the Florida State Collection of Arthropods).

REVIEW OF RELEVANT LITERATURE

A primary task in death-scene investigation is estimation of the post-mortem interval (PMI). Beyond approximately 24-48 hours post mortem (Fatteh 1973), a major forensic tool is the presence and developmental staging of larvae deposited on the corpse by various species of carrion-feeding flies (Hall 1990). Existing information regarding species-specific colonization times and maturation rates allow estimation of a window within which the corpse was initially exposed to colonization (Greenberg 2002).

Three groups (taxonomic families) of carrion flies are of primary importance in PMI investigations, particularly in the early stages of decomposition: blow flies (Diptera: Calliphoridae), flesh flies (Diptera: Sarcophagidae) and house flies (Diptera: Muscidae) (Byrd, Castner 2001). Among the fly fauna of the contiguous U.S., 14 species in the family Calliphoridae, 25 in the family Sarcophagidae, and 3 in the family Muscidae have been reported in the literature as being of forensic importance (Smith 1986; Byrd, Castner 2001; Greenberg 2002).

Accurate identification of dipteran specimens is the first step in using those specimens in a forensic setting (Smith 1986; Greenberg 2002). If the identification is incorrect, there is the significant risk that any further insight that could be gained from the specimen will be flawed. For example, even very closely related carrion fly species can have substantially different growth rates (Kamal 1958) or diapause response (Ash, Greenberg 1975). Misidentification of one species as another might then lead to substantially different estimates of time since colonization, which is often the primary variable used in the calculation of a minimum estimate of time since death (PMI, or the postmortem interval). Species-diagnosis using anatomical differences for the larval and even adult forms of many carrion flies simply are not known.

Because of the critical nature of the questions being asked from these specimens, there have been increasing attempts to utilize molecular data to increase the accuracy of species determination in the field of forensic entomology. Such work began in the mid-1990s (Sperling, Anderson, Hickey 1994; Benecke 1998) and has grown substantially in recent years (Benecke 1998; Malgorn, Coquoz 1999; Stevens, Wall 2001; Wallman, Adams 2001; Wallman, Donnellan 2001; Wells et al. 2001; Wells, Pape, Sperling 2001; Stevens, Wall, Wells 2002; Harvey et al. 2003a; Harvey, Dadour, Gaudieri 2003; Harvey et al. 2003b; Chen, Hung, Shiao 2004; Zehner et al. 2004; Campobasso et al. 2005; Harvey 2005; Wallman, Leys, Hogendoorn 2005; Stevens et al. 2006; Nelson, Wallman, Dowton 2007; Wells, Wall, Stevens 2007; Wells, Williams 2007; Harvey et al. 2008; Nelson, Wallman, Dowton 2008; Wells, Stevens 2008; McDonagh et al. 2009; Park et al. 2009; Picard, Wells 2009; Mazzanti et al. 2010; Picard, Wells 2010; Meiklejohn, Wallman, Dowton 2011b; Singh, Kurahashi, Wells 2011).

While other techniques have been tried, a majority of these attempts to identify species utilize direct sequencing of mitochondrial DNA, usually cytochrome c oxidase subunit one (COI), to produce molecular-based phylogenies. COI is well studied throughout Arthropoda, and in particular Insecta (Hogg, Hebert 2004; Cywinska, Hunter, Hebert 2006; Meier et al. 2006; Smith et al. 2006; Costa et al. 2007; Nelson, Wallman, Dowton 2007; Smith et al. 2007; Burns et al. 2008; Foottit et al. 2008; Janzen et al. 2009; Zhou et al. 2009; Boehme et al. 2010; Ekrem, Stur, Hebert 2010; Park et al. 2010; Dewaard, Hebert, Humble 2011; Meiklejohn, Wallman, Dowton 2011b; Meiklejohn, Wallman, Dowton 2011a; Zaidi et al.

2011). The locus is used so much that the 5' end has been adopted by the DNA Barcoding Consortium as the standard for barcoding all of life (Hebert et al. 2003; Hebert, Ratnasingham, Dewaard 2003; Hebert, Gregory 2005; Meier et al. 2006). Unfortunately, the 5' end of COI does not seem serviceable to forensic entomology (Meier et al. 2006), as also indicated by our own Phase I results (below).

Previous studies in Diptera There is no established precedent as to which markers are most appropriate for discriminating among Diptera of forensic importance, even though a suitable genetic marker is essential for the success of any molecular identification or taxonomy study. Most studies of identification of this group have concentrated on the use of different fragments of the COI gene, including the full barcoding fragment (Wallman, Donnellan 2001; Wells, Pape, Sperling 2001; Wells, Sperling 2001; Stevens, Wall, Wells 2002; Harvey, Dadour, Gaudieri 2003; Harvey et al. 2003b; Stevens 2003; Chen, Hung, Shiao 2004; Nelson, Wallman, Dowton 2007; Caine et al. 2009), or, sometimes, even shorter fragments (<600bp) of the standard barcode region (Wells, Lunt, Villet 2004; Zehner et al. 2004) (Ames, Turner, Daniel 2006; Wells, Williams 2007) (Tourle, Downie, Villet 2009). Other genes that have been used for discriminating forensically important Diptera include the mitochondrially encoded genes COII (Wallman, Donnellan 2001; Wallman, Leys, Hogendoorn 2005) (Stevens, Wall, Wells 2002; Stevens 2003), NADH dehydrogenase 4 (ND4) (Wallman, Leys, Hogendoorn 2005), ND5 (Zehner et al. 2004), cytochrome oxidase b (cytb) (Vincent, Vian, Carlotti 2000) and the mitochondrial control region (Azeredo-Espin, Lessinger, Lessinger 2006), as well as the nuclear-encoded ribosomal genes 28S rRNA (Stevens 2001; Stevens, Wall, Wells 2002; Stevens 2003; Tourle, Downie, Villet 2009).

Methods for analysis of DNA sequence data for species identification. In the forensic context, the most commonly applied approach to DNA-based species identification is to perform a phylogenetic analysis using a known-identity reference collection (Wiens, Penkrot 2002; Morando, Avila, Sites 2003; Meier et al. 2006; Ross, Murugan, Li 2008; Ross et al. 2010; Berger, Krompass, Stamatakis 2011). An unknown sample is deemed to belong to whichever species it clusters with in that analysis. Because all reference individuals are included in the phylogenetic analysis, this approach naturally accommodates the variable nature of populations (provided, of course, that the reference collection includes multiple individuals per species). The phylogenetic method relies on the species in question exhibiting a pattern known as reciprocal monophyly (Wells, Wall, Stevens 2007; Wells, Williams 2007). If monophyly holds, then all the alleles found in individuals of one species will share an inferred common ancestor on the phylogenetic tree that is not shared by alleles possessed by a member of any different species(Felsenstein 2002).

Phylogenetic methods. A phylogenetic tree can be inferred either by a simple algorithm or by a method that is based on some optimality criterion, with those methods using optimality being widely regarded as superior (Felsenstein 2004). Those methods, in turn, can utilize either the original ("discrete") characters (e.g., the nucleotide states that comprise a set of DNA sequences) or a complete set of pair-wise distances. In this project, we use the distance approach (using the Minimum-Evolution method), because such methods are more efficient (i.e., able to support a strong inference despite having only a short segment of DNA sequence information; Kumar, Gadagkar 2000).

It is common practice in phylogenetic analysis to assess the reliability of a phylogenetic inference through a non-parametric resampling technique known as bootstrap resampling (Efron 1979), which was first applied to phylogenetics by (Felsenstein 1985). In

this method, the original data are repeatedly (1,000x, in our case) resampled with replacement to create a series of "pseudo-replicate" data sets. Each pseudo-replicate is then analyzed by the same method used in the original analysis. For any specific node on the final tree, the "Bootstrap percentage", or BP, represents the fraction of the pseudo-replicates in which that same relationship was inferred. Interpretation of specific BP values is not straightforward (Hillis, Bull 1993). There is general agreement, however, that values >95% can be safely taken as indicating very strong support (Felsenstein, Kishino 1993).

Reciprocal monophyly in previously published databases The success at finding reciprocal monophyly among forensically important Diptera in previously published DNA databases is mixed. Among the recent, large-scale studies, Meiklejohn, Wallman, Dowton (2011b) found > 95% of Australian species of Sarcophagidae exhibit reciprocal monophyly, with, consequently, only a few cases of non-monophyly. Similarly, Harvey et al. (2008) found primarily reciprocal monophyly, with a few cases of paraphyly and a single pair of species for which the mitochondrial haplotypes were completely intermingled. In contrast, Wells, Wall, Stevens (2007) recently highlighted particular difficulties in DNA-based species identification for a number of species in the blow fly genus *Lucilia*. Members of this genus are frequently known by the common name "greenbottle flies," and they include a number of species of substantial forensic importance. However, successful DNA-based identification may be problematic for the genus *Lucilia*. Wells et al. (2007) found reciprocal monophyly to be the exception, rather than the norm, within the subfamily that contains *Lucilia*, the Luciliinae. They analyzed Cytochrome oxidase I (COI) sequences from multiple individuals of five *Lucilia* species, and all five exhibited some form of non-monophyly. Wells et al. (2007) caution that the task of obtaining a reference data set that meets the criterion of having primarily or exclusively reciprocal monophyly may appear to be a simple task when the number of specimens examined per species is small, and that cases of non-monophyly might only become apparent when a large number of individuals are included for each species.

Geographic scope of the reference database. A reference database could either attempt to be global in scope, or be focused on a specific geographic region. Some recent papers describing DNA-based species identification of forensically important Diptera have taken each approach. Among those with a worldwide scope are Harvey et al. (2008), who generated some new data and combined that with existing data from GenBank to develop a worldwide reference database for the family Calliphoridae, and one paper that was a product of the present project (DeBry et al. 2010). The latter paper examined in detail the status of two very closely related and difficult to distinguish species, *Lucilia cuprina* and *L. sericata*. The samples generated from this project are all from the contiguous U.S., but additional data obtained from published sources were added to our own, in order to provide a global perspective on that specific issue. Other recent DNA-based studies adopt a more limited scope, often at the level of a country or, sometimes, a continent. These include studies focused on: Taiwan (Chen, Hung, Shiao 2004); Australia (Meiklejohn, Wallman, Dowton 2011b); (Tan et al. 2010), and the United States (Wells, Williams 2007)

Recent large-scale studies on DNA-based species identification in forensic entomology. A number of species-identification papers have been published on forensically important Diptera in the past several years. Of these, the largest in scope are discussed in the following paragraphs.

Harvey et al. (2008) used essentially the same segment of the COI gene as is used in the present study. They focused on the Calliphoridae, and obtained data from 42 individuals representing 22 species. They performed a phylogenetic analysis using Bayesian Inference.

Along with the 42 new sequences, they also included an additional 72 sequences that they obtained from GenBank. Altogether, they included 26 different species. Their study was worldwide in scope, with data coming from Australia, Africa, Europe, Asia, North and South America. They reported finding paraphyly for 4 of the 22 species in their study, while the remaining 18 species appear to be identifiable based on their COI sequence data. Only 7 of their 26 species occur in the contiguous U.S. and, thus, are included in the database presented here.

Meiklejohn, Wallman, Dowton (2011b) obtained approximately 850bp worth of sequence data from the 5' end of COI (the "barcode" fragment) for 16 species of Sarcophagidae from Australia. Because of their focus on the Australian fauna, only a single species, *Sarcophaga crassipalpis*, is in common between the Meiklejohn et al. data set and ours. They found that two of the 16 species formed widely disjunct, paraphyletic clusters, while the rest exhibited reciprocal monophyly.

One of the foundational papers in DNA-based species identification was the study on the blow fly subfamily Chrysomyinae by Wells, Sperling (2001), in which a region of COI was proposed for use in species identification. Recently, Wells, Williams (2007) published a follow-up study, in which they obtained a small amount of COI sequence data (304 bp) for nearly the complete North American chrysomyine fauna for large number of individuals (a total of 245 test sequences). Wells and Williams then tested each short sequence read, one at a time, in a phylogenetic analysis using the original Wells and Sperling (2001) data as the reference database. Even though the Wells and Sperling reference database consists of only a single reference specimen per species, Wells and Williams found that every short query sequence from all species but one paired with the correct reference specimen in a parsimony analysis with bootstrap support ≥ 95%, and sequences from the remaining species paired with its correct reference sequence with ≥ 92% bootstrap support. The Wells and Williams study focused on the U.S. and Canada, and included one species that is not included in the current project. It is now recognized, however, that a proper reference database should include considerably more reference specimens per target species – and that is the approach we have adopted in the present work.

A series of papers has explored the utility of DNA-based species identification in the blow fly subfamily Luciliinae (which is represented in North America only by members of the genus *Lucilia*). Early reports (Stevens 2001; Stevens, Wall, Wells 2002) indicated an unusual pattern with respect to the very widespread species *L. cuprina* in terms of its relationship to the closely related and similarly widespread species *L. sericata*. Data from nuclear DNA showed reciprocal monophyly between the two species, but data from the mitochondrial genome indicated that *L. cuprina* is paraphyletic, with some *L. cuprina* being more closely related to *L. sericata* than they are to other *L. cuprina*. Stevens et al. (2002) concluded that the paraphyly probably did not pose a problem for DNA-based identification of the two species, however, for two reasons. First, those *L. cuprina* that were more closely related to *L. sericata* were, originally, found only in Hawaii. Second, the *sericata*-like *L. cuprina* did form a distinct cluster, such that an unknown specimen could, potentially, be identified as either of two types of *L. cuprina*, either of which is distinct from *L. sericata*. In 2007, however, Wells et al. (2007) published a "cautionary tale for forensic species identification." In that report, they found many (indeed, most) species of *Lucilia* they examined to be paraphyletic, with a correspondingly significant potential for misidentification. Further, the *sericata*-like *L. cuprina* were discovered to not be limited to Hawaii, as they were also to be found in Taiwan. Thus, the situation in *Lucilia* may be in stark contrast to that reported in the Chrysomyinae validation paper. Our results (DeBry et al. 2010) speak directly to this issue, and will be discussed in detail later in this report.

Existing publicly available DNA sequence data: The above-mentioned studies and others have resulted in a fairly large collection of DNA sequence data being deposited in GenBank for the Sarcophagidae and, especially, for the Calliphoridae. These data certainly have the potential to be used as part of DNA-based identification system. However, we do not include those data in our reference collection or our database, for two related reasons. First, many of the sequences in GenBank are for flies that were collected outside of the United States. We do not yet have a good understanding of the levels of geographic variability in mtDNA sequence in these flies. Therefore, it would be very difficult to justify use of (for example) *Lucilia cuprina* data from Africa to help identify an unknown larval calliphorid from California. Second, we believe that a crucial and indispensible component of a DNA sequence database for use in species identification is the association between the DNA sequence and the original specimen (the "voucher specimen"). Morphological identification of the adult flies used in the reference collection should be performed by qualified experts, but few GenBank entries provide any information regarding the person who performed the species determination, and most entries provide no information regarding the current whereabouts or disposition of the specimen used. For this reason, we use as reference samples only those flies that we collected pursuant to this project. The particulars regarding morphological identification and disposition of the voucher specimens is discussed later in this report.

Choosing the best tool for the job of species identification.

The problem posed in species identification is fundamentally different from that of personal identification, and requires the correct molecular markers. The question we are addressing in this study ("to which species does this unknown larval specimen belong?") is fundamentally different from the forensic question most frequently addressed with molecular markers (e.g., "did the specimen collected at a crime scene come from suspect X?"). In the latter case, with all but the most hyper-variable marker systems, there must be an exact match between the genetic profile of the specimen and that of suspect X (else, suspect X would already be excluded). The question really being asked in that context is "what is the probability that another individual, randomly chosen from the relevant population, would also be an exact match to the genetic profile of the specimen?" There are two key differences between that forensic application of genetic data and the application of genetic data to the problem of species identification. First, in the case of species identification there is no exclusion step. A mismatch between the genetic profile of the unknown specimen and the database of known individuals of a species cannot eliminate that known species from consideration, because the unknown sample may simply represent a genetic variant of that species that has not yet been incorporated into the database. Second, if the question was constructed to parallel the question posed in associating a suspect with a DNA specimen, it would be phrased as "what is the probability that an individual, randomly chosen from *a different species*, would also match the target species. With human personal identification, random matches have an extremely low probability because allele frequencies in the reference population are known with great precision. To achieve an equivalent discriminatory power for genotypes across so many species of flies would require an enormous sampling effort. For these reasons, I argue below that a phylogenetic analysis provides the most appropriate framework for DNA-based species identification.

"DNA Barcoding" is similar in spirit and execution to species identification in forensic entomology. The use of short DNA sequencing reads for species identification has become generally accepted within the broader scientific community. The so-called "DNA Barcode"

initiative has, as a main focus, the use of short (ca. 600bp) pieces of DNA sequence that allow placement of an unknown sample into a species (reviewed above). This idea, however, has its origin within the science of forensic entomology. The pioneering work of Wells, Pape, Sperling (2001) was based on the notion that larvae contain the same complement of DNA that the fly would have if it attained adulthood. This led to the insight that the DNA sequence from an unknown larva recovered from a crime scene could be identified to species by using a reference database of DNA sequences from a series of identified adult specimens.

Following the demonstration by Hebert et al. (2003) that even relatively short stretches of mtDNA are sufficient to place a query sample in the correct species, DNA-based species identification has spread quickly. That study marked the beginning of the Barcoding of Life initiative, which proposes the use of a ~600bp fragment near the 5' end of the mitochondrial cytochrome c oxidase subunit one (COI) gene for identifying animal life (Hebert et al. 2003a, b). The barcoding approach has been used successfully to identify species across a range of taxa (Hebert et al. 2004a; Hebert et al. 2004b; Ward et al. 2005; Elsasser et al. 2009; Robinson et al. 2009; Rougerie et al. 2009).

Standardization on a single barcode region is most appropriate for broad survey or inventory work, especially if the investigator is generating only the query sequences while relying on the existing public database for the reference samples. Forensic entomology differs from survey work in that, in any given geographic region, there exists a restricted and relatively well-studied fauna that the investigators need to identify to species. Morphological species identification for adults is generally well characterized in the forensically important species (see, for example, the morphological key to species in the family Calliphoridae of Whitworth 2010), even though morphological identification of larvae is typically not possible. For forensic entomology, the specific need (to correctly identify any larvae that might be encountered during the course of a death investigation) must take precedence over the general desire to contribute sequence data for the standardized barcode region. For that reason, Phase I of this project involved a survey of levels of inter- and intra-species variation for several regions of the mitochondrial genome

It is possible that the standard barcode region might be sufficient for identification of forensically important Diptera in the contiguous U.S., but that must first be demonstrated. Successful species identification requires a locus at which inter-specific divergence substantially exceeds, and does not overlap with, intra-species variation. Roe, Sperling (2007) examined sliding 600bp windows across the entire COI plus COII region in several species of Lepidoptera and Diptera. They found that the region of maximal utility for identification varied, and would likely need to be established separately for any particular study. Consequently, in this study we considered several pairs of closely related species of forensic importance in the contiguous United States, including one pair, *Lucilia cuprina* and *L. sericata*, that is known to be very difficult to distinguish using mtDNA (Wells, Wall, Stevens 2007).

The mitochondrial genome is expected to provide the best data for robust species identification. It is certain that the best approach for using DNA sequence data for accurate species identification would be to obtain data from multiple markers spread across both the nuclear and mitochondrial genomes. Practical limitations instead dictate that crime lab practitioners are unlikely to amplify and sequence anything beyond a single PCR amplicon of modest size. Therefore, it becomes important to identify a marker that will be expected to give the most reliable results from a single amplicon of not much more that 1 kb in size.

Regardless of the source of genetic markers, the biggest barrier to correct species identification occurs when two (or more) species share alleles. Such a pattern could occur in at least two ways. First, closely related species might retain ancestral alleles. In other words, a

potential indicator locus was, of course, homogeneous in the past, when the two species were a single, ancestral species. In such a case, the genetic marker will not discriminate those two species. Species identification can only be accomplished once sufficient time has passed such that new alleles become fixed in one or both descendant species. The rate at which alleles are fixed by genetic drift is a function of the effective population size, N_e, with smaller N_e resulting in more rapid fixation and, therefore, greater power to discriminate closely related species. mtDNA is a haploid genetic system, so its N_e is approximately ¼ that of the diploid nuclear genome in the same species (Moore, 1995). It has long been recognized that, on this basis, mtDNA data are superior to nuclear markers for phylogenetic analysis at the species level (Moore, 1995). A second circumstance that can cause distinct species to share one or more alleles is hybridization. Unfortunately, mtDNA is more prone to crossing the species barrier in cases of limited hybridization than is the nuclear genome. ***unfortunate, but does not outweigh the benefits of using mtDNA for species identification.

1. **Statement of rationale for the research:**

The rationale for this research follows from a logical progression through the following steps:
1) Flies are usually the first visitors to arrive at exposed human remains;
2) Flies lay eggs (Calliphoridae, Muscidae) or deposit 1st-instar larvae (Sarcophagidae), the larvae feed on the remains;
3) A minimum Post-Mortem Interval (PMI) can be estimated from the developmental stage of a larva, with the oldest specimen found being most useful because its age will be closest to the true PMI;
4) Different species develop at different rates, even under identical environmental conditions;
5) Therefore, a necessary first step in using entomological evidence in a death investigation is to establish the species identity of the sampled larvae;
6) Immature (larval) specimens of many forensically important dipteran species cannot reliably be assigned to the correct species on the basis of morphology;
7) Therefore, there is a need for DNA-based identification of forensically important Diptera;
8) DNA-based species identification can only be as good as is the reference collection of morphologically identified samples upon which it is based;

9) Therefore, we undertook to collect, identify, and obtain DNA sequence data from as many different species of forensically important flies that occur in the contiguous United States as possible. This allowed us to construct what is, by far, the most comprehensive reference database for use in DNA-based species identification of forensically important Diptera.

II. Methods

Collection of specimens

The following major collecting trips were undertaken through the course of this project: 2006: Florida; Georgia/South Carolina/Tennessee; Oregon;

2007: Wisconsin/Minnesota; New York; Oregon/Washington/some in California; Texas/New Mexico.

Each collecting trip included at least one week of active collection of flies. Additional specimens were caught using similar methods on shorter, local trips. A small number of specimens were donated by outside individuals.

Flies were collected either by net or trapped with the aid of meat bait (aged chicken thigh and liver). Collected specimens were frozen and taken to the lab for morphological identification, and for molecular analysis. To maintain all morphological structures important for species identification in the voucher specimens, only legs were utilized as the source of specimen DNA. Three legs were removed from each specimen and transferred to a vial of 95% EtOH and stored at -80°C until DNA extractions. The remainder of the specimen was retained as a voucher. Voucher specimens were either pinned or placed in a separate vial of ethanol and stored at -80°C.

All specimens identified and potentially available for DNA sequence analysis in this project are given identification codes (Table 3) maintained as physical voucher specimens. These are available for further study or for confirmation of identifications, if necessary. In the case of specimens for which DNA sequence data are reported (Table 4), 1-3 legs have been removed for DNA analysis. In a very few cases, some abdominal material has been removed for DNA extraction. In those cases, the terminalia have been preserved, as nearly all species in this study have definitive morphological characters in the male genitalia. Pinned specimens are stored in standard museum cases at room temperature. When necessary, additional legs can be removed from a pinned specimen for subsequent DNA extraction. Specimens in alcohol are stored in 1.5 ml snap-cap tubes at -20° C. All alcohol-stored specimens include within the storage tube an embossed label giving the project identification code. Most of the alcohol-stored specimens for which DNA sequence data are reported have also had 1-3 legs removed. A small number may have had portions of the abdomen removed for DNA extraction. All post-preparation manipulations of specimens (removal of legs or abdomen for DNA analysis) was conducted using sterile, UV-irradiated forceps and scalpels.

Identification of specimens. All specimens used to develop the reference database were adults, and were identified to species using standard morphological characteristics. All identifications were performed by Dr. Greg Dahlem of Northern Kentucky University. For the Calliphoridae, the reference work used to determine specific characteristics was the key from Whitworth (2006).

Choice of study species – A relatively small number of dipteran species are both common (sometimes regionally) and well known for being of forensic importance (see Table 1). However, there is a much larger suite of species that *might* be encountered in the forensic setting, either because the adults utilize carrion as a protein source or simply as accidental captures. Trying to query a sequence database with a species that is not represented in the reference collection will produce unpredictable and, certainly, unreliable results. Thus, it is important that the reference database include not only the species of direct forensic importance, but also a good representation of related species. We surveyed the existing literature on which species of Diptera have the potential to be associated with large-animal carrion, as well as species that had been specifically mentioned in the forensic literature. This review was complicated by numerous changes over the years in taxonomic nomenclature, by some cases of likely misidentification, and by the anecdotal nature of some of the literature. We took a generally inclusive approach (as there is little harm in including an irrelevant species in the reference database), and developed the species list given in Table 1 as our target for the database. In total, we identified 40 species as being of at least potential forensic importance.

Rationale for using only specimens collected during his project and DNA sequences generated directly by this project – There exist a substantial number of DNA sequences in GenBank for some of the species in Table 1. However, we feel that it is vitally important for the reference database produced through this project to have the physical voucher specimen available for future study, should there ever arise the need to confirm the morphological species identification, or should future taxonomic changes require re-examination of the original voucher specimens. We therefore decided to include in the reference database only specimens that we collected ourselves (or, in a handful of cases, for which the specimen and associated information was provided by a collaborator, and for which we retain the physical specimen). As all of our collecting effort occurred within the 48 contiguous United States, our database is only directly relevant to that geographic area.

Molecular methods

DNA extractions were performed sometimes on abdomens, but primarily on individual legs. One of two methods was used. The first used the QIAGEN DNeasy kit, and followed the manufacturer's protocol. QIAGEN extraction was used for all abdomen DNA extractions. QIAGEN-extracted DNA was resuspended in ~50ul molecular grade (DNase- and RNase-free) water (hereafter referred to simply as "water") and stored at either 4° C or -20° C or -80° C. The second method used was sonication. Sonication is non-destructive, so the leg can be retained for further DNA extraction, which, if necessary, could be by another method. Individual legs were washed 3x in water, then placed in a 1.5 ml snap-cap tube in 30ul water. This tube was placed in a Branson model 1510 sonicating water bath, and exposed to ultra-sonic vibrations for 3 bouts of 30 seconds each. The leg was then removed and placed back in alcohol for storage. The water was subsequently used, as-is, as the genomic DNA template in subsequent PCR amplification reactions. Extracted DNA is stored in water at -80° C.

PCR and collection of DNA sequence data: Phase I - The goal of Phase I was to identify a region of the mtDNA protein-coding genome that provided the best discrimination among the forensically important species. We began with preliminary analyses that examined data from COI, COII and ND4. These data showed that all regions were roughly equally suitable for most species pairs, and that a region of COI provided adequate discrimination for an extremely difficult species pair (see Results), so other regions of the mitochondrial genome were not used in this project.

DNA extractions were performed using a single fly leg, cut in half, and then subjected to DNA extraction using QIAGEN's DNeasy kit. A fragment of approximately 2.3kb, comprising tRNA tyrosine, the cytochrome oxidase (CO) I gene, tRNA leucine, the COII gene and tRNA lysine, was amplified. This fragment spans nucleotides 1460 to 3775 in the *Drosophila yakuba* mitochondrial genome (Clary & Wolstenholme 1985), which was used for numbering nucleotide positions. Amplification was performed using four primer pairs: TY-J-1460/C1-N-2191, C1-J-2183/C2-N-3014, C1-J-2792/C2-N-3389 and TL-J-3043/3775 (Simon et al. 1994). In addition, a 690bp fragment of the ND4 gene, was amplified using primers N4-J-8502/H3 (Simon et al. 1994; Yu et al. 1999). Amplification reactions were performed in a total volume ranging between 10-50µl and contained 200µM of each dNTP, 1.5mM $MgCl_2$, 1µM of each primer, 0.25 units Platinum *Pfx* DNA polymerase (Invitrogen), 10x buffer (Idaho Technology) and $1/10^{th}$ volume of template DNA. Thermocycling profiles were as follows: 95°C for 3 min, followed by 35 cycles of 94°C for 15s, 53°C for 15s and 72°C for 30s. A final extension period of 72°C for 5min completed the reaction. Products were visualized with UV trans-illumination using 1.25% agarose gels. PCR products were purified

using the QIAquick PCR purification kit (QIAGEN). Both forward and reverse strands were sequenced directly with the amplification primers using BigDye chemistry (PE Applied Biosystems) on an automated ABI 3730 XL instrument. Cycle sequencing was performed by the High Throughput Genomics Unit at the Department of Genome Sciences, University of Washington. For each specimen, an initial 10ul PCR reaction was run with the appropriate primer pair. This reaction was subjected to agarose gel electrophoresis in the presence of ethidium bromide, and subsequently visualized by exposure to UV light. A size standard was included, and the correct size of the PCR product was confirmed in each case. If the initial small-scale PCR reaction was successful, then the reaction was scaled up to 50ul total. 1ul of this reaction was visualized as above

Sequences were edited manually by confirming the identity of all polymorphic bases using the original chromatograms in BioEdit version 7.0.9.0 (Hall 1999). There were no indel differences within the protein-coding regions (tRNA regions were discarded prior to phylogenetic analysis), so sequences were aligned by eye and using the ClustalW accessory application in BioEdit.

A number of different data sets, based on the COI (*Dy*# 1460-3010), COII (*Dy*# 3100-3760) and/or ND4 (*Dy*# 8502-9194) fragments, were analyzed. The total data set consisted of the three concatenated genes, and each gene was considered individually. In addition, the three most commonly analyzed regions of the COI gene (the barcoding fragment *Dy*# 1490-2198, as well as fragments *Dy*# 2183-3014 and *Dy*# 2792-3389), were considered. The COI-COII region was also examined as a single data set and within this region, sliding windows, consisting of 600bp, were analyzed. Window sizes of 600bp were chosen to allow comparison with the ~600bp barcoding fragment. Each sliding window was referred to by its nucleotide midpoint.

Nucleotide substitution patterns were analyzed using DNAsp 4.90.1 (Rozas et al. 2003), using default settings. To calculate variability within species, nucleotide diversity (p) (Nei, 1987), was estimated. Variability between sister-species pairs was quantified as the nucleotide divergence K (Tajima 1983). A Jukes-Cantor correction was used for both estimates. For sliding window analysis, a step size of 5bp was used to analyze nucleotide substitution patterns. Nucleotide divergence was also expressed relative to total COI-COII divergence to facilitate comparisons among all sister pairs. To determine the effect of sample sizes on nucleotide diversity, regression analysis was performed using SPSS for Windows version 11.

Phase II - We generated our database using the primer pair *Dy*# 1751 / *Dy*# 3014, which amplifies a segment comprising approximately 1,100 bp in the 5' half of COI. PCR protocols were, otherwise, identical to those used for Phase I. After trimming the ends of the sequencing reads, the region used to construct the final Phase II reference database is referred to as "1800-3000".

Alignment - No insertion/deletion polymorphisms were detected for the "Phase II region" during this project, so multiple sequence alignment did not present a technical challenge. Alignment was accomplished using the manual sequence editor program BioEdit (Hall 1999). Forward and reverse sequencing reactions for an individual PCR product were first aligned to each other and combined to form a consensus sequence for that amplicon. Any apparent discrepancies between the forward and reverse reads were reconciled by reference to the original chromatogram trace files. Any remaining disagreements between the forward and reverse reads were resolved by re-sequencing.

The final consensus sequence for each PCR product was then aligned to the compete mtDNA genome sequence for *Lucilia sericata* (GenBank NC_009733) which, in turn, we had

aligned to the complete mtDNA sequence of *Drosophila yakuba* (GenBank NC 001322). All sequence position numbering is referenced back to the *D. yakuba* sequence. The final, complete alignment is maintained in BioEdit, and exported in FASTA format for entry the phylogenetic analysis program MEGA 4.0.

Phylogenetic analyses – Due to the large size of the database, and the fact that the database contains many species pairs that are expected to have rather low levels of sequence divergence, we chose to perform our primary phylogenetic analyses using a method based on pair-wise genetic distances. We used the Tamura-Nei 1993 (TN93) (Tamura, Nei 1993) distance correction, to account for unobserved substitution events. TN93 is a 3-parameter model. One parameter is used to account for all transversion substitutions, and two transition parameters separately account for A-G and C-T transitions. Pair-wise distances were calculated in the computer program MEGA 4.0 (Tamura et al. 2007), using pair-wise deletion to handle missing data. The phylogenetic tree was inferred using the Minimum Evolution (ME) approach. This method begins by applying the Neighbor-Joining star-decomposition algorithm, followed by branch swapping. The tree found that imputes the least overall evolutionary changes across the entire tree is chosen as the point estimate of the phylogeny. The ME method was chosen because it is expected to be among the most efficient methods available for closely related sequences (Nei 1991). The robustness of each node on the phylogeny was assessed by bootstrap resampling (Efron 1979; Felsenstein 1985), using 1000 pseudo-replicates.

III. Results

1. **Statement of Results**

Phase I

We examined 600bp sliding windows across the full COI-COII region, plus the approximately 600bp ND4 gene, and assessed each window's suitability for robust species identification for these species. For each window, we performed a number of analyses to characterize levels of within-species variability and between-species divergence.

The main result of Phase I is that any region is suitable for distinguishing most of the species pairs in the Phase I data set, but only a ca. 1100 bp region near the 3' end of the COI gene is able to provide robust discrimination between *Lucilia cuprina* and *L. sericata* (Fig. 1). We denoted the region of high discrimination as 1800-3000, in accordance with the approximate locations of the forward and reverse PCR primers, numbered according to the *Drosophila yakuba* mitochondrial genome numbering system. The 1800-3000 fragment is able to distinguish between *L. cuprina* and *L. sericata* with bootstrap values > 95%. At this point, we could have continued to examine additional mitochondrial loci. However, it was apparent that other loci would, at best, be equivalent to the 1800-3000 fragment. We felt, at that point, that it would be a more efficient to proceed to Phase II. Consequently, the 1800-3000 region, was chosen for use in Phase II of this project.

Detailed Results from Phase I

Intraspecific diversity

Since levels of interspecific divergence may be dependent on sample sizes, regression analysis was performed to determine their relationship. Intraspecific divergence was not significantly related to species sample sizes for any of the three genes analyzed or the total data set (COI: $R^2 = 0.055$, $p = 0.575$, COII: $R^2 = 0.042$, $p = 0.628$, ND4: $R^2 = 0.054$, $p = 0.580$, total data set: $R^2 = 0.052$, $p = 0.588$).

Nucleotide diversity for the total data set consisting of concatenated COI, COII and ND4 sequences was calculated as 7.877% (Table 5), with intraspecific diversity estimates ranging between 0.090 (*L. sericata*) and 1.804 (*S. bullata*). Intraspecific nucleotide diversity was consistently highest within *S. bullata* for all regions and genes analyzed. However, minimum intraspecific diversity varied with the region and genes analyzed. Of the three genes analyzed, COI yielded the highest level of total intraspecific nucleotide diversity (8.407%), followed by COII (8.028%). The ND4 gene displayed the lowest level of diversity (7.752%). This pattern of diversity based on individual genes was evident within most species, with COI gene outperforming both the COII and ND4 genes for intraspecific diversity calculations. Nucleotide diversity within the COI gene relative to that of the concatenated COI, COII and ND4 data set was greater than 100% for all species analyzed. For the ND4 gene, only three species displayed mean nucleotide diversity levels greater than that of the total data set. Relative nucleotide diversity within the COII gene was less than 100% than that of the total data set for all species.

Of the three regions of the COI gene most commonly sequenced, the "2183" fragment provided the highest level of nucleotide divergence (8.806%, Table 6), followed by the barcoding and "2792" fragments (7.982% and 7.076% respectively). This pattern of diversity for the three fragments was reflected by intraspecific nucleotide diversity values for individual species, where the "2183" fragment provided the highest and the "2792" fragment the lowest values for most species (Table 6). Thus, it is evident that the barcoding fragment is not the most suitable fragment of the COI gene for determining maximum levels of intraspecific nucleotide diversity.

Sliding window profiles (600bp) based on the COI-COII region are illustrated in Fig. 2. Profiles differed substantially among the seven species analyzed. Maximum nucleotide diversity among 600bp windows varied between 0.222% (*L. sericata* and *S. africa*) and 2.556% (*S. bullata*) (Fig. 2). The location of maximum diversity was variable among species, with *S. bullata* and *C. vomitoria* displaying multiple regions of maximum diversity (Fig. 2). Minimum nucleotide diversity was 0 in four of the seven species analyzed (*C. vicina*, *L. cuprina*, *L. sericata* and *S. africa*). Locations of minimum diversity for most species occurred most frequently at the 3' end of the COI gene, although ranges of maximum diversity for most species were more widely spread. Thus, different regions of the COI and COII genes are more efficient at determining intraspecific nucleotide diversity of each of the species analyzed.

Interspecific diversity

The ultimate discrimination among closely related species in this project will come from demonstration of reciprocal monophyly. However, it is also informative to examine interspecific divergence compared to intraspecific divergence across sliding windows, as a guide to which genomic regions may be most suitable for discrimination. Maximum intra- and

minimum interspecific diversity was examined across the COI-COII region for all species investigated. Since these divergence values did not overlap for any sister pair of species included in the Phase I analysis (Tables 5 and 7).

Interspecific nucleotide diversity for five sister species pairs was extremely variable, ranging between 0.900% (*L. sericata* and *L. cuprina*) and 9.274% (*S. africa* and *S. bullata*) (Table 7). Nucleotide diversity was consistently highest between *S. africa* and *S. bullata* and lowest between *L. sericata* and *L. cuprina*, regardless of the region analyzed or primer pair used. The especially close relationship between *L. sericata* and *L. cuprina* is in agreement with that of previous studies, where a lineage of *L. cuprina* has been found to be paraphyletic with regard to *L. sericata* (cit).

For all sister species pairs, nucleotide diversity within the COI gene relative to that of the total COI-COII-ND4 data set was greater than 100%. Although the COI gene yielded the highest level of nucleotide diversity (5.349%), it was closely followed by that of the ND4 gene (5.314%). The COII gene yielded a lower level of diversity (4.236%). These results confirm those of intraspecific diversity, where the COI gene appears to be more efficient than the COII and ND4 genes at detecting maximum levels of nucleotide divergence. For the commonly sequenced COI regions, the 2183 fragment once again provided the highest level of diversity, followed by the barcoding and 2792 fragments (Table 8). These results indicate once again that the barcoding fragment is not ideal for identifying forensically important Diptera.

Sliding window profiles of species pairs were less variable than those of individual species profiles and many were remarkably similar (Fig. 3), such as those between *L. sericata* and *L. illustris* and *L. illustris* and *L. cuprina*. The location of minimum and maximum diversity for each of the five species pairs occurred within a fairly narrow region (midpoints *Dy*# 2971-3275 and *Dy*# 2371-2555 respectively). It is thus possible to pinpoint midpoints *Dy*# 2371-2555 of the COI gene as being most suitable for discrimination of the eight species included in analyses. This pattern of diversity was also evident in the sliding window profile of mean relative divergence for all five species pairs (Fig. 4). From variance analyses, it appears that the optimal fragment of a 600bp window of the COI-COII region appears to be at midpoint *Dy*# 2500 (positions *Dy*# 2200-2800). This region encompasses much of the maximum levels of interspecific divergence as well as diversity within the 2183 fragment (midpoint Dy# 2598).

Phylogenetic analysis for species discrimination

Relationships among the seven species analyzed, based on concatenated sequences of the COI, COII and ND4 genes, are shown in Fig. 5. The tree topology reflects that of accepted phylogenies, with bootstrap analysis supporting the majority of internal nodes, and species from the same genus forming monophyletic clusters with 100% bootstrap support. All species of Calliphoridae and Sarcophagidae clustered together within their respective families. Within the genus *Lucilia*, *L. cuprina* and *L. sericata* appeared to be more closely related to each other than to *L. illustris,* which confirms previous results (Wells, Williams 2007). Analysis of individual COI, COII and ND4 genes each provided the same basic tree topology. Genetic distances were similar for all three genes as well as the COI-COII and COI-COII-ND4 regions (Table 9). However, for the COI, COII and ND4 genes bootstrap support for *L. cuprina* and *L. sericata* decreased to 96/100, 96/98 and 69/95 respectively. The number of informative characters varied with the region analyzed (Fig. 6), with the largest

numbers of informative characters appearing towards the 3' end of the COI gene (midpoints *Dy*# 2460-2860). These results are in agreement with those of nucleotide divergence, where this region appeared most suitable for species discrimination.

Each 600bp window of the COI-COII region was able to discriminate between species, providing 100% bootstrap support for *C. vicina*, *C. vomitoria*, *L. illustris*, *S. africa*, *S. bullata* and *P. regina* (not shown). However, bootstrap support for *L. cuprina* and *L. sericata* varied widely among different windows (Fig. 1), with support for *L. cuprina* as low as 62%. It is thus clear that no 600bp fragment of the COI-COII region is sufficient to provide robust identification of *L. cuprina* and *L. sericata*. Therefore, it may be likely that fragment length must be increased when examining species that are very closely related.

Fragment length

The effect of fragment length on nucleotide divergence and phylogeny was investigated by examining fragments with 200bp increments, starting at the 5' end of the COI gene, the 3' end of the total data set and the midpoint of the total data set. Patterns of mean relative divergence were rather dissimilar for the three starting locations (Fig. 7). Starting at the 5' end of COI, the initial mean relative divergence at 200bp was 90%, decreased slightly to 88% at 400bp and increased to steadily to 100% at 1200bp. Relative divergence peaked at 105% at 1400bp and remained at about 100% for increased lengths. Starting at the 3' end of ND4, divergence was highest at 200bp (120%), indicating that a region of high divergence was being sampled. Divergence decreased to 100% at 600bp and decreased further to its lowest point at 95% at 800bp before increasing to 100% at 1000 and 1200bp. Diversity decreased to 96% at 1400bp and 1600bp, remained steady at 100%-102% thereafter. Starting at the midpoint of the COI-COII-ND4, initial divergence was 80% and decreased further to 75% at 400bp. Divergence increased to 100% at 1000bp and peaked at 105% at 1400bp and 1800bp. These results show that fragment lengths of at least 1000bp are necessary to ensure that close to 100% total diversity is sampled.

Bootstrap support for phylogenetic analysis based on the Minimum-Evolution algorithm was used to evaluate the effect of fragment length on monophyly support for each species. A 200bp fragment was sufficient to resolve many of the terminal nodes in the tree, with bootstrap support above 90% for most species, although phylogenetic signal was decreased (Fig. 8). However, these short fragments could not distinguish between *L. cuprina* and *L. sericata* at any of the three starting points or between *S. africa* and *S. bullata* at the 5' starting end. For most species, a fragment length of 400bp was sufficient to yield a bootstrap support of 100%. These results show why studies using even short fragments of DNA have been so successful. The exceptions were *L. cuprina* and *L. sericata*, where bootstrap values were more dependent on fragment length. For *L. sericata* bootstrap support for all three starting points stabilized at 100% between 800bp and 1000bp. For *L. cuprina* fragment starting point had a remarkable effect on initial bootstrap support (Fig. 9). At the 5' end of the COI gene, bootstrap support was only 36% at 200bp, increased sharply to 66% at 400 and thereafter rose steadily to 100% at 2000bp, after which bootstrap values flattened off at 100%. At the 3' end of the ND4 gene, bootstrap support for *L. cuprina* monophyly increased sharply from 66% to 95% between 200bp and 400bp and increased to remain steady at 98%-100% at 800bp until the entire COI-COII-ND4 fragment was included. Starting at the midpoint of the COI-COII-ND4 data set, the bootstrap value at 200bp was 57%, which increased to 60% at 400bp and rose sharply to 97% at 600bp, where it remained steady until 1000bp, after which values decreased dramatically to 86% at 1200bp before climbing to 100% at 1800bp, after which values remained steady. Thus, it is clear that a minimum fragment length of 1000bp is needed to ensure an unambiguous phylogenetic signal for both *L. sericata* and *L. cuprina*.

The use of longer sequences is often impractical in large studies (and for degraded samples, such as might be encountered in casework). However, a sequence length of 1000bp can usually be obtained in a single reaction. Therefore, we constructed the reference DNA database for this project by extending the optimal 600bp fragment (*Dy*# 2200-2800 of the COI gene) by 400bp towards the 5' end of the COI gene and 200bp in the 3' direction (to positions *Dy*# 1800-3000), to ensure greater diversity coverage. Further tests might be conducted in the future, assessing the ability to place shorter unknown sequences into the phylogenetic framework of the full reference database.

Phase II

The primary result from this project is the production of a reference database of COI DNA sequences for the 1800-3000 region comprising 504 individuals from a total of 106 species. This database can be used in a phylogenetic analysis to infer species-level identification of unknown dipteran larvae of forensic significance.

Table 4 provides a listing of every specimen for which we obtained DNA sequence data for the Phase II locus. In total, we include in the reference database 504 individuals representing 106 species. The database includes data for 38 of the 40 species that which we determined from the literature to be of likely forensic significance.

Forensically important species for which we have no data: We were unable to obtain samples for the following 5 species: *Compsomyiops callipes* – this species can be common in

parts of the southwestern U.S., but we did not encounter any during our collecting efforts, and collections from southern California sent to us by a colleague did not include any specimens of this species. Addition of *Compsomyiops callipes* to the reference database should be a high priority going forward. *Lucilia eximia* – this species is common in Central and South America; it is reported as "rare" in Texas, Oklahoma and Florida (Whitworth 2006), but we did not collect any despite extensive collecting in Texas and Florida; *Sarcophaga melanura* – this species is simply very uncommon, and we have not been successful at collecting any (and, presumably, its rarity reflects a very low probability that this species will turn up in a forensic investigation); *Sarcophaga ruficornis* – this species is common in Hawaii, but rare in the western contiguous U.S., and we did not collect in Hawaii; *Cynomya mortuorum* – this species is found only north of the Arctic Circle (Whitworth 2006), another region where we did no collecting.

Species not of forensic interest that are included in the database: In addition to the 36 species of highest forensic importance, we include another 68 species, albeit with fewer individuals per species. We feel that this is an extremely important aspect of the construction of a reference database for DNA-based species identification, but that it is an issue that has not been discussed previously in the forensic entomology literature. It is important that closely related, but non-target species be present in a reference database for species identification, because the phylogenetic analysis methods we use to query the database will place any sample on the tree, even if the unknown is an individual from a species that is not represented in the reference database. It is difficult to predict the behavior of a query sample for which there is not a corresponding reference sample in the database. One would hope that the query sequence would not join with a forensically important species to form a monophyletic group with strong bootstrap support, but such a result is certainly not out of the question. By including a large number of non-target species, all of which were collected during the same collection trips and using the same methodologies, we expect to have included most of the species that might be encountered as "accidentals" already present in the reference database. A final reason for inclusion of the 68 "not forensically important" species is that many of these specimens were collected at baited traps or by sweep netting near a baited trap. Consequently, at least some of those species could, potentially, be of unrecognized forensic utility.

Phylogenetic analysis

The reference database developed in Phase II is the fundamental deliverable of this project; those data are presented in Table 10. The full, bootstrapped phylogenetic tree for the complete database is shown in Fig. 10. The most important feature of the tree overall is that the large majority of species are reciprocally monophyletic vs. all other species with high bootstrap values. Specifically, we include multiple individuals for 57 species. 50 of those are monophyletic with high bootstrap values.

Of the 18 species that are of greatest forensic interest, only two cannot be distinguished from other forensically important species, based on the DNA segment used in our reference database.

The main result from this project is the production of a DNA database that can be used to successfully identify 89% (16 of 18) of the species of carrion flies most likely to be encountered in the forensic setting in the contiguous United States.

Calliphoridae Within the blow flies (Calliphoridae), we find that 23 of the 25 species for which we obtained samples are distinctly different from all other species, as indicated by ME bootstrap. Only a single species pair within the Calliphoridae (*Lucilia coeruleiviridis – L. mexicana*) cannot be identified using our database, based on the results obtained in this project.

The Calliphorid genus *Lucilia* deserves particularly close attention, because Wells et al. (2007) suggested that it might be difficult, or even impossible, the identify many species of *Lucilia* using only DNA data from a relatively small region of the mitochondrial genome.

Lucilia coeruleiviridis – L. mexicana: *L. coeruleiviridis* is a very commonly encountered and forensically important fly throughout much of the United States. *L. mexicana* is somewhat more restricted in its distribution, being found primarily in the Southwestern United States. These two species have a range of overlap running through much of Texas and New Mexico (and, possibly, Arizona). Our samples from the region of overlap are limited to several collecting localities in New Mexico and Texas. We sequenced the Phase II region for a large number of each of these two species, and found nearly complete overlap in their haplotypes. Some of our data are consistent with the possibility that the overlap in haplotypes may be a result of hybridization between the two species, followed by introgression of the *L. coeruleiviridis* mitochondrial genome into *L. mexicana*. Although closely related, these two species are not too difficult to distinguish on the basis of adult morphology, and our collections from New Mexico and Texas do not show signs of being morphologically intermediate. Even more interesting is the observation that the mtDNA sequences from *L. mexicana* collected in southern California are distinctly different from those of both *L. mexicana* and *L. coeruleiviridis* from New Mexico and Texas, with an average pairwise difference of 5%. In contrast, all of our samples of *L. coeruleiviridis* from throughout its range are very similar genetically to those found in the region of overlap, with a maximum pairwise divergence of only 0.5%. This would be consistent with a scenario in which the haplotypes we found for *L. mexicana* in southern California represent the original *L. mexicana* mtDNA lineage, while the *L. mexicana* in New Mexico possess introgressed *L. coeruleiviridis* mtDNA. The inability to distinguish between these two species in parts of their common range should be further investigated. In particular, growth studies should be undertaken in order to assess whether or not there are differences in developmental timing in relation to temperature between the two species in regions where the mtDNA sequences cannot be used to correctly identify the species. If there turn out to be no significant developmental differences, then it will be sufficient to use mtDNA evidence to identify larvae as "either *L. mexicana* or *L. coeruleiviridis*." However, if there are developmental differences, then, when at least one of these two species is involved in their range of overlap, either forensic evidence must include traditional rearing of larvae to adulthood for morphological identification, or, if possible, other species found at the scene that could be positively identified on the basis of DNA sequence should be used for estimation of PMI.

L. cuprina and L. sericata – As reported in a publication based on this project (DeBry et al. 2010), data from the 5' end of COI are sufficient to discriminate between *L. cuprina* and *L. sericata* in a phylogenetic analysis. In the fully inclusive analysis, we find *L. cuprina* and *L. sericata* to be reciprocally monophyletic, based on bootstrap values >95%. There is no doubt, however, that these two species have mtDNA haplotypes that are very similar to each other. We see no evidence for geographic variation within either *L. cuprina* or *L. sericata* across the

contiguous United States. Average intra-species pairwise divergences are low for both species (Table 11), but the average inter-species divergence is also low. For this reason, further validation is warranted to determine whether or not hitherto undiscovered, divergent haplotypes exist that would compromise the discriminatory power of this gene region for these two species.

L. elongata, L. silvarum, and L. thatuna – These three species appear to be the most closely related to *L. cuprina* and *L. sericata*, although deeper phylogenetic relationships cannot reliably be inferred from a limited sample of a single genetic locus. We were only able to collect *L. elongata* from two localities in Oregon, while our only two specimens of *L. thatuna* come from a single locality in northern California. In keeping with our collecting success, Whitworth (2010) characterized each as being either rare or uncommon. Consequently, neither species is likely to be encountered commonly in forensic investigations. Nevertheless, it is important that all reference specimens available be included in any phylogenetically based species identification procedure. *L. silvarum*, in contrast, is characterized by Whitworth (2010) as being a common, widespread species, and we collected it from a number of widely separated localities. All three of these species are well differentiated from each other and from all other species, and each is strongly monophyletic in our bootstrap resampling analysis.

L. illustris – In some parts of the world, *L. illustris* cannot be distinguished from *L. caesar* using mtDNA data (Wells, Wall, Stevens 2007). In the United States, however, *L. caesar* does not occur, and *L. illustris* is easily distinguished from all other *Lucilia* based on DNA sequence data from the 5' end of COI. We see no evidence that there is any geographic variation within *L. illustris*, and the average pairwise intraspecies divergence is very low (0.5%; Table 11).

L. coeruleiviridis and L. mexicana – A large number of *L. mexicana* individuals carry a COI haplotype that is either identical to or extremely similar to haplotypes found in *L. coeruleiviridis* (Fig.10). Consequently, these two species cannot be distinguished using this locus. We do see substantial geographic variation within *L. mexicana*. All of the sequences with the *L. coeruleiviridis*-like COI haplotypes were collected in either Texas of New Mexico. In contrast, all of the individuals we sampled from California form a distinctly separate clade in the phylogenetic analysis (Fig. 10). The average pairwise divergence between the California and the Teas/New Mexico populations (5%) also substantially exceeds the level of intraspecies divergence observed for any other *Lucilia* species. We did examine a different mtDNA fragment (from the ND4 gene) for a limited number of individuals of both *L. coeruleiviridis* and *L. mexicana* from New Mexico. Those data also failed to differentiate between the two species (data not shown). While there are a number of possible explanations for the pattern we observed, perhaps the most likely is that there has been some hybridization between *L. coeruleiviridis* and *L. mexicana*, either ongoing or in the relatively recent past, somewhere in their region of geographic overlap. Subsequently, *L. coeruleiviridis*-like mtDNA has been introgressing into *L. mexicana*. Because the two species maintain their distinctive morphological characteristics across this region, it would appear that nuclear alleles are not crossing the species barrier, although we do not have any nuclear data with which to test that hypothesis. It is not clear what will be the consequence of this pattern for forensic purposes. If the two species were to be found to have similar developmental characteristics, then it would be sufficient to characterize an unknown larva as "either *L. coeruleiviridis* or *L. mexicana*". Lacking data to that effect, however, a DNA-based identification alone will not be adequate for PMI estimation for these two species.

L. cluvia – This species is restricted to the southeastern U.S., and even there it is uncommon (Whitworth 2010). We have only 4 exemplars, all from Florida. These specimens are reciprocally monophyletic compared to all other species, at > 95% bootstrap support.

All of the remaining 15 calliphorid species are clearly and distinctly monophyletic with respect to all other taxa included in the reference database (Fig. 10). The only specific case requiring mention is that we find there to be two distinct subtypes of *Calliphora livida*. Although the two subtypes do not form a monophyletic grouping, each is strongly monophyletic compared to all other species in the reference database.

Sarcophagidae Within the flesh flies (Sarcophagidae), there are three pairs of species for which we observe a failure to achieve reciprocal monophyly. *However, we believe that none of these three pairs will represent a significant problem for DNA-based species identification for the forensically important flies*. In two cases, both species involved are of only limited forensic importance. In the third case, one species is of high forensic importance, but the confounding species is very unlikely to be encountered in a forensic investigation.

Ravinia lherminieri / R. floridensis According to our consultant, Dr. Greg Dahlem, an expert on the biology and identification of sarcophagid flies, these may not actually be separate species. They might, instead, represent two subspecies within a single, more inclusive species. In addition, both are primarily dung feeders as larvae, so their actual forensic utility is limited. There are two reasons to include *Ravinia* species as being of potential forensic importance. First, *Ravinia* do frequently appear at large animal carrion, increasing that chance that they might be found as visitors during a forensic investigation. Second, several species of *Ravinia* are known to feed on human feces. If a death scene includes any human excrement, then larvae of *Ravinia* might, indeed, be present.

Ravinia anxia / R. querula Another problematic pair within the genus *Ravinia*. As above, the larvae of these two species feed primarily on animal dung, and, thus, they are of relatively minor forensic importance.

Sarcophaga bullata / S. polistensis Again, the lack of strict reciprocal monophyly for this species pair is unlikely to have an adverse impact on forensic investigations. Of the 23 individuals of *S. bullata* that we sampled, only one (AF37) falls outside of the main cluster. In some bootstrap pseudoreplicates, this individual grouped with our single sample of *S. polistensis*. However, the reason that we sampled only a single individual of *S. polistensis* is that this species is highly specialized, with its larvae being obligate endoparasites on paper wasps of the genus *Polistes*. Thus, *S. polistensis* is quite unlikely to be encountered in a forensic investigation. When the full reference database is analyzed with *S. polistensis* deleted, all samples of *S. bullata* are monophyletic with bootstrap support of 99% (result not shown). There is some biological interest in the highly divergent mtDNA haplotype found in specimen AF37. As described in the subsection of geographic variation, AF37 represents our only sample of *S. bullata* from California. It may well be that other individuals of *S. bullata* in California will share that divergent haplotype.

Intra-specific variation

Substantial intra-specific variation would have at least two potential consequences. First, it would require the reference database to include a larger number of individuals of each species. This is because observing a large range of variation within a relatively small sample would indicate that a large amount of variation remains un-sampled in natural populations. Second, if there were both intra-specific variation and a geographic pattern to that variation, then we would need to increase not only the total number of individuals sampled, but also the number of collection localities and the coverage of the geographic range for that species that those localities represent. On the other hand, geographic variation might allow inference regarding the geographic origin of an individual fly, which might be useful in some cases. In general, however, we observed only low levels of intra-specific variation, and we could identify only a single case in which there appears to be geographic structure to the intra-specific variation.

Remaining Issues

1. Increase sampling and geographic coverage

We earlier justified the use of a phylogenetic approach (as opposed to a simple definition-based method or a "signature" method) on the basis that natural populations are inherently variable. Consequently, a single DNA sequence definition cannot be expected to capture that variation. Indeed, even if a "signature sequence" sufficed to identify an individual as being a member of a particular species now, the nature of population variability and the processes of mutation and evolution would render that approach incorrect in the future. Although the phylogenetic method does allow for species identification even in the presence of natural variation, that same natural variability also always ensures that a sample, no matter how large, does not capture the full range of variation present in nature. The database developed in this project is the largest fully vouchered database yet to be developed for species identification in forensic entomology. Nevertheless, it will always be desirable to add more specimens, both from the current range of populations included and from additional geographic localities. In much the same way as for reference databases for human DNA profiling, increase the number of reference samples will lead to an increase in statistical power for determination of species identity of an unknown sample.

2. Validation

To date, the reference database developed through this project has been validated only against itself (the bootstrap resampling procedure can be viewed as a form of internal validation). See "Implications for further research" in the last section of the report for additional details.

1. **Tables:**

Table 1. Species of forensic interest in the 48 contiguous United States.

Species of greatest forensic interest		
Family Sarcophagidae		**Family Calliphoridae**
Blaesoxipha plinthopyga		*Calliphora vicina*
Sarcophaga africa		*Calliphora vomitoria*
Sarcophaga argyrostoma		*Cochliomyia macellaria*
Sarcophaga bullata		*Compsomyiops callipes*
Sarcophaga cooleyi		*Cynomya cadaverina*
Sarcophaga crassipalpis		*Lucilia coeruleiviridis*
		Lucilia cuprina
Family Muscidae		*Lucilia illustris*
Musca domestica		*Lucilia mexicana*
M*usca autumnalis*		*Lucilia sericata*
		Phormia regina
Species of occasional or possible forensic utility		
Family Sarcophagidae	**Family Sarcophagidae**	**Family Calliphoridae**
Boettcheria latisterna	*Ravinia querula*	*Calliphora terraenovae*
Helicobia rapax	*Ravinia stimulans*	*Cynomya mortuorum*
Mecynocorpus salvum	*Sarcophaga sarracenioides*	*Lucilia cluvia*
Oxysarcodexia ventricosa	*Sarcophaga subvicina*	*Lucilia eximia*
Ravinia derelicta	*Sarcophaga triplasia*	*Lucilia silvarum*
Ravinia floridensis	*Sarcophaga utilis*	
Ravinia lherminieri	*Wohlfahrtia vigil*	
Ravinia pusiola		

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Table 2. List of specimens for which Phase II DNA sequence data are included in the reference database produced through this project.	
Species (forensically relevant in red, Forensically most important in **red and boldface**)	COI 1800-3000 Completed sequences
Family Sarcophagidae	
Agria housei	1
Amobia eyrthrura	1
Blaesoxipha alcedo	1
Blaesoxipha arizona	1
Blaesoxipha caridei	1
Blaesoxipha cessator	1
Blaesoxipha eleodis	1
Blaesoxipha masculina	1
Blaesoxipha plinthopyga	**8**
Blaesoxipha sp.	3
Boettcheria bisetosa	1
Boettcheria cimbicis	1
Boettcheria latisterna	11
Boettcheria literosa	1
Brachicoma sarcophagina	1
Emblemasoma brachicoma	1
Fletcherimyia fletcheri	1
Helicobia rapax	15
Helicobia resinata	1
Macronychia nigrifunis	1
Macronychia pulcra	1
Mecynocorpus salvum	2
Metopia inermis	1
Oxysarcodexia cingarus	1
Oxysarcodexia ventricosa	14
Peckia chrysostoma	1
Peckia intermutans	1
Peckia uncinata	1
Ravinia anxia	3
Ravinia derelicta	6
Ravinia floridensis	8
Ravinia lherminieri	5
Ravinia plantifrons	4
Ravinia pusiola	10
Ravinia querula	9
Ravinia stimulans	10
Ravinia vagabunda	1
Sarcodexia lambens	4
Sarcophaga acrophila	1

Sarcophaga aldrichi	3
Sarcophaga africa	**7**
Sarcophaga argyrostoma	**10**
Sarcophaga bancroftorum	1
Sarcophaga bullata	**22**
Sarcophaga carnaria	1
Sarcophaga cooleyi	**3**
Sarcophaga crassipalpis	**6**
Sarcophaga froggatti	1
Sarcophaga georgiana	1
Sarcophaga hinei	1
Sarcophaga houghi	1
Sarcophaga idonea	1
Sarcophaga iota	1
Sarcophaga johnsoni	1
Sarcophaga lehmanni	2
Sarcophaga mimoris	1
Sarcophaga nearctica	12
Sarcophaga omikron	1
Sarcophaga polistensis	1
Sarcophaga sarracenioides	4
Sarcophaga seagoi	1
Sarcophaga shermani	4
Sarcophaga subvicina	6
Sarcophaga taenionota	1
Sarcophaga triplasia	10
Sarcophaga utilis	5
Sarcophaga zeta	1
Senotainia trilineata	1
Sphenometopa nebulosa	1
Tricharaea femoralis	1
Tripanurga importuna	1
Villegasia postuncinnata	1
Wohlfahrtia vigil	1
Family Calliphoridae	
Calliphora coloradensis	6
Calliphora grahami	2
Calliphora latifrons	12
Calliphora livida	6
Calliphora terraenovae	3
Calliphora vicina	**16**
Calliphora vomitora	**17**
Chrysomya megacephala	7
Chrysomya rufifacies	14
Cochliomyia macellaria	**30**

Compsomyiops callipes	**0**
Cynoma cadaverina	**9**
Cynomya mortuorum	0
Lucilia cluvia	4
Lucilia coeruleiviridis	**22**
Lucilia cuprina	**23**
Lucilia eximia	0
Lucilia elongata	3
Lucilia illustris	**21**
Lucilia mexicana	**23**
Lucilia sericata	**16**
Lucilia silvarum	8
Phormia regina	**20**
Pollenia angustigena	1
Pollenia labialis	1
Pollenia pediculata	8
Protocalliphora bennetti	2
Protocalliphora occidentalis	1
Protocalliphora rugosa	2
Protocalliphora sialia	2
Pollenia rudis	5
Protophormia terranovae	3
Family Muscidae	
Musca domestica	**2**
Musca autumnalis	**1**

Table 3. Specimen code, identification, collection locality, and associated information for all fly specimens collected and identified as a result of work on the project.

ID	FAMILY	GENUS	SUBGENUS	SPECIES	SEX	STATE	COUNTY	LOCALITY1	LOCALITY 2	DATE	TRAP	NOTES
AA01	Sarcophagidae	Ravinia		floridensis (Aldrich)		Florida	Duval	Roadside rest	west of Jacksonville	V.7.2006		
AA02	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Florida	Duval	Roadside rest	west of Jacksonville	V.7.2006		
AA03	Sarcophagidae	Ravinia		floridensis (Aldrich)		Florida	Duval	Roadside rest	west of Jacksonville	V.7.2006		
AA04	Sarcophagidae	Ravinia		floridensis (Aldrich)		Florida	Duval	Roadside rest	west of Jacksonville	V.7.2006		
AA05		Lucilia		cuprina Wiedemann	M	Florida	Duval	Rest Stop	west of Jacksonville	V.7.2006		
AA06		Lucilia		cuprina Wiedemann	M	Florida	Duval	Rest Stop	west of Jacksonville	V.7.2006		
AA07	Muscidae				F	Florida	Columbia	O'Leno State Park	Limestone trail	V.7.2006		
AA08	Calliphoridae	Sarcophagidae	Boettcheria	sp.	F	Florida	Columbia	O'Leno State Park	Limestone trail	V.7.2006		
AA09	Calliphoridae	Sarcophagidae	Boettcheria	latisterna Parker	F	Florida	Columbia	O'Leno State Park	Limestone trail	V.7.2006		
AA10	Sarcophagidae	Ravinia		derelicta (Walker) M	F	Florida	Columbia	O'Leno State Park	Limestone trail	V.7.2006		
AA11	Sarcophagidae	Boettcheria		latisterna Parker	M	Florida	Columbia	O'Leno State Park	Limestone trail	V.7.2006		
AA12	Sarcophagidae	Boettcheria		latisterna Parker M	M	Florida	Columbia	O'Leno State Park	Limestone trail	V.7.2006		
AA13	Sarcophagidae	Ravinia		derelicta (Walker) F	F	Florida	Columbia	O'Leno State Park	Riverwalk	V.7.2006		
AA14	Sarcophagidae	Ravinia		sp.	F	Florida	Duval	Roadside rest	west of Jacksonville	V.7.2006		
AA15	Sarcophagidae	Fletcherimyia		rileyi (Aldrich)	M	Florida	Liberty	SR-65 roadside	North of Sumatra on S. flava	V.08.2006		
AA16	Sarcophagidae	Fletcherimyia		rileyi (Aldrich)	M	Florida	Liberty	SR-65 roadside	North of Sumatra on S. flava	V.08.2006		
AA17		Lucilia		cuprina Wiedemann	F	Florida	Columbia	I-10 Rest Stop	near I-75 intersection	V.8.2006		
AA18		Lucilia		cuprina Wiedemann	F	Florida	Columbia	I-10 Rest Stop	near I-75 intersection	V.8.2006		
AA19		Lucilia		cuprina Wiedemann	F	Florida	Columbia	I-10 Rest Stop	near I-75 intersection	V.8.2006		
AA20	Calliphoridae	Lucilia		cuprina Wiedemann	F	Florida	Columbia	I-10 Rest Stop	near I-75 intersection	V.8.2006		
AA21	Calliphoridae	Lucilia		cuprina Wiedemann	M	Florida	Columbia	I-10 Rest Stop	near I-75 intersection	V.8.2006		
AA22	Calliphoridae	Stomoxys		calcitrans (Linnaeus)	F	Florida	Columbia	I-10 Rest Stop	near I-75 intersection	V.8.2006		
AA23	Calliphoridae	Sarcophagidae	Oxysarcodexia	ventricosa (Wulp)	F	Florida	Columbia	I-10 Rest Stop	near I-75 intersection	V.08.2006		
AA24	Calliphoridae	Tachinidae			F	Florida	Columbia	I-10 Rest Stop	near I-75 intersection	V.8.2006		
AA25	Sarcophagidae	Ravinia		derelicta (Walker)	F	Florida	Liberty	Torreya State Park		V.8.2006		
AA26	Sarcophagidae	Ravinia		derelicta (Walker)	F	Florida	Liberty	Torreya State Park		V.8.2006		
AA27	Sarcophagidae	Sarcophaga	Neobellieria	triplasia Wulp	M	Florida	Liberty	Torreya State Park		V.8.2006		
AA28	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA29	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA30	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA31	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA32	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA33	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA34		Lucilia		cuprina Wiedemann	M	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA35	Sarcophagidae	Helicobia		morionella (Aldrich)	M	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA36	Sarcophagidae	Ravinia		lherminieri (Robineau-Desvoidy)	M	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA37	Calliphoridae	Sarcophagidae	Oxysarcodexia	ventricosa (Wulp)	F	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.08.2006		
AA38	Sarcophagidae	Ravinia		derelicta (Walker)	F	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA39	Muscidae	Musca		domestica Linnaeus	F	Florida	Madison	I-10 Rest Stop	East of Tallahassee	V.8.2006		
AA40		Lucilia		cuprina Wiedemann	F	Florida	Bay	Panama City	Sunset Inn motel	V.9.2006		
AA41		Lucilia		cuprina Wiedemann	F	Florida	Bay	Panama City	Sunset Inn motel	V.9.2006		
AA42		Lucilia		cuprina Wiedemann	M	Florida	Bay	Panama City	Sunset Inn motel	V.9.2006		
AA43	Calliphoridae	Lucilia		cuprina Wiedemann	F	Florida	Bay	Panama City	Sunset Inn motel	V.9.2006		
AA44	Calliphoridae	Lucilia		cuprina Wiedemann	F	Florida	Bay	Panama City	Sunset Inn motel	V.9.2006		
AA45	Calliphoridae	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Florida	Walton	Greyton Beach State Park		V.9.2006	
AA46	Calliphoridae	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Florida	Walton	Greyton Beach State Park		V.9.2006	
AA47	Calliphoridae	Sarcophagidae	Spirobolomyia	singularis (Aldrich)	M	Florida	Walton	Greyton Beach State Park			V.9.2006	
AA48	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Florida	Walton	Greyton Beach State Park			V.9.2006	
AA49	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Florida	Walton	Greyton Beach State Park			V.9.2006	ID checked
AA50	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Florida	Walton	Greyton Beach State Park			V.9.2006	
AA51	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Walton	Greyton Beach State Park			V.9.2006	
AA52	Sarcophagidae	Senotainia		sp.	M	Florida	Walton	Greyton Beach State Park			V.9.2006	
AA53	Sarcophagidae	Senotainia		sp.	M	Florida	Walton	Greyton Beach State Park			V.9.2006	
AA54	Sarcophagidae	Helicobia		sp.	F	Florida	Walton	Greyton Beach State Park			V.9.2006	
AA55	Sarcophagidae	Eumacronychia		sp.	F	Florida	Walton	Greyton Beach State Park			V.9.2006	
AA56	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Florida	Sarasota	Myakka River State Park	Dam area	V.11.2006		
AA57	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Florida	Sarasota	Myakka River State Park	Dam area	V.11.2006		
AA58	Sarcophagidae	Amobia		floridensis (Townsend)	M	Florida	Sarasota	Myakka River State Park	Dam area	V.11.2006		
AA59	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA60	Sarcophagidae	Ravinia		floridensis (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA61	Sarcophagidae	Oxysarcodexia		galeata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA62	Sarcophagidae	Amobia		floridensis (Townsend)	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA63	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA64	Calliphoridae	Chrysomya		rufifacies (Macquart)	M	Florida	Sarasota	Myakka River State Park		V.11.2006		
AA65	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA66	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA67	Sarcophagidae	Amobia		floridensis (Townsend)	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA68	Sarcophagidae	Amobia		floridensis (Townsend)	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA69	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area	V.11.2006		
AA70	Sarcophagidae	Helicobia		sp.	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA71	Sarcophagidae	Amobia		floridensis (Townsend)	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA72	Sarcophagidae	Amobia		floridensis (Townsend)	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA73	Sarcophagidae	Helicobia		sp.	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA74	Sarcophagidae	Helicobia		sp.	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA75	Sarcophagidae	Helicobia		sp.	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA76	Sarcophagidae	Helicobia		sp.	M	Florida	Sarasota	Myakka River State Park	Birdwalk	V.11.2006		
AA77	Sarcophagidae	Sarcophaga		sp.	F	Florida	Walton	Greyton Beach State Park		V.9.2006		
AA78	Sarcophagidae	Sarcophaga		sp.	F	Florida	Walton	Greyton Beach State Park		V.9.2006		
AA79	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Walton	Greyton Beach State Park		V.9.2006		
AA80												
AA81	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Walton	Greyton Beach State Park		V.9.2006		
AB01	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Florida	Walton	Greyton Beach State Park		V.9.2006		
AB02		Lucilia		coeruleiviridis Macquart	M	Florida	Walton	Greyton Beach State Park		V.9.2006		
AB03	Sarcophagidae	Sarcophaga		sp.	F	Florida	Walton	Greyton Beach State Park		V.9.2006		
AB04		Lucilia		coeruleiviridis Macquart	F	Florida	Walton	Greyton Beach State Park		V.9.2006		
AB05	Calliphoridae	Ravinia		derelicta (Walker)	F	Florida	Walton	Greyton Beach State Park		V.9.2006		
AB06	Sarcophagidae	Spirobolomyia		singularis (Aldrich)	M	Florida	Washington	Falling Waters State Park		V.9.2006		
AB07	Calliphoridae	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Florida	Washington	Falling Waters State Park		V.10.2006	
AB08	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB09	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB10	Sarcophagidae	Sarcophaga	Wohlfahrtiopsis	georgiana Dodge	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AB11	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB12	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB13	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB14	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB15	Sarcophagidae	Ravinia		floridensis (Aldrich)	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AB16	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB17	Sarcophagidae	Spirobolomyia		singularis (Aldrich)	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB18	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB19	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB20	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB21	Sarcophagidae	Spirobolomyia		singularis (Aldrich)	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB22	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB23	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB24	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB25	Sarcophagidae	Sarcophaga	Bercaeopsis	sp.	M	Florida	Washington	Falling Waters State Park		V.10.2006		
AB26	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB27	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB28	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB29	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB30	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	

AB31	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB32	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB33	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB34	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB35	Sarcophagidae	Helicobia		sp.	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB36	Sarcophagidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB37		Lucilia		coeruleiviridis Macquart	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB38		Lucilia		coeruleiviridis Macquart	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB39		Cochliomyia		macellaria (Fabricius)	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB40	Calliphoridae Sarcophagidae	Boettcheria		latisterna Parker	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB41	Calliphoridae Sarcophagidae	Ravinia		derelicta (Walker)	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB42	Calliphoridae Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB43	Sarcophagidae	Spirobolomyia		sp.	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB44	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AB45	Sarcophagidae	Spirobolomyia		singularis (Aldrich)	M	Florida	Washington	Falling Waters State Park			V.9.2006	
AB46	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AB47	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AB48	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AB49	Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB50	Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB51	Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB52	Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB53	Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB54	Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB55	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB56	Sarcophagidae	Sarcophaga		sp.	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB57	Sarcophagidae	Helicobia		sp.	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB58	Sarcophagidae	Helicobia		sp.	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB59		Cochliomyia		macellaria (Fabricius)	F	Florida	Washington	Falling Waters State Park			V.10.2006	ID checked
AB60	Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB61		Cochliomyia		macellaria (Fabricius)	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB62	Calliphoridae	Phormia		regina (Meigen)		Florida	Washington	Falling Waters State Park			V.10.2006	
AB63		Cochliomyia		macellaria (Fabricius)	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB64	Calliphoridae	Phormia		regina (Meigen)		Florida	Washington	Falling Waters State Park			V.10.2006	
AB65	Calliphoridae	Phormia		regina (Meigen)		Florida	Washington	Falling Waters State Park			V.10.2006	
AB66	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB67	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB68	Calliphoridae											
AB69	Calliphoridae Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB70	Calliphoridae	Lucilia		coeruleiviridis Macquart	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AB71		Phormia		regina (Meigen)		Florida	Washington	Falling Waters State Park			V.10.2006	
AB72		Cochliomyia		macellaria (Fabricius) M	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB73	Calliphoridae	Phormia		regina (Meigen)		Florida	Washington	Falling Waters State Park			V.10.2006	
AB74	Calliphoridae	Phormia		regina (Meigen) F		Florida	Washington	Falling Waters State Park			V.10.2006	
AB75	Calliphoridae Muscidae	Hydrotaea		ignava M	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AB76	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB77	Calliphoridae Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AB78		Phormia		regina (Meigen)		Florida	Washington	Falling Waters State Park			V.10.2006	
AB79	Calliphoridae	Phormia		regina (Meigen)		Florida	Washington	Falling Waters State Park			V.10.2006	
AB80		Phormia		regina (Meigen)		Florida	Washington	Falling Waters State Park			V.10.2006	
AB81	Calliphoridae	Phormia		regina (Meigen) M		Florida	Washington	Falling Waters State Park			V.10.2006	
AC01	Calliphoridae Muscidae				F	Florida	Washington	Falling Waters State Park			V.10.2006	
AC02	Calliphoridae Calliphoridae	Phormia		regina (Meigen) M	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AC03	Calliphoridae Muscidae	Hydrotaea		ignava M	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AC04	Muscidae	Hydrotaea		ignava	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AC05	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Washington	Falling Waters State Park			V.10.2006	
AC06	Calliphoridae	Phormia		regina (Meigen)	M	Florida	Washington	Falling Waters State Park			V.10.2006	
AC07	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich) M	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC08	Sarcophagidae	Sarcodexia		lambens Wiedemann M	MF	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC09	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich) M	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC10	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich) F	MF	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC11	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC12	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC13	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC14	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC15	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC16	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC17	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC18	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC19	Sarcophagidae	Sarcodexia		lambens Wiedemann	F	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC20	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC21	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC22	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC23	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC24	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC25	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC26	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC27	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC28	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC29	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC30	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC31	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	F	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC32	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC33	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC34	Sarcophagidae	Sarcodexia		lambens Wiedemann	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC35	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC36	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC37	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC38	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC39	Sarcophagidae				F	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC40	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	F	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC41	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	F	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC42	Sarcophagidae	Senotainia		sp.	F	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC43	Muscidae					Floridda	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC44	Sarcophagidae	Helicobia		sp.	F	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC45	Sarcophagidae	Titanogrypa	Titanogrypa	alata (Aldrich)	F	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC46	Muscidae	Stomoxys		calcitrans (Linnaeus)	F	Floridda	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC47	Sarcophagidae	Senotainia		sp.	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC48	Sarcophagidae	Senotainia		sp.	M	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC49	Muscidae				F	Floridda	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC50	Sarcophagidae				F	Florida	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC51	Muscidae	Musca		domestica Linnaeus	F	Floridda	Sarasota	Myakka River State Park	Dam area		V.11.2006	
AC52												
AC53												
AC54												
AC55												
AC56												
AC57												
AC58												
AC59	Sarcophagidae	Eumacronychia		sp.	M	Florida	Martin	Jonathon Dickinson State Park	trail		V.13.2006	
AC60	Sarcophagidae	Tricharea		sp.	F	Florida	Martin	Jonathon Dickinson State Park	trail		V.13.2006	
AC61												
AC62												
AC63												
AC64	Calliphoridae	Lucilia		cuprina Wiedemann	F	Florida	Marion	I-75 Rest Stop	south of Ocala		V.10.2006	
AC65												
AC66												

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AC67												
AC68												
AC69	Sarcophagidae	Helicobia		sp.	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AC70	Calliphoridae	Chrysomya		rufifacies (Macquart)	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AC71	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AC72	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AC73	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AC74	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AC75	Sarcophagidae	Ravinia		derelicta (Walker)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AC76	Sarcophagidae	Ravinia		derelicta (Walker)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AC77	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AC78	Calliphoridae	Chrysomya		rufifacies (Macquart)		Florida	Highland	Archbold Biological Station			V.12.2006	
AC79	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AC80	Sarcophagidae	Senotainia		sp.	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AC81	Sarcophagidae	Ravinia		derelicta (Walker)	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD01	Sarcophagidae	Ravinia		derelicta (Walker)	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD02	Sarcophagidae	Ravinia		derelicta (Walker)	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD03	Sarcophagidae	Helicobia		sp.	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD04	Sarcophagidae	Helicobia		sp.	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD05	Sarcophagidae	Blaesoxipha		sp.	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD06	Sarcophagidae	Ravinia		derelicta (Walker)	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD07	Sarcophagidae	Ravinia		derelicta (Walker)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD08	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD09	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD10	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD11	Sarcophagidae	Ravinia		derelicta (Walker)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD12	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD13	Muscidae				F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD14	Muscidae	Musca		autumnalis De Geer	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD15	Muscidae	Musca		autumnalis De Geer	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD16	Muscidae				F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD17	Calliphoridae	Lucilia		cluvia (Walker)	F	Florida	Highland	Archbold Biological Station			V.12.2006	ID checked TW
AD18	Calliphoridae	Lucilia		coeruleiviridis Macquart	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD19	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD20	Calliphoridae	Lucilia		cluvia (Walker)	F	Florida	Highland	Archbold Biological Station			V.12.2006	ID checked TW
AD21	Calliphoridae	Phormia		regina (Meigen)	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD22	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD23	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Highland	Archbold Biological Station			V.12.2006	
AD24	Muscidae					Florida	Highland	Archbold Biological Station			V.12.2006	
AD25	Muscidae					Florida	Highland	Archbold Biological Station			V.12.2006	
AD26	Muscidae					Florida	Highland	Archbold Biological Station			V.12.2006	
AD27	Muscidae					Florida	Highland	Archbold Biological Station			V.12.2006	
AD28	Muscidae					Florida	Highland	Archbold Biological Station			V.12.2006	
AD29	Sarcophagidae	Amobia		floridensis (Townsend)	M	Florida	Volusia	Tomoka State Park			V.14.2006	
AD30	Sarcophagidae	Taxigramma		hilarella (Zetterstedt)	M	Florida	Highland	Archbold Biological Station			V.12.2006	
AD31	Sarcophagidae	Ravinia		floridensis (Aldrich)	M	Florida	Martin	Jonathon Dickinson State Park	Observation tower		V.13.2006	
AD32	Sarcophagidae	Amobia		erythrura (Wulp)	M	Florida	Martin	Jonathon Dickinson State Park	Observation tower		V.13.2006	
AD33	Sarcophagidae	Amobia		erythrura (Wulp)	M	Florida	Martin	Jonathon Dickinson State Park	Observation tower		V.13.2006	
AD34	Sarcophagidae	Senotainia		sp.	M	Florida	Martin	Jonathon Dickinson State Park	trail		V.13.2006	
AD35	Sarcophagidae	Senotainia		sp.	M	Florida	Martin	Jonathon Dickinson State Park	trail		V.13.2006	
AD36	Sarcophagidae	Amobia		floridensis (Townsend)	M	Florida	Martin	Jonathon Dickinson State Park	Trail		V.13.2006	
AD37	Sarcophagidae	Senotainia		sp.	M	Florida	Martin	Jonathon Dickinson State Park	trail		V.13.2006	
AD38	Sarcophagidae	Senotainia		sp.	M	Florida	Martin	Jonathon Dickinson State Park	trail		V.13.2006	
AD39	Tachinidae				M	Florida	Martin	Jonathon Dickinson State Park	Trail		V.13.2006	
AD40	Sarcophagidae	Ravinia		derelicta (Walker)	M	Florida	Martin	I-95 Rest Stop			V.13.2006	
AD41	Sarcophagidae	Ravinia		floridensis (Aldrich)	F	Florida	Martin	I-95 Rest Stop			V.13.2006	
AD42	Sarcophagidae	Ravinia		derelicta (Walker)	M	Florida	Martin	I-95 Rest Stop			V.13.2006	
AD43	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD44	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD45	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD46	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD47	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD48	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD49	Calliphoridae	Lucilia		cluvia (Walker)	F	Florida	Volusia	Tomoka State Park			V.14.2006	ID checked TW
AD50	Muscidae				F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD51	Muscidae				F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD52	Muscidae				F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD53	Muscidae				F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD54	Muscidae				F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD55	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD56	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD57	Sarcophagidae	Amobia		erythrura (Wulp)	M	Florida	Volusia	Tomoka State Park			V.14.2006	
AD58	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD59	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD60	Sarcophagidae	Ravinia		stimulans (Walker)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD61	Sarcophagidae	Ravinia		stimulans (Walker)	F	Florida	Volusia	Tomoka State Park			V.14.2006	
AD62	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Florida?						
AD63	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Florida?						
AD64	Sarcophagidae	Ravinia		stimulans (Walker)	M	Florida?						
AD65	Sarcophagidae	Ravinia		stimulans (Walker)	M	Florida?						
AD66	Sarcophagidae	Ravinia		stimulans (Walker)	M	Florida?						
AD67	Sarcophagidae	Ravinia		stimulans (Walker)	M	Florida?						
AD68	Sarcophagidae	Ravinia		stimulans (Walker)	M	Florida?						
AD69	Sarcophagidae	Helicobia		sp.	F	South Carolina	Greenville	I-26 Rest Stop	Welcome center		V.22.2006	
AD70	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD71	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD72	Calliphoridae	Phormia		regina (Meigen)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD73	Calliphoridae	Phormia		regina (Meigen)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD74	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD75	Calliphoridae	Phormia		regina (Meigen)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD76	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD77	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD78	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD79	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD80	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AD81	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE01	Calliphoridae	Phormia		regina (Meigen)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE02	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE03	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE04	Calliphoridae	Phormia		regina (Meigen)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE05	Calliphoridae	Phormia		regina (Meigen)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE06	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE07	Calliphoridae	Phormia		regina (Meigen)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE08	Calliphoridae	Phormia		regina (Meigen)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE09	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE10	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	OHV Area		V.23.2006	
AE11	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area		V.23.2006	
AE12	Sarcophagidae	Ravinia		stimulans (Walker)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area		V.23.2006	
AE13	Tachinidae				M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans		V.23.2006	
AE14	Tachinidae				M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans		V.23.2006	
AE15	Tachinidae				M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans		V.23.2006	
AE16	Sarcophagidae	Boettcheria		latisterna Parker	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans		V.23.2006	
AE17	Sarcophagidae	Spirobolomyia		sp.	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans		V.23.2006	
AE18	Tachinidae				F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans		V.23.2006	
AE19	Calliphoridae	Phormia		regina (Meigen)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans		V.23.2006	
AE20	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans		V.23.2006	
AE21	Tachinidae				F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans		V.23.2006	

AE22	Sarcophagidae	Sarcophaga	Wohlfahrtiopsis	utilis Aldrich		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE23	Sarcophagidae	Sarcophaga	Wohlfahrtiopsis	utilis Aldrich		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE24	Sarcophagidae	Sarcophaga	Wohlfahrtiopsis	utilis Aldrich		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE25	Sarcophagidae	Amobia		oculata (Zetterstedt)		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE26	Calliphoridae	Phormia		regina (Meigen)		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE27	Calliphoridae	Cochliomyia		macellaria (Fabricius)		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE28	Calliphoridae	Cochliomyia		macellaria (Fabricius)		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE29	Calliphoridae	Cochliomyia		macellaria (Fabricius)		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE30	Sarcophagidae	Blaesoxipha		sp.		F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE31	Calliphoridae	Phormia		regina (Meigen)		F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE32	Calliphoridae	Phormia		regina (Meigen)		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE33	Calliphoridae	Phormia		regina (Meigen)		F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE34	Calliphoridae	Phormia		regina (Meigen)		F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE35	Calliphoridae	Phormia		regina (Meigen)		F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE36	Calliphoridae	Phormia		regina (Meigen)		F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE37	Calliphoridae	Phormia		regina (Meigen)		F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE38	Calliphoridae	Phormia		regina (Meigen)		F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006	
AE39	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker		M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.22.2006	
AE40	Calliphoridae	Phormia		regina (Meigen)		F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AE41		Calliphora		vomitoria (Linnaeus)		M	Georgia	Rabun	Rabun Bald	base	V.24.2006	
AE42		Calliphora		vomitoria (Linnaeus)		F	Georgia	Rabun	Rabun Bald	base	V.24.2006	
AE43	Sarcophagidae	Tripanurga		sp.		M	Oregon	Klamath	US-97 Rest stop	near Beaver Marsh	VI.7.2006	
AE44	Calliphoridae Sarcophagidae	Tripanurga		sp.		M	Oregon	Klamath	US-97 Rest stop	near Beaver Marsh	VI.7.2006	
AE45	Calliphoridae Sarcophagidae	Ravinia		planifrons (Aldrich)		M	Oregon	Klamath	US-97 Rest stop	near Beaver Marsh	VI.7.2006	
AE46	Sarcophagidae	Ravinia		anxia (Walker)		F	Oregon	Klamath	US-97 Rest stop	near Beaver Marsh	VI.7.2006	
AE47	Sarcophagidae	Tripanurga		sp.		F	Oregon	Klamath	US-97 Rest stop	near Beaver Marsh	VI.7.2006	
AE48	Sarcophagidae	Sarcophaga		sp.		M	California	Glenn	I-5 Rest Stop	Near Artois	VI.7.2006	
AE49	Sarcophagidae	Sarcophaga		sp.		M	California	Glenn	I-5 Rest Stop	Near Artois	VI.7.2006	
AE50	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE51	Sarcophagidae	Ravinia		errabunda (Wulp)		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE52	Sarcophagidae	Ravinia		stimulans (Walker)		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE53	Sarcophagidae	Blaesoxipha		sp.		F	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE54	Sarcophagidae	Ravinia		anxia (Walker)		F	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE55	Sarcophagidae	Sarcophaga		sp.		F	California	Glenn	I-5 Rest Stop	Near Artois	VI.7.2006	
AE56	Sarcophagidae	Wohlfahrtia		vigil (Walker)		F	California	Glenn	I-5 Rest Stop	Near Artois	VI.7.2006	
AE57	Sarcophagidae	Ravinia		derelicta (Walker)?		F	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE58	Muscidae					F	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE59		Lucilia		sericata (Meigen)		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE60	Calliphoridae	Lucilia		mexicana Macquart		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	ID checked TW
AE61	Calliphoridae	Lucilia		cuprina Wiedemann		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	ID changed Dec.31, 2009
AE62	Calliphoridae	Lucilia		sericata (Meigen)		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE63	Calliphoridae	Lucilia		mexicana Macquart		F	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	ID checked TW
AE64	Calliphoridae	Lucilia		sericata (Meigen)		F	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE65	Calliphoridae	Lucilia		sericata (Meigen)		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE66	Calliphoridae	Lucilia		sericata (Meigen)		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE67	Calliphoridae	Phormia		regina (Meigen)		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE68	Calliphoridae	Lucilia		sericata (Meigen)		M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE69	Calliphoridae Muscidae					F	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE70	Muscidae					M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE71	Calliphoridae Muscidae					F	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE72	Muscidae					M	California	Glenn	I-5 Rest Stop	near Artois	VI.7.2006	
AE73	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)		M	California	Shasta	I-5 Rest Stop	Shasta Lake overview	VI.7.2006	
AE74	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)		M	California	Shasta	I-5 Rest Stop	Shasta Lake overview	VI.7.2006	
AE75	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)		M	California	Shasta	I-5 Rest Stop	Shasta Lake overview	VI.7.2006	
AE76	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)		F	California	Shasta	I-5 Rest Stop	Shasta Lake overview	VI.7.2006	
AE77	Sarcophagidae	Helicobia		sp.		F	California	Shasta	I-5 Rest Stop	Shasta Lake overview	VI.7.2006	
AE78	Calliphoridae	Calliphora		latifrons Hough		M	California	Siskiyou	US-97 Rest stop	Grass Lake	VI.7.2006	
AE79	Sarcophagidae	Ravinia		anxia (Walker)		M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AE80	Sarcophagidae	Ravinia		anxia (Walker)		M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AE81	Sarcophagidae	Ravinia		anxia (Walker)		M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AF01	Sarcophagidae	Brachicoma		setosa Coquillett		M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AF02	Sarcophagidae	Brachicoma		setosa Coquillett		M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AF03	Sarcophagidae	Ravinia		querula (Walker)		M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AF04	Sarcophagidae	Tripanurga		sp.		M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AF05	Sarcophagidae	Ravinia		planifrons (Aldrich)		M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AF06	Sarcophagidae	Ravinia		planifrons (Aldrich)		M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AF07	Conopidae						California	Siskiyou	US-97 Rest Stop	Grass Lake	VI.7.2006	
AF08	Tachinidae					M	California	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AF09	Tachinidae					M	Oregon	Siskiyou	US-97 Rest stop	Grass lake	VI.7.2006	
AF10	Calliphoridae	Protophormia		terraenovae (Robineau-Desvoidy)		F	California	Siskiyou	US-97 Rest stop	Grass Lake	VI.7.2006	ID changed; Whitworth ID
AF11		Calliphora		vomitoria (Linnaeus)			California	Siskiyou	US-97 Rest stop	Grass Lake	VI.7.2006	
AF12	Calliphoridae	Phormia		regina (Meigen)		M	California	Siskiyou	US-97 Rest stop	Grass Lake	VI.7.2006	
AF13	Calliphoridae	Phormia		regina (Meigen)		M	California	Siskiyou	US-97 Rest stop	Grass Lake	VI.7.2006	
AF14	Calliphoridae	Calliphora		latifrons Hough		F	Oregon	Clackamas	Mini Crater Lake		VI.9.2006	
AF15		Calliphora		latifrons Hough		M	Oregon	Clackamas	Mini Crater Lake		VI.9.2006	
AF16	Sarcophagidae	Ravinia		querula (Walker)		M	Oregon	Clackamas	Mini Crater Lake		VI.9.2006	
AF17	Calliphoridae Tachinidae					M	Oregon	Clackamas	Mini Crater Lake		VI.9.2006	
AF18	Calliphoridae Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker		M	Oregon	Crook	Ococho Reservoir	Fish cleaning station	V.8.2006	
AF19		Calliphora		vicina Robineau-Desvoidy	M		Washington	Clark	I-5 Rest Stop	Welcome Center	VI.9.2006	
AF20		Lucilia		illustris (Meigen)		F	Washington	Clark	I-5 Rest Stop	Welcome center	VI.9.2006	
AF21		Calliphora		latifrons Hough		F	Washington	Clark	I-5 Rest Stop	Welcome Center	VI.9.2006	ID checked
AF22	Calliphoridae	Calliphora		vicina Robineau-Desvoidy			Washington	Clark	I-5 Rest Stop	Welcome Center	VI.9.2006	
AF23	Calliphoridae Tachinidae					M	Washington	Clark	I-5 Rest Stop	Welcome Center	VI.9.2006	
AF24	Calliphoridae	Pollenia		rudis (Fabricius)		M	Washington	Clark	I-5 Rest Stop	Welcome center	VI.9.2006	ID checked TW
AF25	Calliphoridae	Phormia		regina (Meigen)	M	M	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF26	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF27	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF28	Calliphoridae	Phormia		regina (Meigen)	M	F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF29	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF30	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF31	Sarcophagidae	Sarcophaga		sp.		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF32	Sarcophagidae	Sarcophaga		sp.		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF33	Sarcophagidae	Sarcophaga		sp.		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF34	Sarcophagidae	Sarcophaga		sp.		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF35	Sarcophagidae	Sarcophaga		sp.		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF36	Sarcophagidae	Sarcophaga		sp.		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF37	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF38	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF39	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF40	Sarcophagidae	Sarcophaga		sp.		F	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF41	Calliphoridae	Phormia		regina (Meigen)		F	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF42	Muscidae					F	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF43	Muscidae					M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF44	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF45	Calliphoridae	Phormia		regina (Meigen)		F	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF46	Calliphoridae	Phormia		regina (Meigen)		F	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF47		Lucilia		sericata (Meigen)		F	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF48	Calliphoridae	Phormia		regina (Meigen)		F	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF49	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF50	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF51	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF52	Calliphoridae	Phormia		regina (Meigen)		F	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF53	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF54	Calliphoridae	Phormia		regina (Meigen)		F	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF55	Calliphoridae	Phormia		regina (Meigen)		M	California	Yolo	Rest Stop	South of Caluso	VI.9.2006	
AF56	Sarcophagidae	Sarcophaga		sp.		M	Oregon	Linn	I-5 Rest Stop	south of Harrisburg	VI.10.2006	
AF57	Calliphoridae	Lucilia		silvarum (Meigen)		M	Oregon	Linn	I-5 Rest Stop	south of Harrisburg	VI.10.2006	

AF58	Calliphoridae	Lucilia		silvarum (Meigen)	F	Oregon	Linn	I-5 Rest Stop	south of Harrisburg	VI.10.2006	
AF59	Calliphoridae	Lucilia		silvarum (Meigen)	M	Oregon	Linn	I-5 Rest Stop	south of Harrisburg	VI.10.2006	
AF60	Calliphoridae	Lucilia		silvarum (Meigen)	M	Oregon	Linn	I-5 Rest Stop	south of Harrisburg	VI.10.2006	
AF61	Sarcophagidae	Sarcophaga	Neobellieria	cooleyi Parker	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AF62	Sarcophagidae	Sarcophaga		sp.	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AF63	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF64	Muscidae				F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF65	Calliphoridae	Calliphora		terraenovae Macquart	M	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF66	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF67	Muscidae				M	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF68	Calliphoridae	Pollenia		rudis (Fabricius)	F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	ID checked TW
AF69	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF70	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF71	Muscidae				F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF72	Muscidae				F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF73	Calliphoridae	Lucilia		sp.	F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF74	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	ID changed Dec. 31, 2009
AF75	Muscidae				F	Oregon	Crook	Ococho Reservoir	Fish cleaning station	VI.8.2006	
AF76	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AF77	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AF78	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AF79	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AF80	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AF81	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG01	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG02	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG03	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG04	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG05	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG06	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG07	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG08	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG09	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG10	Calliphoridae	Calliphora		latifrons Hough	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG11	Sarcophagidae	Sarcophaga		sp.	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG12	Muscidae				F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG13	Muscidae				F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG14	Muscidae				M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG15	Calliphoridae	Cynomya		cadaverina Robineau-Desvoidy	M	Oregon	Benton	Mary's Peak		VI.10.2006	
AG16	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Benton	Mary's Peak		VI.10.2006	
AG17	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Benton	Mary's Peak		VI.10.2006	
AG18	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Benton	Mary's Peak		VI.10.2006	
AG19	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Oregon	Clatsop	Astoria	Best Western parking lot fences	VI.10.2006	
AG20	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Oregon	Clatsop	Astoria	Best Western parking lot fences	VI.10.2006	
AG21	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Oregon	Clatsop	Astoria	Best Western parking lot fences	VI.10.2006	
AG22	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Clatsop	Astoria	Best Western parking lot fences	VI.10.2006	
AG23	Calliphoridae	Calliphora		latifrons Hough	M	Oregon	Clatsop	Astoria	Best Western parking lot fences	VI.10.2006	
AG24	Calliphoridae	Calliphora		latifrons Hough	M	Oregon	Clatsop	Astoria	Best Western parking lot fences	VI.10.2006	
AG25	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	M	Oregon	Clatsop	Astoria	Best Western parking lot fences	VI.10.2006	
AG26	Sarcophagidae	Boettcheria		litorosa (Reinhard)	M	Oregon	Clatsop	Astoria	Best Western parking lot fences	VI.10.2006	
AG27	Sarcophagidae	Sarcophaga	Neobellieria	cooleyi Parker	M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG28	Sarcophagidae	Ravinia		querula (Walker)	M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG29	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AG30	Sarcophagidae	Ravinia		querula (Walker)	M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG31	Sarcophagidae	Ravinia		querula (Walker)	M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG32	Sarcophagidae	Ravinia		querula (Walker)	M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG33	Sarcophagidae	Ravinia		querula (Walker)	M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG34	Sarcophagidae	Ravinia		planifrons (Aldrich)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AG35	Sarcophagidae	Metopia		sp.	M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG36	Sarcophagidae	Sarcophaga	Neobellieria	cooleyi Parker	M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG37	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Benton	Mary's Peak		VI.10.2006	
AG38	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Benton	Mary's Peak		VI.10.2006	
AG39	Muscidae				M	Oregon	Lane	Coburg		VI.10.2006	
AG40	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG41	Sarcophagidae	Blaesoxipha		sp.	F	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG42	Calliphoridae	Calliphora		latifrons Hough	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG43	Calliphoridae	Calliphora		latifrons Hough	M	Oregon	Crook	Powell Butte	6645 SW Steffey Ln.	VI.8.2006	
AG44	Calliphoridae	Lucilia		sericata (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AG45	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG46	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG47	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AG48	Sarcophagidae	Ravinia		anxia (Walker)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AG49	Sarcophagidae	Ravinia		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AG50	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG51	Sarcophagidae	Ravinia		anxia (Walker)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AG52	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG53	Calliphoridae	Calliphora		coloradensis Hough	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	ID checked
AG54	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.8.2006	
AG55	Sarcophagidae	Blaesoxipha		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AG56	Sarcophagidae	Blaesoxipha		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AG57	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AG58	Sarcophagidae	Sarcophaga		sp.	F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG59	Calliphoridae	Lucilia		illustris (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG60	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AG61	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AG62	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG63	Calliphoridae	Lucilia		illustris (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG64	Sarcophagidae	Ravinia		sp.	F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG65	Calliphoridae	Lucilia		illustris (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG66	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AG67	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AG68	Calliphoridae	Lucilia		illustris (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG69	Calliphoridae	Calliphora		vomitoria (Linnaeus)	F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG70	Muscidae				M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG71	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG72	Calliphoridae	Lucilia		elongata Shannon	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG73	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AG74	Sarcophagidae	Sarcophaga		sp.	F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG75	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG76	Calliphoridae	Lucilia		elongata Shannon	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG77	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AG78	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG79	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AG80	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AG81	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH01	Calliphoridae	Lucilia		sericata (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH02	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH03	Calliphoridae	Calliphora		latifrons Hough	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH04	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH05	Sarcophagidae	Sarcophaga		sp.	F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH06	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AH07	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH08	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AH09	Muscidae	Musca		domestica Linnaeus	F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH10	Calliphoridae	Pollenia		rudis (Fabricius)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	ID checked TW
AH11	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH12	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	

AH13	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH14	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH15	Muscidae					F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH16	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH17	Sarcophagidae	Senotainia		sp.		F	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH18	Sarcophagidae	Boettcheria		litorosa (Reinhard)		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH19	Sarcophagidae	Sarcophaga		sp.		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH20	Sarcophagidae	Sarcophaga		sp.		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH21	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH22	Sarcophagidae	Sarcophaga	Liosarcophaga	shermani Parker		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH23	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH24	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Douglas	I-5 Rest Stop	near Oakland	VI.11.2006	
AH25	Sarcophagidae	Sarcophaga		sp.		F	Oregon	Douglas	Umpqua National Forest	Crashing rivers viewpoint	VI.11.2006	
AH26	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH27	Tachinidae					M	Oregon	Douglas	Umpqua National Forest	Crashing rivers viewpoint	VI.11.2006	
AH28	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH29	Calliphoridae	Lucilia		illustris (Meigen)		M	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH30	Calliphoridae	Lucilia		illustris (Meigen)		M	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH31	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH32	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH33	Calliphoridae	Calliphora		latifrons Hough		M	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH34	Calliphoridae	Calliphora		latifrons Hough		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH35	Calliphoridae	Pollenia		angustigena Wainwright		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	ID checked TW
AH36	Calliphoridae	Pollenia		angustigena Wainwright		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	ID checked TW
AH37	Calliphoridae	Lucilia		elongata Shannon		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	ID changed Dec. 31, 2009; DET TW
AH38	Calliphoridae	Lucilia		illustris (Meigen)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH39	Calliphoridae	Lucilia		illustris (Meigen)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH40	Calliphoridae	Lucilia		illustris (Meigen)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH41	Calliphoridae	Calliphora		vomitoria (Linnaeus)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH42	Sarcophagidae	Ravinia		querula (Walker)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH43	Sarcophagidae	Boettcheria		litorosa (Reinhard)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH44	Sarcophagidae	Sarcophaga	Liosarcophaga	shermani Parker		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH45	Sarcophagidae	Sarcophaga		sp.		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH46	Sarcophagidae	Sarcophaga		sp.		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH47	Sarcophagidae	Sarcophaga	Liosarcophaga	shermani Parker		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH48	Sarcophagidae	Sarcophaga	Liosarcophaga	shermani Parker		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH49	Sarcophagidae	Sarcophaga		sp.		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH50	Sarcophagidae	Metopia		sp.		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH51	Sarcophagidae	Ravinia		querula (Walker)		F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH52	Sarcophagidae	Ravinia		anxia (Walker)		F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AH53	Muscidae					F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH54	Muscidae					F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH55	Muscidae					F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH56	Calliphoridae	Pollenia		rudis (Fabricius)		F	Oregon	Crook	Ococho Reservoir		VI.8.2006	ID checked TW
AH57	Calliphoridae	Calliphora		livida Hall		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	ID checked
AH58	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH59	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH60	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH61	Calliphoridae	Calliphora		vicina Robineau-Desvoidy			Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH62	Calliphoridae	Calliphora		vicina Robineau-Desvoidy			Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH63	Calliphoridae	Calliphora		vicina Robineau-Desvoidy			Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH64	Calliphoridae	Calliphora		vicina Robineau-Desvoidy			Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH65	Calliphoridae	Calliphora		vicina Robineau-Desvoidy			Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH66	Calliphoridae	Calliphora		livida Hall		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH67	Calliphoridae	Phormia		regina (Meigen)	F	F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH68	Calliphoridae	Phormia		regina (Meigen)	F	M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH69	Calliphoridae	Phormia		regina (Meigen)	F	F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH70	Calliphoridae	Calliphora		latifrons Hough	F	F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH71	Calliphoridae	Phormia		regina (Meigen)	F	F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH72	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH73	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH74	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH75	Sarcophagidae	Sarcophaga	Neobellieria	cooleyi Parker		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH76	Sarcophagidae	Sarcophaga	Neobellieria	cooleyi Parker		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH77	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)		M	Oregon	Crook	Ococho Reservoir		VI.8.2006	
AH78	Calliphoridae	Calliphora		vomitoria (Linnaeus)		F	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH79	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH80	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AH81	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Umqua Natl. Forest	Crashing rivers viewpoint	VI.11.2006	
AI01		Calliphora		vomitoria (Linnaeus)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI02		Calliphora		vomitoria (Linnaeus)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI03	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI04	Calliphoridae	Protophormia		terraenovae (Robineau-Desvoidy)		M	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI05	Calliphoridae	Protophormia		terraenovae (Robineau-Desvoidy)		M	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI06		Calliphora		latifrons Hough		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI07	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI08	Muscidae					F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI09	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI10	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI11	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI12	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI13	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI14	Muscidae					F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI15	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI16	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI17	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI18	Calliphoridae	Phormia		regina (Meigen)		M	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI19	Muscidae					F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI20	Muscidae					F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI21	Muscidae					F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI22	Muscidae					F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI23	Calliphoridae	Phormia		regina (Meigen)		F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI24	Muscidae					F	Oregon	Douglas	Diamond Lake		VI.11.2006	
AI25+												
AJ01	Calliphoridae	Calliphora		latifrons Hough		F	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ02	Calliphoridae	Calliphora		grahami Aldrich		F	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ03	Tachinidae					F	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ04	Tachinidae					F	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ05	Sarcophagidae	Brachicoma		setosa Coquillett		F	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ06	Calliphoridae	Calliphora		latifrons Hough		F	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ07	Sarcophagidae	Brachicoma		setosa Coquillett		F	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ08	Calliphoridae	Calliphora		grahami Aldrich		M	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ09	Sarcophagidae	Brachicoma		setosa Coquillett		M	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ10	Calliphoridae	Calliphora		grahami Aldrich		M	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ11	Sarcophagidae	Blaesoxipha	Acanthodotheca	sp.		M	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ12	Sarcophagidae	Sarcophaga	Bercaea	africa (Wiedemann)		M	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ13	Sarcophagidae	Sarcophaga	Bercaea	africa (Wiedemann)		M	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AJ14	Muscidae					M	Oregon	Curry	I-101 Rest Stop	Welcome Center North of Brookings	VI.13.2006	
AJ15	Calliphoridae	Calliphora		terraenovae Macquart		F	Oregon	Curry	I-101 N Rest stop	Welcome Center North of Brookings	VI.13.2006	
AJ16	Sarcophagidae	Ravinia		anxia (Walker)		F	Oregon	Curry	I-101 Rest Stop	Welcome Center North of Brookings	VI.13.2006	
AJ17	Sarcophagidae	Sarcophaga	Neobellieria	cooleyi Parker		M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ18	Sarcophagidae	Ravinia		anxia (Walker)		M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ19	Sarcophagidae	Ravinia		querula (Walker)		M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ20		Calliphora		latifrons Hough		M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ21	Sarcophagidae	Sarcophaga		sp.		F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ22	Sarcophagidae	Sarcophaga		sp.		F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ23	Calliphoridae	Ravinia		querula (Walker)		F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	

AJ24	Sarcophagidae	Blaesoxipha		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ25	Sarcophagidae	Sarcophaga		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ26	Sarcophagidae	Sarcophaga		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ27	Sarcophagidae	Blaesoxipha		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ28	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ29	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ30	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ31	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ32	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ33	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ34	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ35	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ36	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ37	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ38	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ39	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ40	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ41	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ42	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ43	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ44	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ45	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ46	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ47	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ48	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ49	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ50	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ51	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ52	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ53	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ54	Calliphoridae	Lucilia		sericata (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ55	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ56	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ57	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ58	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ59	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ60	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ61	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ62	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ63	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ64	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ65	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ66	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ67	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ68	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ69	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ70	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ71	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ72	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ73	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ74	Muscidae				F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ75	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ76	Calliphoridae	Lucilia		sericata (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ77	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ78	Calliphoridae	Lucilia		sericata (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ79	Calliphoridae	Calliphora		coloradensis Hough	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	ID checked
AJ80	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AJ81	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK01	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK02	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK03	Calliphoridae	Calliphora		latifrons Hough	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK04	Sarcophagidae	Ravinia		querula (Walker)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK05	Sarcophagidae	Ravinia		querula (Walker)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK06	Calliphoridae	Calliphora		latifrons Hough	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK07	Calliphoridae	Calliphora		latifrons Hough	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK08	Sarcophagidae	Ravinia		planifrons (Aldrich)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK09	Sarcophagidae	Ravinia		planifrons (Aldrich)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK10	Sarcophagidae	Blaesoxipha		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK11	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK12	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK13	Tachinidae				F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK14	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK15	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK16	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK17	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK18	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK19	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK20	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK21	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK22	Tachinidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK23	Muscidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK24	Muscidae				M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK25	Sarcophagidae	Ravinia		anxia (Walker)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK26	Sarcophagidae	Amobia		erythrura (Wulp)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK27	Sarcophagidae	Senotainia		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK28	Sarcophagidae	Eumacronychia		sp.	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK29	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK30	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK31	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK32	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK33	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Jefferson	Haystack Reservoir		VI.14.2006	
AK34	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Coos	The Sisters		VI.14.2006	
AK35	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Coos	The Sisters		VI.14.2006	
AK36	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Coos	The Sisters		VI.14.2006	
AK37	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Coos	The Sisters		VI.14.2006	
AK38	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Coos	The Sisters		VI.14.2006	
AK39	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Coos	The Sisters		VI.14.2006	
AK40	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Coos	The Sisters		VI.14.2006	
AK41	Calliphoridae	Phormia		regina (Meigen)	M	Oregon	Coos	The Sisters		VI.14.2006	
AK42	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Coos	The Sisters		VI.14.2006	
AK43	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Coos	The Sisters		VI.14.2006	
AK44	Calliphoridae	Phormia		regina (Meigen)	F	Oregon	Coos	The Sisters		VI.14.2006	
AK45	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK46	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK47	Calliphoridae	Calliphora		terraenovae Macquart	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK48	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK49	Calliphoridae	Pollenia		angustigena Wainwright	F	Oregon	Curry	Rest Stop	North of Brookings	VI.13.2006	ID checked TW
AK50	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK51	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK52	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK53	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK54	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK55	Calliphoridae	Calliphora		latifrons Hough	F	Oregon	Curry	Roadside rest	North of Brookings	VI.13.2006	
AK56	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	M	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AK57	Calliphoridae	Lucilia		illustris (Meigen)	F	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AK58	Muscidae				F	Oregon	Coos	Suislaw Natl. Forest	Coastal dunes S of Lakeside	VI.13.2006	
AK59	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 1:30-2:30	V.24.2006	

AK60	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 1:30-2:30	V.24.2006
AK61	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 1:30-2:30	V.24.2006
AK62	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 1:30-2:30	V.24.2006
AK63	Sarcophagidae	Sarcophaga	Bercaeopsis	sp.	M	Georgia	Rabun	Rabun Bald	Summit 1:30-2:30	V.24.2006
AK64	Sarcophagidae	Sarcophaga	Bercaeopsis	acrophila (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 1:30-2:30	V.24.2006
AK65	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 1:30-2:30	V.24.2006
AK66	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Georgia	Rabun	Rabun Bald	Summit 1:30-2:30	V.24.2006
AK67	Sarcophagidae	Boettcheria		bisetosa Parker	F	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006
AK68		Calliphora		vomitoria (Linnaeus)	F	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006
AK69		Calliphora		vomitoria (Linnaeus)	F	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006
AK70		Calliphora		vicina Robineau-Desvoidy	F	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006
AK71	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006
AK72	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006
AK73	Calliphoridae	Boettcheria		bisetosa Parker	M	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006
AK74	Calliphoridae	Sarcophaga	Neobellieria	triplasia Wulp	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AK75	Calliphoridae	Sarcophaga	Bercaeopsis	pulla Aldrich	M	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006
AK76	Tachinidae				F	Georgia	Rabun	Rabun Bald	Trail to summit 2:30-3:30	V.24.2006
AK77	Tachinidae				M	Georgia	Rabun	Rabun Bald	Trail to summit 2:30-3:30	V.24.2006
AK78	Tachinidae				M	Georgia	Rabun	Rabun Bald	Trail to summit 2:30-3:30	V.24.2006
AK79	Sarcophagidae	Lepidodexia	Neophyto	sheldoni (Coquillett)?	M	Georgia	Rabun	Rabun Bald	Trail from summit 2:30-3:30	V.24.2006
AK80	Sarcophagidae	Macronychia		aurata (Coquillett)	F	Georgia	Rabun	Rabun Bald	Trail from summit 2:30-3:30	V.24.2006
AK81	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Georgia	Rabun	Rabun Bald	Trail from summit 2:30-3:30	V.24.2006
AL01	Calliphoridae	Calliphora		livida Hall	M	Georgia	Rabun	Rabun Bald summit		V.24.2006
AL02	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Georgia	Rabun	Rabun Bald summit		V.24.2006
AL03	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL04	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL05	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL06	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL07	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL08	Tachinidae			M	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL09	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL10	Sarcophagidae	Sarcophaga	Neobellieria	triplasia Wulp	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL11	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL12	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL13	Sarcophagidae	Blaesoxipha		sp.	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL14	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL15	Sarcophagidae	Sarcophaga	Neobellieria	triplasia Wulp	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL16	Sarcophagidae	Sarcophaga	Bercaeopsis	acrophila (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL17	Sarcophagidae	Sarcophaga	Bercaeopsis	sp.	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL18	Sarcophagidae	Sarcophaga	Bercaeopsis	acrophila (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL19	Sarcophagidae	Sarcophaga	Bercaeopsis	hesterna Reinhard	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL20	Sarcophagidae	Blaesoxipha		sp.	M	Georgia	Rabun	Rabun Bald	Summit	V.24.2006
AL21	Sarcophagidae	Blaesoxipha		sp.	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area	V.23.2006
AL22	Sarcophagidae	Boettcheria		bisetosa Parker	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area & garbage cans	V.23.2006
AL23	Sarcophagidae	Boettcheria		cimbicis (Townsend)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area	V.23.2006
AL24	Sarcophagidae	Blaesoxipha		sp.	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area	V.23.2006
AL25	Tachinidae				M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area	V.23.2006
AL26	Sarcophagidae	Boettcheria		latisterna Parker	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Picnic Area	V.23.2006
AL27	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL28	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL29	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL30	Sarcophagidae	Sarcophaga	Bercaeopsis	acrophila (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL31	Sarcophagidae	Sarcophaga	Bercaea	africa (Wiedemann)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL32	Sarcophagidae	Ravinia		querula (Walker)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL33	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL34	Sarcophagidae	Sarcophaga	Bercaeopsis	acrophila (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL35	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL36	Sarcophagidae	Sarcophaga	Bercaeopsis	acrophila (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL37	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL38	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL39	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL40	Sarcophagidae	Sarcophaga	Bercaeopsis	acrophila (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL41	Sarcophagidae	Sarcophaga	Mehria	houghi Aldrich	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL42	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL43	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL44	Sarcophagidae	Sarcophaga	Bercaeopsis	acrophila (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL45	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL46	Sarcophagidae	Sarcophaga	Bercaeopsis	acrophila (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL47	Sarcophagidae	Blaesoxipha		sp.	M	Georgia	Rabun	Rabun Bald	Summit 11:30-12:30	V.24.2006
AL48	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL49	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL50	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL51	Tachinidae				F	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL52	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL53	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL54	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL55	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL56	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL57	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL58	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL59	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL60	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL61	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL62	Tachinidae				F	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL63	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL64	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL65	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL66	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL67	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL68	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL69	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL70	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL71	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006
AL72	Sarcophagidae	Sarcophaga	Bercaeopsis	tarsata Aldrich	M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL73	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL74	Sarcophagidae	Ravinia		stimulans (Walker)	M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL75	Tachinidae				M	Georgia	Rabun	Rabun Bald	Summit 12:30-1:30	V.24.2006
AL76	Tachinidae				F	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006
AL77	Sarcophagidae	Spirobolomyia		sp.	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006
AL78	Sarcophagidae	Blaesoxipha		sp.	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006
AL79	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006
AL80	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006
AL81	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006
AM01	Muscidae				F	Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006
AM02	Calliphoridae	Phormia		regina (Meigen)	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006
AM03	Calliphoridae	Phormia		regina (Meigen)	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006
AM04	Calliphoridae	Phormia		regina (Meigen)	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006
AM05	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006
AM06	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006
AM07	Sarcophagidae	Agria		housei (Shewell)	F	Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006
AM08	Sarcophagidae	Sarcophaga	Mehria	hinei Aldrich	F	Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006
AM09	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006
AM10	Sarcophagidae	Agria		housei (Shewell)	M	Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006
AM11	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006
AM12	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006
AM13	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006
AM14	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006

AM15	Calliphoridae	Phormia		regina (Meigen)	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM16	Calliphoridae	Phormia		regina (Meigen)	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM17	Calliphoridae	Phormia		regina (Meigen)	M	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM18	Calliphoridae	Phormia		regina (Meigen)	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM19	Calliphoridae	Lucilia		sericata (Meigen)	F	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM20	Muscidae					Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM21	Muscidae					Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM22	Muscidae					Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM23	Muscidae					Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM24	Muscidae					Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM25	Calliphoridae	Cynomya		cadaverina Robineau-Desvoidy	M	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM26	Calliphoridae	Cynomya		cadaverina Robineau-Desvoidy	M	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM27	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM28	Calliphoridae	Lucilia		illustris (Meigen)	M	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM29	Calliphoridae	Phormia		regina (Meigen)	M	Maine	Hancock	Acadia N.P.	Schoodic Center	VII.15.2006	
AM30	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM31	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM32	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM33	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM34	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM35	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM36	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM37	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM38	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM39	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM40	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM41	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM42	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM43	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM44	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM45	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM46	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM47	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM48	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM49	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM50	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM51	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM52	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM53	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM54	Calliphoridae	Pollenia		vagabunda (Meigen)	M	Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	ID checked TW
AM55	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM56	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM57	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM58	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM59	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM60	Tachinidae					Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM61	Sarcophagidae	Agria		housei (Shewell)	F	Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM62	Sarcophagidae	Sarcophaga	Mehria	hinei Aldrich	M	Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM63	Oestridae	Cephenemyia		sp.	M	Maine	Hancock	Acadia N.P.	Schoodic Head summit	VII.15.2006	
AM64	Tachinidae					Maine	Hancock	Acadia N.P.	Jordan's Pond	VII.15.2006	
AM65	Tachinidae					Maine	Hancock	Acadia N.P.	Jordan's Pond	VII.15.2006	
AM66	Tachinidae					Maine	Hancock	Acadia N.P.	Dorr Mt. summit	VII.15.2006	
AM67	Tachinidae					Maine	Hancock	Acadia N.P.	Dorr Mt. summit	VII.15.2006	
AM68	Tachinidae					Maine	Hancock	Acadia N.P.	Dorr Mt. summit	VII.15.2006	
AM69	Tachinidae					Maine	Hancock	Acadia N.P.	Dorr Mt. summit	VII.15.2006	
AM70	Sarcophagidae	Boettcheria		latisterna Parker	M	Maine	Hancock	Acadia N.P.	Dorr Mt. summit	VII.15.2006	
AM71	Tachinidae					Maine	Hancock	Acadia N.P.	Dorr Mt. summit	VII.15.2006	
AM72	Tachinidae					Maine	Hancock	Acadia N.P.	Dorr Mt. summit	VII.15.2006	
AM73	Tachinidae				F	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006	
AM74	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006	
AM75	Calliphoridae	Calliphora		vomitoria (Linnaeus)	F	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006	
AM76	Calliphoridae	Calliphora		vomitoria (Linnaeus)	F	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006	
AM77	Calliphoridae	Calliphora		vomitoria (Linnaeus)	F	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006	
AM78	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006	
AM79	Calliphoridae	Calliphora		vomitoria (Linnaeus)	F	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006	
AM80	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006	
AM81	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	Georgia	Rabun	Rabun Bald	Trail to summit	V.24.2006	
AN01	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006	
AN02	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006	
AN03	Sarcophagidae	Sarcophaga	Bercaeopsis	pleomenda Reinhard	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006	
AN04	Sarcophagidae	Sarcophaga	Mehria	houghi Aldrich	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006	
AN05	Sarcophagidae	Blaesoxipha		sp.	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006	
AN06	Sarcophagidae	Macronychia		n.sp. (spinosa of Downes)	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006	
AN07	Sarcophagidae	Sarcophaga	Bercaeopsis	seagoi (Dodge)	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006	
AN08	Sarcophagidae	Spirobolomyia		sp.	M	Georgia	Rabun	Rabun Bald	Summit 10:50-11:30	V.24.2006	
AN09	Tachinidae				M	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN10	Tachinidae				F	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN11	Sarcophagidae	Ravinia		stimulans (Walker)	F	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN12	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN13	Sarcophagidae	Ravinia		derelicta (Walker)	F	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN14	Sarcophagidae	Ravinia		lherminieri (Robineau-Desvoidy)	M	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN15	Sarcophagidae	Ravinia		lherminieri (Robineau-Desvoidy)	M	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN16	Sarcophagidae	Ravinia		lherminieri (Robineau-Desvoidy)	M	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN17	Sarcophagidae	Ravinia		lherminieri (Robineau-Desvoidy)	M	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN18	Sarcophagidae	Ravinia		derelicta (Walker)	M	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN19	Sarcophagidae	Helicobia		rapax (Walker)	M	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN20	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Tennessee	Jefferson	I-40 Rest Stop	near I-81 intersection	V.22.2006	
AN21	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN22	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN23	Sarcophagidae	Oxysarcodexia		sp.	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN24	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN25	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN26	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN27	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN28	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN29	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN30	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN31	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN32	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN33	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN34	Sarcophagidae	Oxysarcodexia		sp.	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN35	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN36	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN37	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN38	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN39	Sarcophagidae	Oxysarcodexia		sp.	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN40	Sarcophagidae	Oxysarcodexia		sp.	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN41	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN42	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN43	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN44	Sarcophagidae	Ravinia		derelicta (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN45	Sarcophagidae	Ravinia		derelicta (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN46	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN47	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN48	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN49	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	
AN50	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006	

AN51	Sarcophagidae	Ravinia		stimulans (Walker)	F	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN52	Calliphoridae	Phormia		regina (Meigen)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN53	Sarcophagidae	Ravinia		derelicta (Walker)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN54	Sarcophagidae	Ravinia		stimulans (Walker)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN55	Sarcophagidae	Ravinia		derelicta (Walker)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN56	Sarcophagidae	Ravinia		stimulans (Walker)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN57	Sarcophagidae	Ravinia		stimulans (Walker)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN58	Sarcophagidae	Ravinia		stimulans (Walker)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN59	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN60	Sarcophagidae	Ravinia		stimulans (Walker)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN61	Sarcophagidae	Ravinia		stimulans (Walker)	M	South Carolina	Newberry	Sumter NF; Enoree Dist.	Firetower Area	V.23.2006		
AN64	Sarcophagidae	Boettcheria		bisetosa Parker		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN65	Sarcophagidae	Boettcheria		latisterna Parker		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN66	Sarcophagidae	Sarcophaga	Bercaeopsis	fortisa Reinhard	M	Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN67	Sarcophagidae	Sarcophaga	Bercaeopsis	sp.	M	Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN68	Sarcophagidae	Sarcophaga	Bercaeopsis	fortisa Reinhard	M	Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN69	Sarcophagidae	Sarcophaga	Bercaeopsis	fortisa Reinhard	M	Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN70	Sarcophagidae	Sarcophaga	Bercaeopsis	pleomenda Reinhard	M	Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN71	Sarcophagidae	Sarcophaga	Bercaeopsis	pleomenda Reinhard	M	Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN72	Sarcophagidae	Sarcophaga		sp.	F	Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN73	Sarcophagidae	Boettcheria		bisetosa Parker		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN74	Sarcophagidae	Boettcheria		bisetosa Parker		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN75	Sarcophagidae	Sarcophaga		sp.	F	Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN76	Sarcophagidae	Sarcophaga		sp.	F	Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN77	Tachinidae					Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN78	Tachinidae					Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN79	Tachinidae					Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN80	Tachinidae					Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007		
AN81	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007	carrion	
AO01	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007	carrion	
AO02	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007	carrion	
AO03	Calliphoridae	Phormia		regina (Meigen)		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007	carrion	
AO04	Calliphoridae	Phormia		regina (Meigen)		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007	carrion	
AO05	Calliphoridae	Phormia		regina (Meigen)		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007	carrion	
AO06	Calliphoridae	Phormia		regina (Meigen)		Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007	carrion	
AO07	Tachinidae					Tennessee	Monroe	Cherokee National Forest	nr Tellico Plains on "Big Ridge"	IV.04.2007	carrion	
AO08	Sarcophagidae	Sarcophaga		aldrichi Parker	M	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO09	Sarcophagidae	Sarcophaga		aldrichi Parker	M	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO10	Sarcophagidae	Sarcophaga	Mehria	houghi Aldrich	M	Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO11	Sarcophagidae	Sarcophaga	Mehria	houghi Aldrich	M	Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO12	Sarcophagidae	Microcerella		sp.	M	Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO13	Calliphoridae	Lucilia		coeruleiviridis Macquart	M	Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO14	Calliphoridae	Lucilia		coeruleiviridis Macquart	M	Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO15	Calliphoridae	Calliphora		terraenovae Macquart	M	Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO16	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO17	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO18	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO19	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO20	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO21	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.12.2007	Malaise	
AO22	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO23	Calliphoridae	Calliphora		livida Hall	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	ID checked
AO24	Calliphoridae	Lucilia		illustris (Meigen)	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO25	Sarcophagidae	Boettcheria		latisterna Parker	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO26	Sarcophagidae	Boettcheria		cimbicis (Townsend)	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO27	Sarcophagidae	Sarcophaga		aldrichi Parker	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO28	Sarcophagidae	Sarcophaga		aldrichi Parker	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO29	Sarcophagidae	Sarcophaga		aldrichi Parker	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO30	Sarcophagidae	Sarcophaga		aldrichi Parker	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO31	Sarcophagidae	Sarcophaga	Mehria	houghi Aldrich ?	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO32	Sarcophagidae	Helicobia		rapax (Walker)	F	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO33	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO34	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO35	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO36	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO37	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO38	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO39	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO40	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO41	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO42	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO43	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO44	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO45	Calliphoridae	Lucilia		illustris (Meigen)	M	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO46	Calliphoridae	Calliphora		terraenovae Macquart	M	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO47	Sarcophagidae	Sarcophaga		aldrichi Parker	M	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO48	Sarcophagidae	Sarcophaga		aldrichi Parker	M	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO49	Sarcophagidae	Sarcophaga	Mehria	houghi Aldrich	M	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AO50	Sarcophagidae	Sarcophaga	Mehria	houghi Aldrich	M	Ohio	Hamilton	Anderson Twp.		V.1.2007	Malaise	
AP01	Tachinidae					New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP02	Tachinidae					New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP03	Tachinidae					New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP04	Tachinidae					New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP05	Tachinidae					New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP06	Sarcophagidae	Sarcophaga	Sarcophaga	subvicina Rohdendorf	M	New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP07	Sarcophagidae	Sarcophaga	Sarcophaga	subvicina Rohdendorf	M	New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP08	Calliphoridae	Calliphora		vomitoria (Linnaeus)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		ID checked
AP09	Calliphoridae	Lucilia		illustris (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP10	Calliphoridae	Lucilia		illustris (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP11	Calliphoridae	Lucilia		illustris (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP12	Calliphoridae	Lucilia		illustris (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP13	Calliphoridae	Lucilia		illustris (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP14	Calliphoridae	Lucilia		illustris (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP15	Calliphoridae	Lucilia		illustris (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP16	Calliphoridae	Lucilia		illustris (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP17	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP18	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP19	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP20	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP21	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP22	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP23	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP24	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP25	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP26	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP27	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP28	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP29	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP30	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP31	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP32	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP33	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP34	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP35	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP36	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP37	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP38	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		

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AP39	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP40	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP41	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP42	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP43	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP44	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP45	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP46	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP47	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP48	Calliphoridae	Phormia		regina (Meigen)		New York	Chautauqua	Long Point State Park	nr Bemus Pt.	VI.08.2007		
AP49	Tachinidae					New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP50	Tachinidae					New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP51	Tachinidae					New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP52	Tachinidae					New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP53	Tachinidae					New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP54	Tachinidae					New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP55	Muscidae	Musca		sp.		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP56	Muscidae	Musca		sp.		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP57		Calliphora		vomitoria (Linnaeus)		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP58		Calliphora		vicina Robineau-Desvoidy		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP59	Calliphoridae	Lucilia		coeruleiviridis Macquart		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP60	Calliphoridae	Pollenia		pediculata Macquart		New York	Schuyler	Watkins Glen State Park		VI.09.2007		ID checked TW
AP61	Calliphoridae	Lucilia		illustris (Meigen)		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP62	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP63	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes	F	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP64	Calliphoridae	Calliphora		livida Hall		New York	Schuyler	Watkins Glen State Park		VI.09.2007	ID checked	
AP65	Calliphoridae	Sarcophaga		aldrichi Parker	M	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP66	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP67	Sarcophagidae	Oxysarcodexia		cingarus (Aldrich)	M	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP68	Sarcophagidae	Oxysarcodexia		cingarus (Aldrich)	M	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP69		Calliphora		vicina Robineau-Desvoidy		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP70		Calliphora		vicina Robineau-Desvoidy		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP71	Sarcophagidae	Helicobia		rapax (Walker)	M	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP72	Calliphoridae	Sarcophaga	Sarcophaga	subvicina Rohdendorf	M	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP73	Calliphoridae	Lucilia		coeruleiviridis Macquart		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP74		Lucilia		coeruleiviridis Macquart		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP75	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP76	Calliphoridae	Sarcophaga		aldrichi Parker	F	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP77	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP78	Sarcophagidae	Sarcophaga		sp.	F	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP79	Sarcophagidae	Boettcheria		latisterna Parker	F	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP80	Calliphoridae	Oxysarcodexia		sp.	F	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AP81	Sarcophagidae	Oxysarcodexia		sp.	F	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ01	Tachinidae					New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ02	Muscidae	Musca		sp.		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ03	Muscidae	Musca		sp.		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ04	Muscidae	Musca		sp.		New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ05	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ06	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ07	Calliphoridae	Calliphora		livida Hall		New York	Schuyler	Watkins Glen State Park		VI.09.2007	cannot find specimen	
AQ08	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ09	Sarcophagidae	Sarcophaga		sp.	F	New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ10	Tachinidae					New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ11	Tachinidae					New York	Schuyler	Watkins Glen State Park		VI.09.2007		
AQ12		Calliphora		vicina Robineau-Desvoidy		New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ13		Calliphora		vicina Robineau-Desvoidy		New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ14		Calliphora		vomitoria (Linnaeus)		New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ15	Calliphoridae	Calliphora		vomitoria (Linnaeus)		New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ16	Calliphoridae	Sarcophaga		aldrichi Parker	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ17	Calliphoridae	Sarcophaga		aldrichi Parker	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ18	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ19	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ20	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ21	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ22	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ23	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ24		Calliphora		vomitoria (Linnaeus)		New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ25	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ26	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ27	Sarcophagidae	Sarcophaga	Bercaea	africa Wiedemann	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ28	Tachinidae					New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ29	Calliphoridae	Calliphora		vomitoria (Linnaeus)		New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ30		Calliphora		vomitoria (Linnaeus)		New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ31	Calliphoridae	Cynomya		cadaverina Robineau-Desvoidy		New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007		
AQ32	Calliphoridae	Tachinidae				New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ33	Calliphoridae	Pollenia		angustigena Wainwright		New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007		ID checked TW
AQ34	Sarcophagidae	Metopia		sp.	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007		
AQ35	Sarcophagidae	Metopia		sp.	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007		
AQ36	Sarcophagidae	Metopia		sp.	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007		
AQ37	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007		
AQ38	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007		
AQ39		Lucilia		sericata (Meigen)		New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007		
AQ40	Sarcophagidae	Sarcophaga	Wohlfahrtiopsis	johnsoni Aldrich	M	New York	Richmond	Heckscher State Park	Long Island; along beach	VI.11.2007		
AQ41	Tachinidae					New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ42	Calliphoridae	Tachinidae				New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ43	Tachinidae					New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ44	Tachinidae					New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ45	Tachinidae					New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ46	Muscidae	Musca		sp.		New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ47	Muscidae	Musca		sp.		New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ48	Calliphoridae	Lucilia		sericata (Meigen)		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ49	Sarcophagidae	Sarcophaga	Liosarcophaga	sarracenioides Aldrich (?)	F	New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ50	Sarcophagidae	Helicobia		rapax (Walker)	F	New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ51	Calliphoridae	Phormia		regina (Meigen)		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ52	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ53	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ54		Lucilia		coeruleiviridis Macquart		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007		
AQ55	Tachinidae					New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ56	Tachinidae					New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ57	Calliphoridae	Tripanurga		importuna (Walker)	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ58	Sarcophagidae	Ravinia		querula (Walker)	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ59	Sarcophagidae	Tripanurga		importuna (Walker)	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ60	Sarcophagidae	Metopia		sp.	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ61	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		ID checked TW
AQ62		Lucilia		sericata (Meigen)		New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ63	Calliphoridae	Phormia		regina (Meigen)		New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ64	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AQ65	Calliphoridae	Sarcophaga		aldrichi Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AQ66	Sarcophagidae	Helicobia		rapax (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ67	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ68	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ69	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ70	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ71	Tachinidae					New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ72	Tachinidae					New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ73	Tachinidae					New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AQ74	Sarcophagidae	Metopia		sp.	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		

AQ75	Sarcophagidae	Metopia		sp.	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AQ76	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AQ77	Sarcophagidae	Tripanurga		importuna (Walker)	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AQ78	Sarcophagidae	Oxysarcodexia		sp.	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AQ79	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			ID checked TW
AQ80	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AQ81	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR01	Sarcophagidae	Sarcophaga	Liosarcophaga	sarracenioides Aldrich	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR02	Sarcophagidae	Metopia		argyrocephala (Meigen)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR03	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR04	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR05	Calliphoridae	Calliphora		vomitoria (Linnaeus)		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007	carrion		
AR06	Calliphoridae	Calliphora		vomitoria (Linnaeus)		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007	carrion		
AR07	Calliphoridae	Phormia		regina (Meigen)		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007	carrion		
AR08	Calliphoridae	Phormia		regina (Meigen)		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007	carrion		
AR09	Calliphoridae	Phormia		regina (Meigen)		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007	carrion		
AR10	Calliphoridae	Phormia		regina (Meigen)		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007	carrion		
AR11	Calliphoridae	Pollenia		pediculata Macquart		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007	carrion		ID checked TW
AR12	Muscidae					New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007			
AR13	Muscidae					New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007			
AR14	Muscidae					New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007			
AR15	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007			
AR16	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Richmond	James Baird State Park	E. of Poughkeepsie	VI.12.2007			
AR17	Calliphoridae	Lucilia		coeruleiviridis Macquart		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007	carrion		
AR18	Calliphoridae	Lucilia		sericata (Meigen)		New York	Dutchess	James Baird State Park	E. of Poughkeepsie	VI.12.2007	carrion		
AR19	Tachinidae					New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR20	Sarcophagidae	Sarcophaga	Neobellieria	triplasia Wulp	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR21	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR22	Calliphoridae	Phormia		regina (Meigen)		New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR23	Calliphoridae	Lucilia		silvarum (Meigen)		New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR24	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR25	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR26	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR27	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR28	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR29	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR30	Sarcophagidae	Tripanurga		importuna (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR31	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR32	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR33	Sarcophagidae	Ravinia		stimulans (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR34	Sarcophagidae	Metopia		argyrocephala (Meigen)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR35	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR36	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR37	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR38	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR39	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR40	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR41	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			same specimen listed twice?
AR42	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR43	Sarcophagidae	Sarcophaga		sp.	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR44	Sarcophagidae	Tripanurga		importuna (Walker)	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR45	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR46	Sarcophagidae	Tripanurga		importuna (Walker)	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR47	Sarcophagidae	Tripanurga		importuna (Walker)	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR48	Calliphoridae	Phormia		regina (Meigen)		New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR49	Sarcophagidae	Ravinia		querula (Walker)	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR50	Muscidae	Musca		sp.		New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR51	Sarcophagidae	Senotainia		trilineata (Wulp)	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR52	Sarcophagidae	Metopia		sp.	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR53	Sarcophagidae	Sarcophaga		sp.	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR54	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007			
AR55	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	lookout tower	VI.30.2007			
AR56	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	lookout tower	VI.30.2007			
AR57	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	lookout tower	VI.30.2007			
AR58	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	lookout tower	VI.30.2007			
AR59	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	lookout tower	VI.30.2007			
AR60	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	lookout tower	VI.30.2007			
AR61	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Wisconsin	Waukesha	Lapham Peak State Park	lookout tower	VI.30.2007			
AR62	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Wisconsin	Waukesha	Lapham Peak State Park	lookout tower	VI.30.2007			
AR63	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion		
AR64	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Wisconsin	Waukesha	Lapham Peak State Park	base of observation tower	VII.01.2007			
AR65	Sarcophagidae	Lepidodexia	Neophyto	sp.	F	Wisconsin	Waukesha	Lapham Peak State Park	base of observation tower	VII.01.2007			
AR66	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	F	Wisconsin	Waukesha	Lapham Peak State Park	base of observation tower	VII.01.2007			
AR67	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Wisconsin	Waukesha	Lapham Peak State Park	base of observation tower	VII.01.2007			
AR68	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Wisconsin	Waukesha	Lapham Peak State Park	base of observation tower	VII.01.2007			
AR69	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Wisconsin	Waukesha	Lapham Peak State Park	base of observation tower	VII.01.2007			
AR70	Sarcophagidae	Ravinia		derelicta (Walker)	M	Wisconsin	Waukesha	Lapham Peak State Park	base of observation tower	VII.01.2007			ID checked
AR71	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AR72	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AR73	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AR74	Calliphoridae	Pollenia		pediculata Macquart		Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			ID checked TW
AR75	Calliphoridae	Pollenia		rudis (Fabricius)		Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AR76	Calliphoridae	Pollenia		rudis (Fabricius)		Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			ID checked TW
AR77	Calliphoridae	Pollenia		rudis (Fabricius)		Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			ID checked TW
AR78	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AR79	Sarcophagidae	Boettcheria		bisetosa Parker	F	Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AR80	Sarcophagidae	Ravinia		stimulans (Walker)	F	Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007			
AR81	Sarcophagidae	Boettcheria		latisterna Parker	F	Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AS01	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AS02	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AS03	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AS04	Sarcophagidae	Metopia		inermis Allen (?)	M	Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AS05	Sarcophagidae	Metopia		inermis Allen (?)	M	Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AS06	Sarcophagidae	Metopia		inermis Allen (?)	M	Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AS07	Sarcophagidae	Metopia		inermis Allen (?)	M	Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AS08	Sarcophagidae	Metopia		inermis Allen (?)	M	Wisconsin	Waukesha	Lapham Peak State Park	along trails	VII.01.2007			
AS09	Oestridae	Cephenemyia		sp.		Wisconsin	Waukesha	Lapham Peak State Park	observation tower at tree top level	VII.01.2007			
AS10	Oestridae	Cephenemyia		sp.		Wisconsin	Waukesha	Lapham Peak State Park	observation tower at tree top level	VII.01.2007			
AS11	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	observation tower; tree top level	VII.01.2007			
AS12	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	observation tower; tree top level	VII.01.2007			
AS13	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	observation tower; tree top level	VII.01.2007			
AS14	Tachinidae					Wisconsin	Waukesha	Lapham Peak State Park	observation tower; tree top level	VII.01.2007			
AS15	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes	M	Wisconsin	Waukesha	Lapham Peak State Park	observation tower at tree top level	VII.01.2007			
AS16	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes	M	Wisconsin	Waukesha	Lapham Peak State Park	observation tower at tree top level	VII.01.2007			
AS17	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes (?)	M	Wisconsin	Waukesha	Lapham Peak State Park	observation tower at tree top level	VII.01.2007			
AS18	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes	M	Wisconsin	Waukesha	Lapham Peak State Park	observation tower at tree top level	VII.01.2007			
AS19	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes	M	Wisconsin	Waukesha	Lapham Peak State Park	observation tower at tree top level	VII.01.2007			
AS20	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes	M	Wisconsin	Waukesha	Lapham Peak State Park	observation tower at tree top level	VII.01.2007			
AS21	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes	M	Wisconsin	Waukesha	Lapham Peak State Park	observation tower at tree top level	VII.01.2007			
AS22	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	Wisconsin	Waukesha	Lapham Peak State Park	base of observation tower	VII.01.2007			
AS23	Tachinidae					Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007			
AS24	Tachinidae					Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007			
AS25	Sarcophagidae	Ravinia		querula (Walker)	F	Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007			
AS26	Sarcophagidae	Ravinia		stimulans (Walker)	F	Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007			
AS27	Sarcophagidae	Boettcheria		latisterna Parker	F	Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007			
AS28	Tachinidae					Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007			
AS29	Sarcophagidae	Boettcheria		latisterna Parker	F	Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007			

AS30		Calliphora		vicina Robineau-Desvoidy		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS31		Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS32		Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS33	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS34	Calliphoridae Muscidae	Musca		sp.		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS35	Calliphoridae Muscidae	Musca		sp.		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS36	Calliphoridae Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)	M	Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS37	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS38	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS39	Sarcophagidae	Blaesoxipha	Servaisia	uncata (Wulp)	M	Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS40		Calliphora		latifrons Hough		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS41		Calliphora		vicina Robineau-Desvoidy		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS42		Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS43	Calliphoridae Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS44	Calliphoridae Tachinidae					Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS45	Calliphoridae Tachinidae					Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS46	Tachinidae					Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS47	Tachinidae					Wisconsin	Marathon	Rib Mountain State Park	along trails	VII.02.2007		
AS48	Sarcophagidae	Sarcophaga	Bercaeopsis	idonea Aldrich	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS49	Sarcophagidae	Sarcophaga	Bercaeopsis	morosa Aldrich	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS50	Sarcophagidae	Emblemasoma		albicoma Reinhard	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS51	Sarcophagidae	Emblemasoma		albicoma Reinhard	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS52	Sarcophagidae	Macronychia		sp. 2 pulcra of Downes	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS53	Sarcophagidae	Macronychia		sp. 2 pulcra of Downes	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS54	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS55	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS56	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS57	Sarcophagidae	Macronychia		sp. 1 nigrifunis of Downes	M	Wisconsin	Marathon	Rib Mountain State Park	observation tower	VII.02.2007		
AS58	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS59	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS60		Calliphora		vicina Robineau-Desvoidy		Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS61	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS62	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS63	Calliphoridae Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS64	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS65	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS66	Sarcophagidae	Helicobia		rapax (Walker)	M	Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS67	Sarcophagidae	Ravinia		stimulans (Walker)	M	Wisconsin	Barron	Rest stop on US-53	dog dung & dead ground squirrel	VII.02.2007		
AS68	Sarcophagidae	Sarcophaga	Sarcophaga	subvicina Rohdendorf	M	Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	
AS69	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	
AS70	Calliphoridae	Pollenia		pediculata Macquart		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	ID checked TW
AS71	Calliphoridae	Pollenia		pediculata Macquart		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	ID checked TW
AS72	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	
AS73	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	
AS74	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	
AS75	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	
AS76		Lucilia		coeruleiviridis Macquart		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	ID checked TW
AS77		Lucilia		illustris (Meigen)		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	ID checked
AS78		Lucilia		coeruleiviridis Macquart		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	ID checked TW
AS79	Calliphoridae	Lucilia		coeruleiviridis Macquart		Wisconsin	Waukesha	Lapham Peak State Park		VII.01.2007	carrion	ID checked TW
AS80	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Douglas	Amnicon Falls State Park	waterfall area	VII.03.2007		
AS81	Calliphoridae	Lucilia		illustris (Meigen)		Wisconsin	Douglas	Amnicon Falls State Park	waterfall area	VII.03.2007		
AT01	Calliphoridae	Pollenia		pediculata Macquart		Wisconsin	Douglas	Amnicon Falls State Park	waterfall area	VII.03.2007		ID checked TW
AT02	Calliphoridae Calliphoridae	Pollenia		labialis Robineau-Desvoidy		Wisconsin	Douglas	Amnicon Falls State Park	waterfall area	VII.03.2007		
AT03	Calliphoridae	Cynomya		cadaverina Robineau-Desvoidy		Wisconsin	Douglas	Amnicon Falls State Park	waterfall area	VII.03.2007		
AT04		Calliphora		vomitoria (Linnaeus)		Wisconsin	Douglas	Amnicon Falls State Park	waterfall area	VII.03.2007		
AT05	Sarcophagidae	Tripanurga		sp.	F	Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT06	Sarcophagidae	Sarcophaga		sp.	F	Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT07	Calliphoridae Sarcophagidae	Sarcophaga		sp.	F	Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT08	Sarcophagidae	Boettcheria		latisterna Parker	F	Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT09	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT10		Calliphora		vomitoria (Linnaeus)		Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT11		Calliphora		vomitoria (Linnaeus)		Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT12		Calliphora		vomitoria (Linnaeus)		Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT13	Calliphoridae Tachinidae					Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT14	Calliphoridae Tachinidae					Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT15	Calliphoridae Tachinidae					Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT16		Calliphora		vomitoria (Linnaeus)		Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT17	Calliphoridae	Cynomya		cadaverina Robineau-Desvoidy		Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT18	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT19	Calliphoridae Sarcophagidae	Sarcophaga	Wohlfahrtiopsis	utilis Aldrich	M	Wisconsin	Douglas	Amnicon Falls State Park	nature trail	VII.03.2007		
AT20	Tachinidae					Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT21	Tachinidae					Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT22	Tachinidae					Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT23	Tachinidae					Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT24	Tachinidae					Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT25	Tachinidae					Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT26												
AT27	Sarcophagidae	Sarcophaga	Neobellieria	triplasia Wulp	M	Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT28	Sarcophagidae	Sarcophaga	Neobellieria	triplasia Wulp	M	Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT29	Sarcophagidae	Sarcophaga	Bercaeopsis	idonea Aldrich	M	Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT30	Sarcophagidae	Sarcophaga	Bercaeopsis	idonea Aldrich	M	Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT31	Sarcophagidae	Sarcophaga	Bercaeopsis	hesterna Reinhard	M	Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT32	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT33	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Minnesota	Winona	Great River Bluffs State Park	along trails	VII.07.2007		
AT34	Tachinidae					Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT35	Tachinidae					Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT36	Sarcophagidae	Helicobia		rapax (Walker)	F	Minnesota	Kandiyohi	Sibley State Park	along trails	VII.06.2007		
AT37	Sarcophagidae	Metopia		sp.	F	Minnesota	Kandiyohi	Sibley State Park	along trails	VII.06.2007		
AT38	Calliphoridae	Phormia		regina (Meigen)		Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT39	Calliphoridae	Phormia		regina (Meigen)		Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT40	Tachinidae					Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT41	Tachinidae					Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT42	Tachinidae					Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT43	Tachinidae					Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT44	Sarcophagidae	Ravinia		anxia (Walker)	F	Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT45	Sarcophagidae	Ravinia		anxia (Walker)	F	Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT46	Sarcophagidae	Ravinia		anxia (Walker)	F	Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT47	Sarcophagidae	Ravinia		anxia (Walker) (?)	F	Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT48	Sarcophagidae	Ravinia		derelicta (Walker)	F	Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT49	Sarcophagidae	Ravinia		anxia (Walker)	M	Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT50	Sarcophagidae	Ravinia		anxia (Walker)	M	Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT51	Sarcophagidae	Brachicoma		sarcophagina (Townsend)	M	Minnesota	Kandiyohi	Sibley State Park	horse trails and Mt. Tom	VII.06.2007		
AT52	Calliphoridae	Cochliomyia		macellaria (Fabricius)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT53		Calliphora		vicina Robineau-Desvoidy		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT54	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT55	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT56	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT57	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT58	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT59	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT60	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT61	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT62	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT63	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT64	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT65	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		

AT66	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT67	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT68	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT69	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT70	Calliphoridae	Cochliomyia		macellaria (Fabricius)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT71	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT72	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT73	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT74	Calliphoridae	Phormia		regina (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT75	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT76	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT77	Calliphoridae	Lucilia		silvarum (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		ID checked
AT78	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT79	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT80	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AT81	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AU01	Calliphoridae	Lucilia		illustris (Meigen)		North Dakota	Trail	Rest stop on I-29	south of Hillsboro	VII.05.2007		
AU02	Sarcophagidae	Ravinia		acerba (Walker) (?)	F	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU03	Sarcophagidae	Ravinia		derelicta (Walker)	F	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		ID checked
AU04	Tachinidae					Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU05	Tachinidae					Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU06	Sarcophagidae	Metopia		campestris (Fallen) (?)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU07	Sarcophagidae	Senotainia		trilineata (Wulp)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU08	Sarcophagidae	Senotainia		trilineata (Wulp)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU09	Sarcophagidae	Senotainia		trilineata (Wulp)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU10	Sarcophagidae	Senotainia		trilineata (Wulp)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU11	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		ID checked
AU12	Sarcophagidae	Helicobia		rapax (Walker)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		ID checked
AU13	Sarcophagidae	Senotainia		trilineata (Wulp)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU14	Sarcophagidae	Senotainia		trilineata (Wulp)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU15	Sarcophagidae	Senotainia		trilineata (Wulp)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU16	Sarcophagidae	Senotainia		trilineata (Wulp)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU17	Sarcophagidae	Helicobia		rapax (Walker)	M	Minnesota	Kittson	Lake Bronson State Park	along trails	VII.05.2007		
AU18	Tachinidae					Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU19	Tachinidae					Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU20	Tachinidae					Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU21	Tachinidae					Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU22	Tachinidae					Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU23	Tachinidae					Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU24	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU25	Sarcophagidae	Boettcheria		latisterna Parker	F	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU26	Sarcophagidae	Boettcheria		latisterna Parker	F	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU27	Sarcophagidae	Boettcheria		latisterna Parker	F	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU28	Sarcophagidae	Metopia		sp.	F	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU29	Sarcophagidae	Metopia		sp.	F	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU30	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU31	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU32	Sarcophagidae	Boettcheria		latisterna Parker	M	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU33	Sarcophagidae	Boettcheria		latisterna Parker	M	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU34	Sarcophagidae	Helicobia		rapax (Walker)	M	Minnesota	Koochiching	Franz Jevne State Park	along trails	VII.04.2007		
AU35	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU36	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU37	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU38	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU39	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU40	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU41	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU42	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU43	Sarcophagidae	Sarcophaga	Wohlfahrtiopsis	utilis Aldrich	M	Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU44	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU45	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU46	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU47	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU48	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU49	Calliphoridae	Calliphora		vomitoria (Linnaeus)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU50	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU51	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU52	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU53	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU54	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU55	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU56	Calliphoridae	Phormia		regina (Meigen)		Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU57	Muscidae					Wisconsin	Marathon	Rib Mountain State Park		VII.02.2007	carrion	
AU58	Tachinidae					New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AU59	Tachinidae					New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AU60	Tachinidae					New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AU61	Tachinidae					New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AU62	Calliphoridae	Lucilia		silvarum (Meigen)		New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AU63	Calliphoridae	Lucilia		silvarum (Meigen)		New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AU64	Calliphoridae	Lucilia		coeruleiviridis Macquart		New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		ID checked
AU65	Tachinidae					New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU66	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU67	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU68	Sarcophagidae	Helicobia		rapax (Walker)	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU69	Sarcophagidae	Boettcheria		latisterna Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU70	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU71	Sarcophagidae	Sarcophaga	Sarcophaga	subvicina Rohdendorf	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU72	Sarcophagidae	Helicobia		rapax (Walker)	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU73	Sarcophagidae	Helicobia		rapax (Walker)	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU74	Tachinidae					New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU75	Tachinidae					New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU76	Tachinidae					New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AU77	Calliphoridae	Calliphora		vomitoria (Linnaeus)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007	? Not typical	
AU78	Calliphoridae	Pollenia		pediculata Macquart		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AU79	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AU80	Calliphoridae	Pollenia		rudis (Fabricius) ?		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AU81	Calliphoridae	Pollenia		rudis (Fabricius) ?		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AV01	Sarcophagidae	Boettcheria		cimbicis (Townsend)	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV02	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV03	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV04	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV05	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV06	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV07	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV08	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV09	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV10	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV11	Sarcophagidae	Boettcheria		latisterna Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV12	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV13	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV14	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV15	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV16	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV17	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV18	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV19	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV20	Sarcophagidae	Spirobolomyia		flavipalpis (Aldrich)	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		

AV21	Sarcophagidae	Spirobolomyia		flavipalpis (Aldrich)	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV22	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV23	Sarcophagidae	Sarcophaga	Sarcophaga	subvicina Rohdendorf	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV24	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV25	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV26	Sarcophagidae	Microcerella		adelphe Pape	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV27	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV28	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV29	Sarcophagidae	Boettcheria		latisterna Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV30	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV31	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV32	Sarcophagidae	Boettcheria		cimbicis (Townsend)	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV33	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV34	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV35	Sarcophagidae	Sarcophaga		sp.	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV36	Sarcophagidae	Oxysarcodexia		sp.	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV37	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV38	Sarcophagidae	Sarcophaga		aldrichi Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV39	Sarcophagidae	Boettcheria		cimbicis (Townsend)	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV40	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AV41	Calliphoridae	Pollenia		angustigena Wainwright		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AV42	Calliphoridae	Pollenia		rudis (Fabricius) ?		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AV43	Calliphoridae	Phormia		regina (Meigen)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV44	Sarcophagidae	Boettcheria		bisetosa Parker	F	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV45	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AV46	Calliphoridae	Pollenia		pediculata Macquart		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AV47	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AV48	Tachinidae					New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV49	Tachinidae					New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV50	Tachinidae					New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV51	Tachinidae					New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV52	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV53	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV54		Lucilia		illustris (Meigen)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AV55	Calliphoridae	Cynomya		cadaverina Robineau-Desvoidy		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV56		Calliphora		vicina Robineau-Desvoidy		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV57	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV58		Calliphora		vicina Robineau-Desvoidy		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV59	Calliphoridae	Lucilia		coeruleiviridis Macquart		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV60	Calliphoridae	Sarcophaga	Mehria	hinei Aldrich	M	New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV61	Calliphoridae	Sarcophaga	Mehria	hinei Aldrich	M	New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV62	Calliphoridae	Sarcophaga	Mehria	hinei Aldrich	M	New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV63		Lucilia		sericata (Meigen)		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV64	Tachinidae					New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV65	Tachinidae					New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV66	Calliphoridae	Tachinidae				New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV67	Tachinidae					New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV68	Tachinidae					New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV69	Calliphoridae	Cynomya		cadaverina Robineau-Desvoidy		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV70		Calliphora		vicina Robineau-Desvoidy		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV71	Calliphoridae	Phormia		regina (Meigen)		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV72	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV72	Calliphoridae	Phormia		regina (Meigen)		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV73	Calliphoridae	Phormia		regina (Meigen)		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		ID added Dec. 31, 1009
AV74	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV75		Lucilia		illustris (Meigen)		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV76	Calliphoridae	Pollenia		angustigena Wainwright		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		ID checked TW
AV77	Calliphoridae	Sarcophagidae	Boettcheria	cimbicis (Townsend)	F	New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV78	Calliphoridae	Sarcophagidae	Metopia	sp.	F	New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV79	Sarcophagidae	Sarcophaga	Liosarcophaga	sp	F	New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV80	Sarcophagidae	Sarcophaga		sp.	F	New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		
AV81	Calliphoridae	Pollenia		angustigena Wainwright		New York	Niagara	Niagara Falls State Park	Goat Island	VI.16.2007		ID checked TW
AW01	Calliphoridae	Lucilia		coeruleiviridis Macquart		New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AW02	Sarcophagidae	Sarcophaga	Sarcophaga	subvicina Rohdendorf	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AW03	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AW04	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AW05	Sarcophagidae	Helicobia		rapax (Walker)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AW06	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AW07	Sarcophagidae	Senotainia		trilineata (Wulp)	M	New York	Saratoga	Moreau Lake State Park	SE of Glens Falls	VI.13.2007		
AW08	Tachinidae					New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AW09	Tachinidae					New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AW10	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		ID checked TW
AW11	Calliphoridae	Pollenia		rudis (Fabricius) ?		New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		ID checked TW
AW12	Calliphoridae	Pollenia		angustigena Wainwright		New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		ID checked TW
AW13	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		ID checked TW
AW14	Calliphoridae	Lucilia		coeruleiviridis Macquart		New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AW15	Calliphoridae	Lucilia		sericata (Meigen)		New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AW16	Sarcophagidae	Spirobolomyia		flavipalpis (Aldrich)	M	New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AW17	Sarcophagidae	Boettcheria		latisterna Parker	M	New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AW18	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AW19	Sarcophagidae	Sarcophaga		aldrichi Parker	M	New York	Monroe	Hamlin Beach State Park	on Lake Ontario	VI.15.2007		
AW20	Tachinidae					New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		
AW21	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AW22	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AW23	Calliphoridae	Pollenia		rudis (Fabricius)		New York	Onondaga	Green Lakes State Park	nr Syracuse	VI.14.2007		ID checked TW
AW24	Sarcophagidae	Sphenometopa		nebulosa (Coquillett)	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW25	Muscidae					New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW26	Sarcophagidae	Blaesoxipha	Gigantotheca	cessator (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW27	Sarcophagidae	Blaesoxipha	Gigantotheca	cessator (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW28	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW29	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW30	Sarcophagidae	Ravinia		querula (Walker)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW31	Sarcophagidae	Blaesoxipha	Acanthodotheca	arizona Pape	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW32	Sarcophagidae	Blaesoxipha	Acanthodotheca	arizona Pape (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW33	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW34	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW35	Sarcophagidae	Blaesoxipha	Acanthodotheca	arizona Pape	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW36	Sarcophagidae	Blaesoxipha	Acanthodotheca	masculina (Aldrich) (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW37	Sarcophagidae	Blaesoxipha	Acanthodotheca	eleodis (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW38	Sarcophagidae	Blaesoxipha	Gigantotheca	cessator (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW39	Sarcophagidae	Blaesoxipha	Gigantotheca	cessator (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW40	Sarcophagidae	Blaesoxipha	Tephromyia	hunteri (Hough)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW41	Sarcophagidae	Helicobia		sp.	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW42	Sarcophagidae	Sarcophaga	Bercaea	africa Wiedemann	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW43	Sarcophagidae	Sarcophaga	Bercaea	africa Wiedemann	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW44	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW45	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW46	Sarcophagidae	Helicobia		sp.	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW47	Sarcophagidae	Helicobia		sp.	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.13.2007	summit	
AW48	Sarcophagidae	Ravinia		anxia (Walker)	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW49	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW50	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW51	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW52	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW53	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW54	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW55	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		

AW56	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW57	Sarcophagidae	Tripanurga		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW58	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW59	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW60	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW61	Sarcophagidae	Taxigramma		hilarella (Zetterstedt)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW62	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW63	Sarcophagidae	Ravinia		vagabunda (Wulp)	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW64	Sarcophagidae	Ravinia		pusiola (Wulp)	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW65	Muscidae					New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW66	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW67	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW68	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW69	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW70	Sarcophagidae	Ravinia		anxia (Walker)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AW71	Sarcophagidae	Blaesoxipha	Speciosia	speciosa (Lopes)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.13.2007		
AW72	Sarcophagidae	Tripanurga		sulculata (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AW73	Sarcophagidae	Ravinia		pusiola (Wulp)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AW74	Calliphoridae	Lucilia		sericata (Meigen)				medicinal maggots - reared		2008		
AW75	Calliphoridae	Lucilia		sericata (Meigen)				medicinal maggots - reared		2008		
AW76	Calliphoridae	Lucilia		sericata (Meigen)				medicinal maggots - reared		2008		
AW77	Calliphoridae	Lucilia		sericata (Meigen)				medicinal maggots - reared		2008		
AW78	Calliphoridae	Lucilia		sericata (Meigen)				medicinal maggots - reared		2008		
AW79	Calliphoridae	Lucilia		sericata (Meigen)				medicinal maggots - reared		2008		
AW80	Calliphoridae	Lucilia		sericata (Meigen)				medicinal maggots - reared		2008		
AW81	Calliphoridae	Lucilia		sericata (Meigen)				medicinal maggots - reared		2008		
AX01	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX02	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX03	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX04	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX05	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX06	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX07	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX08	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX09	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX10	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.12.2008		
AX11	Calliphoridae	Lucilia		illustris (Meigen)		Ohio	Hamilton	Anderson Twp.		V.13.2008	Malaise	
AX12	Calliphoridae	Lucilia		coeruleiviridis Macquart		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX13	Calliphoridae	Lucilia		coeruleiviridis Macquart		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX14	Calliphoridae	Lucilia		coeruleiviridis Macquart		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX15	Calliphoridae	Lucilia		coeruleiviridis Macquart		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX16	Calliphoridae	Lucilia		coeruleiviridis Macquart		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX17	Calliphoridae	Lucilia		coeruleiviridis Macquart		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX18	Calliphoridae	Lucilia		coeruleiviridis Macquart		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX19	Calliphoridae	Lucilia		coeruleiviridis Macquart		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX20	Calliphoridae	Pollenia		sp.		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	ID changed Dec. 31, 2009
AX21	Rhinophoridae	Melanophora		roralis (Linnaeus)		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX22	Rhinophoridae	Melanophora		roralis (Linnaeus)		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX23	Rhinophoridae	Melanophora		roralis (Linnaeus)		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX24	Rhinophoridae	Melanophora		roralis (Linnaeus)		Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX25	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX26	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX27	Tachinidae					Ohio	Hamilton	Anderson Twp.		V.29.2008	Malaise	
AX28	Calliphoridae	Phormia		regina (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX29	Calliphoridae	Phormia		regina (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX30	Calliphoridae	Phormia		regina (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX31	Calliphoridae	Phormia		regina (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX32	Calliphoridae	Phormia		regina (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX33	Calliphoridae	Phormia		regina (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX34	Calliphoridae	Phormia		regina (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX35	Calliphoridae	Phormia		regina (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX36	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX37	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX38	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX39	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX40	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX41	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX42	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	ID checked TW
AX43	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX44	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	ID checked TW
AX45	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX46	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	ID checked
AX47	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX48	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	ID checked TW
AX49	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX50	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	ID checked
AX51	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX52	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX53	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX54	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX55	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX56	Calliphoridae	Lucilia		mexicana Macquart		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	ID checked
AX57	Muscidae					New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	carrion	
AX58	Sarcophagidae	Blaesoxipha	Gigantotheca	cessator (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	trail to summit	
AX59	Sarcophagidae	Blaesoxipha	Gigantotheca	cessator (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	trail to summit	
AX60	Sarcophagidae	Blaesoxipha	Gigantotheca	cessator (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	trail to summit	
AX61	Sarcophagidae	Ravinia		pusiola (Wulp)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	trail to summit	
AX62	Sarcophagidae	Ravinia		pusiola (Wulp)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	trail to summit	
AX63	Sarcophagidae	Ravinia		pusiola (Wulp)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.14.2007	trail to summit	
AX64	Sarcophagidae	Blaesoxipha	Acanthodotheca	arizona Pape	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX65	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX66	Sarcophagidae	Blaesoxipha	Acanthodotheca	arizona Pape	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX67	Sarcophagidae	Blaesoxipha	Gigantotheca	cessator (Aldrich)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX68	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX69	Sarcophagidae	Eumacronychia		sp.	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX70	Sarcophagidae	Sphenometopa		nebulosa (Coquillett)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX71	Sarcophagidae	Sphenometopa		tergata (Coquillett)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX72	Sarcophagidae	Sarcophaga	Mehria	sp.	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX73	Sarcophagidae	Blaesoxipha	Acanthodotheca	arizona Pape	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2008	summit	
AX74	Sarcophagidae	Blaesoxipha	Acanthodotheca	arizona Pape	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2008	summit	
AX75	Sarcophagidae	Sphenometopa		nebulosa (Coquillett)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.14.2007	summit	
AX76	Calliphoridae	Protocalliphora		sp.	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2008	summit	
AX77	Sarcophagidae	Helicobia		sp.	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2008	summit	
AX78	Sarcophagidae	Helicobia		sp.	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2008	summit	
AX79	Sarcophagidae	Blaesoxipha	Gigantotheca	mex Pape	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AX80	Sarcophagidae	Sarcophaga	Liosarcophaga	sarracenioides Aldrich	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AX81	Sarcophagidae	Blaesoxipha	Gigantotheca	mex Pape	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY01	Sarcophagidae	Blaesoxipha	Acridiophaga	angustifrons (Aldrich) (?)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY02	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY03	Oestridae	Cuterebra		sp.		New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY04	Sarcophagidae	Blaesoxipha	Acanthodotheca	eleodis (Aldrich)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY05	Sarcophagidae	Blaesoxipha	Acanthodotheca	eleodis (Aldrich) (?)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY06	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY07	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY08	Sarcophagidae	Blaesoxipha	Acanthodotheca	alcedo (Aldrich)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY09	Sarcophagidae	Blaesoxipha	Acanthodotheca	alcedo (Aldrich) (?)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY10	Sarcophagidae	Blaesoxipha	Acridiophaga	caridei (Brethes) (?)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	

AY11	Sarcophagidae	Blaesoxipha	Acanthodotheca	arizona Pape	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2008	summit	
AY12	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY13	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY14	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY15	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY16	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY17	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY18	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY19	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY20	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY21	Calliphoridae	Calliphora		vicina Robineau-Desvoidy		Ohio	Hamilton	Anderson Twp.		V.31.2008		
AY22	Sarcophagidae	Tripanurga		sulculata (Aldrich)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY23	Sarcophagidae	Blaesoxipha	Gigantotheca	mex Pape	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY24	Sarcophagidae	Blaesoxipha	Acridiophaga	taediosa (Aldrich) (?)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY25	Sarcophagidae	Blaesoxipha	Acanthodotheca	alcedo (Aldrich)	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY26	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY27	Sarcophagidae	Eumacronychia		sp.	M	New Mexico	Grant	Gila National Forest	Eighty Mountain nr Silver City	VIII.15.2007	summit	
AY28	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY29	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY30	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY31	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY32	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY33	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY34	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY35	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY36	Sarcophagidae	Ravinia		pusiola (Wulp)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY37	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY38	Sarcophagidae	Ravinia		planifrons (Aldrich) (?)	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY39	Sarcophagidae	Ravinia		pusiola (Wulp)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY40	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY41	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY42	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY43	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY44	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY45	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY46	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY47	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY48	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY49	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY50	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY51	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY52	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY53	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY54	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY55	Calliphoridae	Cochliomyia		macellaria (Fabricius)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY56	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY57	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY58	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY59	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY60	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY61	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY62	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY63	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY64	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY65	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY66	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY67	Muscidae	Musca		domestica (Linnaeus)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY68	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY69	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY70	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY71	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY72	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY73	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY74	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY75	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY76	Calliphoridae	Chrysomya		rufifacies (Macquart)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY77	Calliphoridae	Chrysomya		rufifacies (Macquart)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY78	Calliphoridae	Chrysomya		rufifacies (Macquart)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY79	Calliphoridae	Chrysomya		rufifacies (Macquart)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY80	Muscidae					New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AY81	Muscidae					New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AZ01	Calliphoridae	Calliphora		coloradensis Hough		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	ID checked
AZ02	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AZ03	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AZ04	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AZ05	Sarcophagidae	Ravinia		pusiola (Wulp)	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AZ06	Sarcophagidae			sp.	F	New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AZ07	Sarcophagidae	Helicobia		sp.	M	New Mexico	Grant	Gila National Forest	Gomez Peak nr. Silver City	VIII.15.2007	carrion	
AZ08	Calliphoridae	Lucilia		sericata (Meigen)		New Mexico	Grant	Gila National Forest	Gomez Peak nr Silver City	VIII.15.2007	carrion	
AZ09	Sarcophagidae	Ravinia		derelicta (Walker)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ10	Sarcophagidae	Ravinia		stimulans (Walker)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ11	Sarcophagidae	Ravinia		stimulans (Walker)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ12	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ13	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ14	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ15	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ16	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ17	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ18	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ19	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ20	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ21	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ22	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ23	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ24	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ25	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ26	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ27	Calliphoridae	Lucilia		sericata (Meigen)		Ohio	Hamilton	Anderson Twp.		VI.15.2008	dog dung	
AZ28	Calliphoridae	Calliphora		terraenovae Macquart		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion	
AZ29	Sarcophagidae	Oxysarcodexia		trivialis (Wulp)		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion	
AZ30	Sarcophagidae	Oxysarcodexia		trivialis (Wulp)		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion	
AZ31	Calliphoridae	Calliphora		latifrons Hough		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion	
AZ32	Calliphoridae	Calliphora		livida Hall		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion	ID checked
AZ33	Calliphoridae	Calliphora		latifrons Hough		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion	ID checked
AZ34	Calliphoridae	Pollenia		pediculata Macquart		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion	ID checked TW
AZ35	Tachinidae					West Virginia	Cabell	Welcome rest stop on I-64	nr Huntington	VI.19.2008		
AZ36	Tachinidae					West Virginia	Cabell	Welcome rest stop on I-64	nr Huntington	VI.19.2008		
AZ37	Calliphoridae	Lucilia		sericata (Meigen)		West Virginia	Cabell	Welcome rest stop on I-64	nr Huntington	VI.19.2008		
AZ38	Calliphoridae	Lucilia		sericata (Meigen)		West Virginia	Cabell	Welcome rest stop on I-64	nr Huntington	VI.19.2008		
AZ39	Calliphoridae	Lucilia		sericata (Meigen)		West Virginia	Cabell	Welcome rest stop on I-64	nr Huntington	VI.19.2008		
AZ40	Calliphoridae	Lucilia		sericata (Meigen)		West Virginia	Cabell	Welcome rest stop on I-64	nr Huntington	VI.19.2008		
AZ41	Calliphoridae	Lucilia		sericata (Meigen)		West Virginia	Cabell	Welcome rest stop on I-64	nr Huntington	VI.19.2008		
AZ42	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)		West Virginia	Cabell	Welcome rest stop on I-64	nr Huntington	VI.19.2008		
AZ43	Sarcophagidae	Sarcophaga	Lippygia	sp.	F	West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008		
AZ44	Sarcophagidae	Ravinia		lherminieri (Robineau-Desvoidy)	F	West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008		
AZ45	Sarcophagidae	Ravinia		stimulans (Walker)	F	West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008		
AZ46	Sarcophagidae	Ravinia		stimulans (Walker)	F	West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008		

AZ47	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ48	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ49	Calliphoridae	Lucilia		sericata (Meigen)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ50	Calliphoridae	Lucilia		sericata (Meigen)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ51	Calliphoridae	Phormia		regina (Meigen)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ52	Calliphoridae	Phormia		regina (Meigen)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ53	Calliphoridae	Phormia		regina (Meigen)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ54	Calliphoridae	Phormia		regina (Meigen)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ55	Calliphoridae	Phormia		regina (Meigen)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ56	Calliphoridae	Phormia		regina (Meigen)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ57	Calliphoridae	Phormia		regina (Meigen)		West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			
AZ58	Sarcophagidae	Ravinia		lhermineri (Robineau-Desvoidy)?	M	West Virginia	Kanawha	Rest area on I-64/I-77	south of Standard	VI.19.2008			ID checked
AZ59	Tachinidae					Virginia	Bland	Welcome rest stop on I-77		VI.19.2008			
AZ60	Sarcophagidae	Ravinia		stimulans (Walker)	F	Virginia	Bland	Welcome rest stop on I-77		VI.19.2008			
AZ61	Sarcophagidae	Ravinia		querula (Walker)	M	Virginia	Bland	Welcome rest stop on I-77		VI.19.2008			
AZ62	Sarcophagidae	Ravinia		derelicta (Walker)		Virginia	Bland	Welcome rest stop on I-77		VI.19.2008			
AZ63	Calliphoridae	Pollenia		rudis (Fabricius)		North Carolina	Durham	Duke University campus		VI.20.2008			
AZ64	Sarcophagidae	Mecynocorpus		salvum (Aldrich)	M	North Carolina	Durham	Duke University campus		VI.20.2008			
AZ65	Sarcophagidae	Helicobia		rapax (Walker)		North Carolina	Durham	Duke University campus		VI.20.2008			
AZ66	Tachinidae					North Carolina	Orange	Motel parking lot border		VI.21.2008			
AZ67	Sarcophagidae	Helicobia		rapax (Walker)		North Carolina	Orange	Motel parking lot border		VI.21.2008			
AZ68	Sarcophagidae	Helicobia		rapax (Walker)		North Carolina	Orange	Motel parking lot border		VI.21.2008			
AZ69	Tachinidae					North Carolina	Davie	Rest stop on I-40		VI.21.2008			
AZ70	Calliphoridae	Lucilia		sericata (Meigen)		North Carolina	Davie	Rest stop on I-40		VI.21.2008			
AZ71	Calliphoridae	Lucilia		sericata (Meigen)		North Carolina	Davie	Rest stop on I-40		VI.21.2008			
AZ72	Calliphoridae	Lucilia		coeruleiviridis Macquart		North Carolina	Davie	Rest stop on I-40		VI.21.2008			
AZ73	Calliphoridae	Calliphora		terraenovae Macquart		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
AZ74	Calliphoridae	Calliphora		vomitoria (Linnaeus) (?)		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
AZ75	Calliphoridae	Calliphora		terraenovae Macquart		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
AZ76	Calliphoridae	Calliphora		terraenovae Macquart		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
AZ77	Calliphoridae	Calliphora		latifrons Hough		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
AZ78	Calliphoridae	Calliphora		livida Hall		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		ID checked
AZ79	Calliphoridae	Calliphora		latifrons Hough		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
AZ80	Calliphoridae	Calliphora		livida Hall		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		ID checked
AZ81	Calliphoridae	Calliphora		livida Hall		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		ID checked
BA01	Calliphoridae	Calliphora		livida Hall		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		ID checked
BA02	Calliphoridae	Calliphora		latifrons Hough		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA03	Calliphoridae	Calliphora		livida Hall or coloradensis Hough	F	New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		ID checked
BA04	Calliphoridae	Calliphora		coloradensis Hough		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		ID checked
BA05	Calliphoridae	Calliphora		latifrons Hough		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA06	Calliphoridae	Calliphora		latifrons Hough (?)		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA07	Calliphoridae	Calliphora		latifrons Hough		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA08	Calliphoridae	Calliphora		latifrons Hough (?)		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA09	Calliphoridae	Calliphora		latifrons Hough		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA10	Calliphoridae	Pollenia		pediculata Macquart		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		ID checked TW
BA11	Calliphoridae	Pollenia		pediculata Macquart		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA12	Calliphoridae	Pollenia		pediculata Macquart		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		ID checked TW
BA13	Calliphoridae	Pollenia		pediculata Macquart		New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA14	Sarcophagidae	Boettcheria		cimbicis (Townsend)	M	New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA15	Sarcophagidae	Ravinia		vagabunda	M	New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA16	Sarcophagidae	Ravinia		querula (Walker)	M	New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA17	Sarcophagidae	Ravinia		vagabunda	M	New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA18	Sarcophagidae	Ravinia		pusiola (Wulp)	M	New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA19	Sarcophagidae	Ravinia		pusiola (Wulp)	M	New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		
BA20	Sarcophagidae	Sarcophaga	Bercaea	africa Wiedemann	M	New Mexico	Grant	Gila National Forest	Cherry Creek Forest Camp	VIII.13.2007	carrion		abdomen reserved
BA21	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA22	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA23	Sarcophagidae	Helicobia		rapax (Walker)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA24	Sarcophagidae	Helicobia		rapax (Walker)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA25	Sarcophagidae	Boettcheria		cimbicis (Townsend)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA26	Sarcophagidae	Boettcheria		cimbicis (Townsend)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA27	Sarcophagidae	Ravinia		stimulans (Walker)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA28	Sarcophagidae	Ravinia		stimulans (Walker)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA29	Sarcophagidae	Ravinia		derelicta (Walker)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA30	Sarcophagidae	Ravinia		derelicta (Walker)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA31	Sarcophagidae	Mecynocorpus		salvum (Aldrich)	M	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		head & thorax in EtOH
BA32	Tachinidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA33	Tachinidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA34	Tachinidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA35	Tachinidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA36	Tachinidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA37	Tachinidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA38	Tachinidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA39	Tachinidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA40	Muscidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA41	Muscidae					Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA42	Calliphoridae	Pollenia		rudis (Fabricius)	F	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA43	Calliphoridae	Pollenia		rudis (Fabricius)	F	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA44	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA45	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA46	Calliphoridae	Lucilia		illustris (Meigen)	F	Ohio	Hamilton	Anderson Twp.		VII.6.2008	Malaise		
BA47	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA48	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA49	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA50	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA51	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA52	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA53	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA54	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA55	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA56	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA57	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA58	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA59	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA60	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA61	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA62	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA63	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA64	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA65	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA66	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		ID checked
BA67	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA68	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA69	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Minnesota	Winona	Great River Bluffs State Park		VII.7.2007	carrion		
BA70	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BA71	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BA72	Calliphoridae	Pollenia		pediculata Macquart	F	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		ID checked TW
BA73	Calliphoridae	Pollenia		pediculata Macquart	F	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		ID checked TW
BA74	Muscidae					Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BA75	Muscidae					Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BA76	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BA77	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BA78	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BA79	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BA80	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BA81	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		
BB01	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park		VII.6.2007	carrion		

BB02	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB03	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB04	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB05	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB06	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB07	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB08	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB09	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB10	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB11	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB12	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB13	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB14	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB15	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB16	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB17	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB18	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB19	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB20	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB21	Sarcophagidae	Ravinia		derelicta (Walker)	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB22	Sarcophagidae	Sarcophaga	Mehria	hough Aldrich	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB23	Sarcophagidae	Ravinia		pectinata (Aldrich)	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB24	Sarcophagidae	Sarcophaga		aldrichi Parker	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB25	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB26	Sarcophagidae	Oxysarcodexia		sp.	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB27	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Minnesota	Kandiyohi	Sibley State Park			VII.6.2007	carrion	
BB28	Calliphoridae	Lucilia		illustris (Meigen)	M	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB29	Calliphoridae	Lucilia		illustris (Meigen)	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB30	Calliphoridae	Lucilia		illustris (Meigen)	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB31	Calliphoridae	Lucilia		illustris (Meigen)	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB32	Calliphoridae	Lucilia		illustris (Meigen)	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB33	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB34	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB35	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB36	Calliphoridae	Calliphora		vomitoria (Linnaeus)	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB37	Calliphoridae	Pollenia		pediculata Macquart	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	ID checked TW
BB38	Calliphoridae	Phormia		regina (Meigen)	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB39	Calliphoridae	Phormia		regina (Meigen)	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB40	Calliphoridae	Phormia		regina (Meigen)	F	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB41	Calliphoridae	Phormia		regina (Meigen)	M	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB42	Calliphoridae	Phormia		regina (Meigen)	M	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB43	Calliphoridae	Phormia		regina (Meigen)	M	Wisconsin	Douglas	Amnicon Falls State Park	waterfall area		VII.3.2007	carrion	
BB44	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB45	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB46	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB47	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB48	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB49	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB50	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB51	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB52	Calliphoridae	Calliphora		vicina Robineau-Desvoidy	M	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB53	Calliphoridae	Calliphora		vomitoria (Linnaeus)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB54	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB55	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB56	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB57	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB58	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB59	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB60	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB61	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB62	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB63	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB64	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB65	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB66	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Koochiching	Franz Jevne State Park			VII.4.2007	carrion	
BB67	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Minnesota	Kittson	Lake Bronson State Park	lake area		VII.5.2007	carrion	
BB68	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB69	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB70	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB71	Calliphoridae	Lucilia		illustris (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB72	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB73	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB74	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB75	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB76	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB77	Calliphoridae	Lucilia		illustris (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB78	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB79	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB80	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BB81	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC01	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC02	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC03	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC04	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC05	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC06	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC07	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC08	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC09	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC10	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC11	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC12	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC13	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC14	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC15	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC16	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	F	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC17	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC18	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC19	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC20	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Ohio	Hamilton	Anderson Twp.			VII.14.2008	reared from chicken	
BC21	Tachinidae					Ohio	Hamilton	Anderson Twp.			VII.6.2008	Malaise	
BC22	Sarcophagidae	Sarcophaga	Robineauella	nearctica Parker	F	Minnesota	Kittson	Lake Bronson State Park	prairie area		VII.5.2007	carrion	
BC23	Sarcophagidae	Boettcheria		cimbicis (Townsend)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC24	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC25	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC26	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC27	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC28	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC29	Calliphoridae	Phormia		regina (Meigen)	F	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC30	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC31	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC32	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC33	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC34	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC35	Calliphoridae	Phormia		regina (Meigen)	M	Minnesota	Kittson	Lake Bronson State Park			VII.5.2007	carrion	
BC36	Sarcophagidae	Sarcophaga	Liosarcophaga	sarracenioides Aldrich	M	New York	Suffolk	Hecksher State Park	Long Island; along beach		VI.11.2007	carrion	
BC37	Calliphoridae	Pollenia		rudis (Fabricius)	F	New York	Suffolk	Hecksher State Park	Long Island; along beach		VI.11.2007	carrion	ID checked TW

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BC38	Calliphoridae	Lucilia	sericata (Meigen)	M	New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007	carrion
BC39	Calliphoridae	Phormia	regina (Meigen)	F	New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007	carrion
BC40	Calliphoridae	Phormia	regina (Meigen)	F	New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007	carrion
BC41	Calliphoridae	Phormia	regina (Meigen)	F	New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007	carrion
BC42	Calliphoridae	Phormia	regina (Meigen)	F	New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007	carrion
BC43	Calliphoridae	Phormia	regina (Meigen)	F	New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007	carrion
BC44	Calliphoridae	Phormia	regina (Meigen)	F	New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007	carrion
BC45	Calliphoridae	Phormia	regina (Meigen)	M	New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007	carrion
BC46	Calliphoridae	Phormia	regina (Meigen)	M	New York	Suffolk	Heckscher State Park	Long Island; along beach	VI.11.2007	carrion
BC47	Sarcophagidae	Sarcophaga	aldrichi Parker	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC48	Calliphoridae	Calliphora	vomitoria (Linnaeus)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC49	Calliphoridae	Calliphora	vomitoria (Linnaeus)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC50	Calliphoridae	Calliphora	vomitoria (Linnaeus)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC51	Calliphoridae	Calliphora	vomitoria (Linnaeus)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC52	Calliphoridae	Calliphora	vomitoria (Linnaeus)	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC53	Calliphoridae	Phormia	regina (Meigen)	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC54	Calliphoridae	Phormia	regina (Meigen)	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC55	Calliphoridae	Phormia	regina (Meigen)	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC56	Calliphoridae	Phormia	regina (Meigen)	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC57	Calliphoridae	Phormia	regina (Meigen)	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC58	Calliphoridae	Phormia	regina (Meigen)	F	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC59	Calliphoridae	Phormia	regina (Meigen)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC60	Calliphoridae	Phormia	regina (Meigen)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC61	Calliphoridae	Phormia	regina (Meigen)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC62	Calliphoridae	Phormia	regina (Meigen)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC63	Calliphoridae	Phormia	regina (Meigen)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC64	Calliphoridae	Phormia	regina (Meigen)	M	New York	Rockland	Bear Mountain State Park	summit of Bear Mt.	VI.10.2007	carrion
BC65	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC66	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC67	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC68	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC69	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC70	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC71	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC72	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC73	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC74	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC75	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC76	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC77	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC78	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC79	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC80	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BC81	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BD01	Calliphoridae	Phormia	regina (Meigen)	F	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BD02	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BD03	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BD04	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BD05	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BD06	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BD07	Calliphoridae	Phormia	regina (Meigen)	M	New York	Dutchess	James Baird State Park		VI.12.2007	carrion
BD08	Calliphoridae	Phormia	regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD09	Calliphoridae	Phormia	regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD10	Calliphoridae	Phormia	regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD11	Calliphoridae	Phormia	regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD12	Calliphoridae	Phormia	regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD13	Calliphoridae	Phormia	regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD14	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD15	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD16	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD17	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD18	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD19	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD20	Calliphoridae	Lucilia	sericata (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD21	Calliphoridae	Lucilia	sericata (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD22	Calliphoridae	Lucilia	sericata (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD23	Calliphoridae	Lucilia	sericata (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD24	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD25	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD26	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD27	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD28	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD29	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD30	Calliphoridae	Lucilia	coeruleiviridis Macquart	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD31	Calliphoridae	Lucilia	coeruleiviridis Macquart	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD32	Calliphoridae	Lucilia	coeruleiviridis Macquart	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD33	Calliphoridae	Lucilia	sericata (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD34	Calliphoridae	Lucilia	sericata (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD35	Calliphoridae	Lucilia	cuprina Wiedemann	M	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD36	Sarcophagidae			F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD37	Calliphoridae	Chrysomya	rufifacies (Macquart)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD38	Calliphoridae	Chrysomya	rufifacies (Macquart)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD39	Calliphoridae	Chrysomya	rufifacies (Macquart)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD40	Calliphoridae	Chrysomya	rufifacies (Macquart)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD41	Calliphoridae	Chrysomya	rufifacies (Macquart)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD42	Calliphoridae	Chrysomya	rufifacies (Macquart)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD43	Muscidae	Musca	domestica Linnaeus	M	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD44	Calliphoridae	Cochliomyia	macellaria (Fabricius)	M	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD45	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD46	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD47	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD48	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD49	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD50	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD51	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD52	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD53	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD54	Calliphoridae	Cochliomyia	macellaria (Fabricius)	F	Texas	Galveston	Galveston Island State Park		VIII.08.2007	carrion
BD55	Muscidae				New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD56	Muscidae				New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD57	Muscidae				New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD58	Muscidae				New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD59	Sarcophagidae	Oxysarcodexia	ventricosa (Wulp)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD60	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD61	Calliphoridae	Lucilia	illustris (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD62	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD63	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD64	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD65	Calliphoridae	Lucilia	coeruleiviridis Macquart	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD66	Calliphoridae	Lucilia	coeruleiviridis Macquart	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD67	Calliphoridae	Lucilia	sericata (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD68	Calliphoridae	Lucilia	sericata (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD69	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD70	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD71	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD72	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion
BD73	Calliphoridae	Phormia	regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion

BD74	Calliphoridae	Phormia		regina (Meigen)	M	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion	
BD75	Calliphoridae	Phormia		regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion	
BD76	Calliphoridae	Phormia		regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion	
BD77	Calliphoridae	Phormia		regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion	
BD78	Calliphoridae	Phormia		regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion	
BD79	Calliphoridae	Phormia		regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion	
BD80	Calliphoridae	Phormia		regina (Meigen)	F	New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion	
BD81	Muscidae					New York	Richmond	Clay Pit Ponds State Park	Staten Island	VI.11.2007	carrion	
BE01	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)	M	Kentucky	Campbell	Highland Heights		IX.25.2008	reared from chicken	
BE02	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)	M	Kentucky	Kenton	Erlanger		X.7.2008	reared from chicken	
BE03	Sarcophagidae	Boettcheria		latisterna Parker	F	Ohio	Hamilton	Anderson Twp.		V.1.2008	Malaise	
BE04	Sarcophagidae	Sarcophaga		aldrichi Parker	M	Ohio	Hamilton	Anderson Twp.		V.1.2008	Malaise	
BE05	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	Ohio	Hamilton	Anderson Twp.		V.1.2008	Malaise	
BE06	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	Ohio	Hamilton	Anderson Twp.		V.1.2008	Malaise	
BE07	Calliphoridae	Phormia		regina (Meigen)	F	New York	Schuyler	Watkins Glen State Park		VI.9.2007	carrion	
BE08	Calliphoridae	Phormia		regina (Meigen)	F	New York	Schuyler	Watkins Glen State Park		VI.9.2007	carrion	
BE09	Calliphoridae	Lucilia		illustris (Meigen)	F	New York	Schuyler	Watkins Glen State Park		VI.9.2007	carrion	
BE10	Calliphoridae	Lucilia		illustris (Meigen)	F	New York	Schuyler	Watkins Glen State Park		VI.9.2007	carrion	
BE11	Calliphoridae	Lucilia		coeruleiviridis Macquart	F	New York	Schuyler	Watkins Glen State Park		VI.9.2007	carrion	
BE12	Calliphoridae	Lucilia		sericata (Meigen)	F	New York	Schuyler	Watkins Glen State Park		VI.9.2007	carrion	
BE13	Calliphoridae	Calliphora		vomitoria (Linnaeus)	M	New York	Schuyler	Watkins Glen State Park		VI.9.2007	carrion	
BE14	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)	M	Kentucky	Campbell	Highland Heights		IX.25.2008	reared from chicken	
BE15	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)	M	Kentucky	Campbell	Highland Heights		IX.25.2008	reared from chicken	
BE16	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)	F	Kentucky	Campbell	Highland Heights		IX.25.2008	reared from chicken	
BE17	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)	M	Kentucky	Kenton	Erlanger		X.7.2008	reared from chicken	
BE18	Sarcophagidae	Sarcophaga	Liopygia	argyrostoma (Robineau-Desvoidy)	F	Kentucky	Kenton	Erlanger		X.7.2008	reared from chicken	
BE19	Calliphoridae	Chrysomya		megacephala (Fabricius)	M	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE20	Calliphoridae	Chrysomya		megacephala (Fabricius)	M	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE21	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE22	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE23	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE24	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE25	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE26	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE27	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE28	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE29	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE30	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE31	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE32	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE33	Calliphoridae	Lucilia		cuprina Wiedemann	M	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE34	Calliphoridae	Lucilia		cuprina Wiedemann	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE35	Calliphoridae	Lucilia		cuprina Wiedemann	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE36	Muscidae	Musca		sp.	F	Texas	Cameron	Howard Johnson Hotel		VIII.07.2007	carrion	
BE37	Sarcophagidae	Sarcophaga	Neobellieria	libera Aldrich	M	Ohio	Adams	Edge of Appalachia Preserve		V.22.2009		
BE38	Sarcophagidae	Sarcophaga	Neobellieria	libera Aldrich	M	Ohio	Adams	Edge of Appalachia Preserve		V.22.2009		
BE39	Sarcophagidae	Microcerella		scrofa (Aldrich)	M	Ohio	Adams	Edge of Appalachia Preserve		V.22.2009		
BE40	Sarcophagidae	Sarcophaga	Bercaeopsis	pulla Aldrich	M	Ohio	Adams	Edge of Appalachia Preserve		V.22.2009		
BE41	Sarcophagidae	Mecynocorpus		salvum (Aldrich)	M	Ohio	Adams	Edge of Appalachia Preserve		V.22.2009		
BE42	Sarcophagidae	Spirobolomyia		sp.	M	Ohio	Adams	Edge of Appalachia Preserve		V.22.2009		
BE43	Sarcophagidae	Helicobia		rapax (Walker)	M	Ohio	Adams	Edge of Appalachia Preserve		V.22.2009		
BE44	Sarcophagidae	Titanogrypa	Titanogrypa	melampyga (Aldrich)	M	Ohio	Adams	Edge of Appalachia Preserve		V.22.2009		
BE45	Sarcophagidae				M	Texas	Fort Bend	Brazos Bend State Park		VIII.08.2007	carrion	
BE46	Sarcophagidae				F	Texas	Fort Bend	Brazos Bend State Park		VIII.08.2007	carrion	
BE47	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Fort Bend	Brazos Bend State Park		VIII.08.2007	carrion	
BE48	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Fort Bend	Brazos Bend State Park		VIII.08.2007	carrion	
BE49	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Fort Bend	Brazos Bend State Park		VIII.08.2007	carrion	
BE50	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Fort Bend	Brazos Bend State Park		VIII.08.2007	carrion	
BE51	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Fort Bend	Brazos Bend State Park		VIII.08.2007	carrion	
BE52	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Fort Bend	Brazos Bend State Park		VIII.08.2007	carrion	
BE53	Sarcophagidae				M	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE54	Sarcophagidae				F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE55	Sarcophagidae				F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE56	Sarcophagidae				F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE57	Sarcophagidae				F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE58	Sarcophagidae				F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE59	Sarcophagidae				M	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE60	Sarcophagidae				M	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE61	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE62	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE63	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE64	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE65	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	
BE66	Calliphoridae	Lucilia		mexicana Macquart	F	Texas	Kimble	South Llano River State Park	Junction	VIII.06.2007	carrion	ID checked TW
BE67	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Jackson	Lake Texana State Park		VIII.07.2007	carrion	
BE68	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Jackson	Lake Texana State Park		VIII.07.2007	carrion	
BE69	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Jackson	Lake Texana State Park		VIII.07.2007	carrion	
BE70	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Jackson	Lake Texana State Park		VIII.07.2007	carrion	
BE71	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Jackson	Lake Texana State Park		VIII.07.2007	carrion	
BE72	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Jackson	Lake Texana State Park		VIII.07.2007	carrion	
BE73	Muscidae	Musca		sp.	F	Texas	Jackson	Lake Texana State Park		VIII.07.2007	carrion	
BE74	Muscidae	Musca		domestica (Linnaeus)	M	Texas	McMullen	Choke Canyon State Park		VIII.06.2007	carrion	
BE75	Muscidae	Musca		domestica (Linnaeus)	F	Texas	McMullen	Choke Canyon State Park		VIII.06.2007	carrion	
BE76	Muscidae	Musca		domestica (Linnaeus)	M	Texas	McMullen	Choke Canyon State Park		VIII.06.2007	carrion	
BE77	Muscidae	Musca		domestica (Linnaeus)	F	Texas	McMullen	Choke Canyon State Park		VIII.06.2007	carrion	
BE78	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	McMullen	Choke Canyon State Park		VIII.06.2007	carrion	
BE79	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	McMullen	Choke Canyon State Park		VIII.06.2007	carrion	
BE80	Sarcophagidae				M	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BE81	Sarcophagidae				M	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF01	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF02	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF03	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF04	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF05	Calliphoridae	Phormia		regina (Meigen)	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF06	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF07	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF08	Calliphoridae	Lucilia		mexicana Macquart or eximia ?	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	ID checked by TW
BF09	Calliphoridae	Lucilia		cuprina Wiedemann	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF10	Calliphoridae	Lucilia		cuprina Wiedemann	M	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF11	Calliphoridae	Lucilia		cuprina Wiedemann	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF12	Calliphoridae	Lucilia		cuprina Wiedemann	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF13	Calliphoridae	Lucilia		cuprina Wiedemann	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF14	Calliphoridae	Lucilia		cuprina Wiedemann	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF15	Calliphoridae	Lucilia		sericata (Meigen)	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF16	Calliphoridae	Lucilia		sericata or cuprina	F	Texas	Dallas	Dallas	Canine Country Club	VIII.09.2007	carrion	
BF17	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Kenedy	Roadside Rest on Highway 77	S. of Corpus Christi	VIII.07.2007	carrion	
BF18	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Kenedy	Roadside Rest on Highway 77	S. of Corpus Christi	VIII.07.2007	carrion	
BF19	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Kenedy	Roadside Rest on Highway 77	S. of Corpus Christi	VIII.07.2007	carrion	
BF20	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Kenedy	Roadside Rest on Highway 77	S. of Corpus Christi	VIII.07.2007	carrion	
BF21	Calliphoridae	Chrysomya		megacephala (Fabricius)	M	Texas	Kenedy	Roadside Rest on Highway 77	S. of Corpus Christi	VIII.07.2007	carrion	
BF22	Calliphoridae	Chrysomya		megacephala (Fabricius)	M	Texas	Kenedy	Roadside Rest on Highway 77	S. of Corpus Christi	VIII.07.2007	carrion	
BF23	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Texas	Kenedy	Roadside Rest on Highway 77	S. of Corpus Christi	VIII.07.2007	carrion	
BF24	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Texas	Kenedy	Roadside Rest on Highway 77	S. of Corpus Christi	VIII.07.2007	carrion	
BF25	Muscidae	Musca		sp	F	Texas	Kenedy	Roadside Rest on Highway 77	S. of Corpus Christi	VIII.07.2007	carrion	
BF26	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Ellis	Ennis	Jacob Way's house	VIII.10.2007	carrion	
BF27	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	Texas	Ellis	Ennis	Jacob Way's house	VIII.10.2007	carrion	
BF28	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Ellis	Ennis	Jacob Way's house	VIII.10.2007	carrion	

BF29	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	Ellis	Ennis	Jacob Way's house	VIII.10.2007	carrion		
BF30	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	Ellis	Ennis	Jacob Way's house	VIII.10.2007	carrion		ID changed Dec.31, 2009; not typical
BF31		Lucilia		sericata (Meigen)	M	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF32		Lucilia		sericata (Meigen)	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF33		Lucilia		sericata (Meigen)	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF34	Calliphoridae	Lucilia		sericata (Meigen)	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF35	Calliphoridae	Lucilia		mexicana Macquart	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		ID checked TW
BF36	Calliphoridae	Phormia		regina (Meigen)	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF37	Calliphoridae	Phormia		regina (Meigen)	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF38	Muscidae	Musca		domestica Linnaeus	M	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF39	Muscidae	Musca		domestica Linnaeus	M	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF40	Muscidae	Musca		domestica Linnaeus	M	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF41	Muscidae	Musca		domestica Linnaeus	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF42	Muscidae	Musca		domestica Linnaeus	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF43	Muscidae	Musca		domestica Linnaeus	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF44	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF45	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF46	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF47	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF48	Calliphoridae	Chrysomya		rufifacies (Macquart)	M	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF49	Calliphoridae	Chrysomya		rufifacies (Macquart)	M	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF50	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF51	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	New Mexico	Dona Ana	Anthony	Theresa & Terry	VIII.04.2007	carrion		
BF52	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Texas	El Paso	El Paso	Will's house	VIII.04.2007	carrion		
BF53	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		
BF54	Calliphoridae	Phormia		regina (Meigen)	M	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		
BF55	Calliphoridae	Lucilia		mexicana Macquart	F	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		
BF56	Calliphoridae	Lucilia		mexicana Macquart	F	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		ID checked TW
BF57	Calliphoridae	Lucilia		mexicana Macquart	F	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		
BF58	Calliphoridae	Lucilia		mexicana Macquart	F	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		
BF59		Lucilia		sericata (Meigen)	F	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		
BF60		Lucilia		sericata (Meigen)	F	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		
BF61		Lucilia		sericata (Meigen)	F	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		
BF62	Calliphoridae	Lucilia		sericata (Meigen)	F	Texas	El Paso	El Paso	Frank's house	VIII.04.2007	carrion		
BF63	Calliphoridae	Calliphora		coloradensis Hough	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		ID checked
BF64	Calliphoridae	Calliphora		terraenovae Macquart	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF65	Calliphoridae	Calliphora		terraenovae Macquart	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF66	Calliphoridae	Calliphora		coloradensis Hough	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF67	Calliphoridae	Phormia		regina (Meigen)	F	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF68	Calliphoridae	Phormia		regina (Meigen)	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF69		Lucilia		sericata (Meigen)	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF70		Lucilia		sericata (Meigen)	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF71		Lucilia		sericata (Meigen)	F	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF72	Calliphoridae	Lucilia		sericata (Meigen)	F	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF73	Calliphoridae	Lucilia		mexicana Macquart	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		ID checked TW
BF74	Calliphoridae	Lucilia		mexicana Macquart	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF75	Calliphoridae	Lucilia		mexicana Macquart	M	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		ID checked TW
BF76	Calliphoridae	Lucilia		mexicana Macquart	F	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF77	Calliphoridae	Lucilia		mexicana Macquart	F	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		ID checked TW
BF78	Calliphoridae	Lucilia		mexicana Macquart	F	New Mexico	Santa Fe	Santa Fe	Larry's house	VIII.01.2007	carrion		
BF79		Lucilia		cluvia (Walker)	M	Florida	Highland	Archbold Biological Station		V.12.2006			ID checked TW; legs sampled from dry specimen
BF80													
BF81													
BG01	Calliphoridae	Lucilia		cuprina Wiedemann	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG02		Lucilia		cuprina Wiedemann	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG03		Lucilia		cuprina Wiedemann	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG04		Lucilia		cuprina Wiedemann	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG05	Calliphoridae	Lucilia		cuprina Wiedemann	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG06	Calliphoridae	Lucilia		cuprina Wiedemann	M	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG07	Calliphoridae	Lucilia		cuprina Wiedemann	M	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG08	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG09	Calliphoridae	Sarcophaga	Neobellieria	bullata Parker?	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG10	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG11	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG12	Muscidae	Musca		domestica (Linnaeus)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG13	Muscidae	Musca		domestica (Linnaeus)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG14	Muscidae				F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG15	Muscidae				F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG16	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG17	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG18	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG19	Calliphoridae	Chrysomya		rufifacies (Macquart)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG20	Calliphoridae	Chrysomya		rufifacies (Macquart)	M	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG21	Calliphoridae	Chrysomya		rufifacies (Macquart)	M	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG22	Calliphoridae	Chrysomya		rufifacies (Macquart)	M	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG23	Calliphoridae	Chrysomya		megacephala (Fabricius)	M	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG24	Calliphoridae	Chrysomya		megacephala (Fabricius)	M	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG25	Calliphoridae	Chrysomya		megacephala (Fabricius)	M	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG26	Calliphoridae	Chrysomya		megacephala (Fabricius)	M	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG27	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG28	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG29	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Florida	Monroe	Fort Zachary Taylor State Park	Key West	VII.14.2009			
BG30	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG31	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG32	Sarcophagidae	Blaesoxipha		sp.	F	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG33	Calliphoridae	Pollenia		sp.	F	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG34	Calliphoridae	Calliphora		terraenovae Macquart	F	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG35		Lucilia		sericata (Meigen)	F	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG36	Calliphoridae	Phormia		regina (Meigen)	M	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG37	Calliphoridae	Lucilia		sericata (Meigen)	M	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG38		Lucilia		sericata (Meigen)	M	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG39	Calliphoridae	Lucilia		sericata (Meigen)	M	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG40	Calliphoridae	Lucilia		sericata (Meigen)	M	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG41	Calliphoridae	Lucilia		sericata (Meigen)	M	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG42	Calliphoridae	Phormia		regina (Meigen)	F	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG43	Calliphoridae	Phormia		regina (Meigen)	F	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG44	Sarcophagidae	Sarcophaga	Liopygia	crassipalpis Macquart	M	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG45	Sarcophagidae	Ravinia		anxia (Walker)	M	New Mexico	Los Alamos	Los Alamos	Tari's house	VII.31.2007			
BG46	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	F	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG47	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	F	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG48	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	F	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG49	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	F	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG50	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	F	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG51	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG52	Calliphoridae	Phormia		regina (Meigen)	F	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG53	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG54	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG55	Calliphoridae	Cochliomyia		macellaria (Fabricius)	M	New Mexico	Soccorro	Roadside rest on I-25	nr. San Acacia	VII.31.2007			
BG56	see AS76											dry legs for double check	
BG57	see AT01											dry legs for double check	
BG58	see AF21											dry legs for double check	
BG59	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Florida	Monroe	John Penecamp Coral Reef State Park		VII.14.2009			
BG60	Calliphoridae	Chrysomya		megacephala (Fabricius)	F	Florida	Monroe	John Penecamp Coral Reef State Park		VII.14.2009			
BG61	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Monroe	Long Key State Park		VII.14.2009			
BG62	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Monroe	Long Key State Park		VII.14.2009			
BG63	Calliphoridae	Cochliomyia		macellaria (Fabricius)	F	Florida	Monroe	Long Key State Park		VII.14.2009			
BG64	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009			

BG65	Sarcophagidae	Sarcophaga	Neobellieria	bullata Parker	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG66	Sarcophagidae	Blaesoxipha	Gigantotheca	plinthopyga (Wiedemann)	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG67	Sarcophagidae	Oxysarcodexia		ventricosa (Wulp)	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG68	Sarcophagidae	Sarcodexia		lambens (Wiedemann)	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG69	Calliphoridae	Lucilia		cuprina Wiedemann	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG70	Sarcophagidae	Tricharea		sp.	F	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG71	Sarcophagidae	Tricharea		sp.	F	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG72	Calliphoridae	Lucilia		cuprina Wiedemann	F	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG73	Calliphoridae	Lucilia		cuprina Wiedemann	F	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG74	Calliphoridae	Lucilia		cuprina Wiedemann	F	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG75	Muscidae	Musca		domestica (Linnaeus)	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG76	Muscidae	Musca		domestica (Linnaeus)	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG77	Muscidae	Musca		domestica (Linnaeus)	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG78	Muscidae	Musca		domestica (Linnaeus)	M	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG79	Sarcophagidae	Sarcodexia		lambens (Wiedemann)?	F	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG80	Sarcophagidae	Sarcodexia		lambens (Wiedemann)?	F	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BG81	Sarcophagidae	Helicobia		sp.	F	Florida	Broward	John U. Lloyd State Park	Ft. Lauderdale	VII.13.2009				
BH01	Calliphoridae	Lucilia		sericata (Meigen)	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH02	Calliphoridae	Lucilia		sericata (Meigen)	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH03	Calliphoridae	Lucilia		sericata (Meigen)	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH04	Calliphoridae	Lucilia		sericata (Meigen)	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH05	Calliphoridae	Lucilia		mexicana Macquart	M	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH06	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH07	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH08	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH09	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH10	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH11	Calliphoridae	Lucilia		mexicana Macquart	M	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH12	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH13	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH14	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH15	Calliphoridae	Lucilia		mexicana Macquart	M	California	Los Angeles	Angeles National Forest	Gold Creek Rd. 1 mi E of Little Tujunga Cyn. Rd.	VIII.23.2009				
BH16	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH17	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH18	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH19	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH20	Calliphoridae	Lucilia		mexicana Macquart	M	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH21	Calliphoridae	Lucilia		mexicana Macquart	M	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH22	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH23	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH24	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH25	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH26	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Leo Carillo State Beach	Arroyo Sequit Cr.	IX.7.2009	rotting tilapia fish			
BH27	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BH28	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BH29	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BH30	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BH31	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BH32	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BH33	Calliphoridae	Lucilia		mexicana Macquart	M	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BH34	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BH35	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BH36	Calliphoridae	Lucilia		mexicana Macquart	F	California	Los Angeles	Tarzana Caballero Cyn.	Santa Monica Mts	VIII.30.2009	rotting tilapia fish			
BI01	Calliphoridae	Lucilia		thatuna		California	Del norte	Botanical Trail	trail	VI.6.2009	Whitworth donation			
BI02	Calliphoridae	Lucilia		thatuna		California	Del norte	Botanical Trail	trail	VI.6.2009	Whitworth donation			
BI03	Calliphoridae	Calliphora		loewi		Alaska		Denali Park	Nenana River	VIII.10.2008	Whitworth donation	bait trap		
BI04	Calliphoridae	Calliphora		loewi		Alaska		Denali Park	Nenana River	VIII.10.2008	Whitworth donation	bait trap		
BI05	Calliphoridae	Protocalliphora		bennetti							Whitworth donation			7907
BI06	Calliphoridae	Protocalliphora		bennetti							Whitworth donation			7907
BI07	Calliphoridae	Protocalliphora		sialia							Whitworth donation			7812
BI08	Calliphoridae	Protocalliphora		sialia							Whitworth donation			7812
BI09	Calliphoridae	Protocalliphora		rugosa							Whitworth donation			7888
BI10	Calliphoridae	Protocalliphora		rugosa							Whitworth donation			7888
BI11	Calliphoridae	Trypocalliphora		braueri							Whitworth donation			7908
BI12	Calliphoridae	Protocalliphora		occidentalis							Whitworth donation			7894
BI13	Calliphoridae	Protocalliphora		occidentalis							Whitworth donation			7894
BI14	Calliphoridae	Protocalliphora		occidentalis							Whitworth donation			7894
OH01	Sarcophagidae	Eumacronychia		sp.	M	Florida	Martin	Jonathon Dickinson State Park	trail	V.13.2006				

Table 4. List of specimen codes for samples included in the final Phase II reference database.

Family Calliphoridae		**Family Sarcophagidae**	
Code	Species	Code	Species
AG53	C. coloradensis	AM10	Ag. housei
AJ79	C. coloradensis	AY09	B. alcedo
AZ01	C. coloradensis	AW32	B. arizona
BA04	C. coloradensis	AW36	B. arizona
BF63	C. coloradensis	AW29	B. caridei
AJ02	C. grahami	AW27	B. cessator
AJ10	C. grahami	AY05	B. eleodis
AF14	C. latifrons	AC79	B. plinthopyga
AF15	C. latifrons	AE50	B. plinthopyga
AG16	C. latifrons	AG29	B. plinthopyga
AG22	C. latifrons	AH77	B. plinthopyga
AG37	C. latifrons	AK02	B. plinthopyga
AK48	C. latifrons	BG46	B. plinthopyga
AS40	C. latifrons	BG47	B. plinthopyga
AZ31	C. latifrons	AJ80	B. sp
AZ33	C. latifrons	AJ81	B. sp
BA02	C. latifrons	AK01	B. sp
BA05	C. latifrons	A37	Bo. bisetosa
BA09	C. latifrons	E35	Bo. cimbicis
BG58	C. latifrons	AA11	Bo. latisterna
AH57	C. livida	AA12	Bo. latisterna
AH66	C. livida	AL26	Bo. latisterna
AP64	C. livida	AM70	Bo. latisterna
AQ07	C. livida	AR81	Bo. latisterna
AZ32	C. livida	AW17	Bo. latisterna
BA01	C. livida	E22	Bo. latisterna
BI03	C. loewi	E49	Bo. latisterna
BI04	C. loewi	E53	Bo. latisterna
AF65	C. terranovae	AU69	Bo. latsiterna
AJ15	C. terranovae	AG26	Bo. litorosa
AK47	C. terranovae	AR69	Br. sarcophagina
AF19	C. vicina	AS51	Em. albicoma
AG19	C. vicina	E76	Fl. fletcheri
AH61	C. vicina	AP71	H. rapax
AK45	C. vicina	AQ50	H. rapax
AK70	C. vicina	AS66	H. rapax
AM11	C. vicina	AT36	H. rapax
AM12	C. vicina	AU12	H. rapax
AP58	C. vicina	AU34	H. rapax
AP69	C. vicina	AU72	H. rapax
AS41	C. vicina	AW05	H. rapax
AT53	C. vicina	AZ65	H. rapax
AV57	C. vicina	AZ68	H. rapax
AV70	C. vicina	BA23	H. rapax
AV74	C. vicina	BA24	H. rapax
BB52	C. vicina	E4	H. rapax
AF11	C. vomitoria	E55	H. rapax

AF63	C. vomitoria	E77	H. rapax
AK68	C. vomitoria	AZ64	Me. salvum
AM27	C. vomitoria	BA31	Me. salvum
AM75	C. vomitoria	AV26	Mi. adelphe
AM77	C. vomitoria	AP68	Ox. cingarus
AO01	C. vomitoria	AA23	Ox. ventricosa
AO02	C. vomitoria	AA37	Ox. ventricosa
AP08	C. vomitoria	AA59	Ox. ventricosa
AP57	C. vomitoria	AB44	Ox. ventricosa
AQ29	C. vomitoria	AB48	Ox. ventricosa
AS31	C. vomitoria	AC72	Ox. ventricosa
AS32	C. vomitoria	AC73	Ox. ventricosa
AT10	C. vomitoria	AD56	Ox. ventricosa
BB53	C. vomitoria	AZ47	Ox. ventricosa
BC50	C. vomitoria	BA21	Ox. ventricosa
BE19	Ch. megacephala	BD59	Ox. ventricosa
BE20	Ch. megacephala	E62	Ox. ventricosa
BF21	Ch. megacephala	E8	Ox. ventricosa
BG23	Ch. megacephala	AE81	R. anxia
BG24	Ch. megacephala	AT45	R. anxia
BG59	Ch. megacephala	AT50	R. anxia
BG60	Ch. megacephala	AT48	R. derelicta
AA64	Ch. rufifacies	AZ09	R. derelicta
AC70	Ch. rufifacies	AZ62	R. derelicta
AC77	Ch. rufifacies	BA29	R. derelicta
AC78	Ch. rufifacies	BA30	R. derelicta
AD19	Ch. rufifacies	BB21	R. derelicta
AD43	Ch. rufifacies	AA01	R. floridensis
AY76	Ch. rufifacies	AA03	R. floridensis
AY78	Ch. rufifacies	AA60	R. floridensis
BE50	Ch. rufifacies	A22	R. lherminieri
BE65	Ch. rufifacies	AA36	R. lherminieri
BE72	Ch. rufifacies	AN14	R. lherminieri
BF07	Ch. rufifacies	AN15	R. lherminieri
BF40	Ch. rufifacies	AN16	R. lherminieri
BF49	Ch. rufifacies	AN17	R. lherminieri
AA28	Co. macellaria	AQ58	R. lherminieri
AA29	Co. macellaria	AZ44	R. lherminieri
AA30	Co. macellaria	AZ58	R. lherminieri
AA49	Co. macellaria	AE45	R. planifrons
AA50	Co. macellaria	AF05	R. planifrons
AA51	Co. macellaria	AF06	R. planifrons
AB39	Co. macellaria	AK08	R. planifrons
AB61	Co. macellaria	AW64	R. pusiola
AB67	Co. macellaria	AW73	R. pusiola
AD22	Co. macellaria	AX61	R. pusiola
AE09	Co. macellaria	AX62	R. pusiola
AE10	Co. macellaria	AX63	R. pusiola
AE27	Co. macellaria	AY36	R. pusiola
AE29	Co. macellaria	AZ05	R. pusiola

AT52	Co. macellaria	BA18	R. pusiola
AT70	Co. macellaria	BA19	R. pusiola
AY46	Co. macellaria	AW30	R. querula
AY48	Co. macellaria	AZ61	R. querula
AY50	Co. macellaria	BA16	R. querula
AY54	Co. macellaria	AR33	R. stimulans
BA70	Co. macellaria	AZ10	R. stimulans
BE27	Co. macellaria	AZ45	R. stimulans
BE28	Co. macellaria	AZ46	R. stimulans
BE47	Co. macellaria	AZ60	R. stimulans
BE67	Co. macellaria	BA27	R. stimulans
BE78	Co. macellaria	E7	R. stimulans
BF02	Co. macellaria	BA15	R. vagabunda
BF44	Co. macellaria	BA17	R. vagabunda
BF52	Co. macellaria	AL34	S. acrophila
AG15	Cy. cadaverina	AJ12	S. africa
AM25	Cy. cadaverina	AJ13	S. africa
AM26	Cy. cadaverina	AL31	S. africa
AQ31	Cy. cadaverina	AL31	S. africa
AT03	Cy. cadaverina	AW42	S. africa
AT17	Cy. cadaverina	AW43	S. africa
AV55	Cy. cadaverina	BA20	S. africa
AV69	Cy. cadaverina	AV03	S. aldrichi
E40	Cy. Cadaverina	E23	S. aldrichi
AD18	L. cluvia	AE73	S. argyrostoma
AD20	L. cluvia	AE74	S. argyrostoma
AD49	L. cluvia	AE76	S. argyrostoma
BF79	L. cluvia	AS36	S. argyrostoma
AB02	L. coeruleiviridis	BE01	S. argyrostoma
AB04	L. coeruleiviridis	BE02	S. argyrostoma
AB37	L. coeruleiviridis	BE14	S. argyrostoma
AB38	L. coeruleiviridis	BE16	S. argyrostoma
AB66	L. coeruleiviridis	BE18	S. argyrostoma
AB70	L. coeruleiviridis	AA02	S. bullata
AP59	L. coeruleiviridis	AA45	S. bullata
AP73	L. coeruleiviridis	AA46	S. bullata
AP74	L. coeruleiviridis	AA48	S. bullata
AR17	L. coeruleiviridis	AA57	S. bullata
AS76	L. coeruleiviridis	AB07	S. bullata
AS78	L. coeruleiviridis	AC71	S. bullata
AS79	L. coeruleiviridis	AD09	S. bullata
AU64	L. coeruleiviridis	AD70	S. bullata
AV59	L. coeruleiviridis	AE39	S. bullata
AW01	L. coeruleiviridis	AF37	S. bullata
AW14	L. coeruleiviridis	AQ05	S. bullata
AX13	L. coeruleiviridis	AQ06	S. bullata
AX16	L. coeruleiviridis	AR26	S. bullata
AX19	L. coeruleiviridis	AR27	S. bullata
BA68	L. coeruleiviridis	BA69	S. bullata
AA05	L. cuprina	BB19	S. bullata

AA18	L. cuprina	BB20	S. bullata
AA20	L. cuprina	BC10	S. bullata
AA21	L. cuprina	BC12	S. bullata
AA34	L. cuprina	BC14	S. bullata
AA40	L. cuprina	BG64	S. bullata
AA42	L. cuprina	BG65	S. bullata
AE61	L. cuprina	AF61	S. cooleyi
BE33	L. cuprina	AH76	S. cooleyi
BE34	L. cuprina	AJ17	S. cooleyi
BE35	L. cuprina	AL12	S. crassipalpis
BF09	L. cuprina	AL33	S. crassipalpis
BF10	L. cuprina	AL35	S. crassipalpis
BF11	L. cuprina	AQ25	S. crassipalpis
BF12	L. cuprina	AR61	S. crassipalpis
BF13	L. cuprina	E74	S. crassipalpis
BG02	L. cuprina	AB10	S. georgiana
BG72	L. cuprina	AV61	S. hinei
AG72	L. elongata	AO50	S. houghi
AG76	L. elongata	AT30	S. idonea
AH37	L. elongata	AQ40	S. johnsoni
AF20	L. illustris	E39	S. mimoris
AG59	L. illustris	AH21	S. nearctica
AG63	L. illustris	AQ52	S. nearctica
AG65	L. illustris	AQ53	S. nearctica
AH38	L. illustris	AR21	S. nearctica
AM28	L. illustris	AR64	S. nearctica
AO24	L. illustris	AR78	S. nearctica
AP13	L. illustris	AS37	S. nearctica
AP15	L. illustris	AS38	S. nearctica
AS81	L. illustris	AS62	S. nearctica
AT54	L. illustris	AU24	S. nearctica
AT55	L. illustris	AU70	S. nearctica
AT56	L. illustris	BB67	S. nearctica
AT57	L. illustris	E43	S. polistensis
AT58	L. illustris	BC36	S. saraceniodes
AV54	L. illustris	AQ49	S. sarracenioides
AX11	L. illustris	AR01	S. sarracenioides
BA61	L. illustris	AX80	S. sarracenioides
BB44	L. illustris	AL80	S. seagoi
BB68	L. illustris	AH22	S. shermani
BE09	L. illustris	AH44	S. shermani
BE10	L. illustris	AH47	S. shermani
AE60	L. mexicana	AH48	S. shermani
AE63	L. mexicana	AV79	S. sp
AX39	L. mexicana	AP06	S. subvicina
AX40	L. mexicana	AP07	S. subvicina
AX41	L. mexicana	AP72	S. subvicina
AX42	L. mexicana	AS68	S. subvicina
AX43	L. mexicana	AV23	S. subvicina
AX44	L. mexicana	AW02	S. subvicina

AX45	L. mexicana
AX46	L. mexicana
AX47	L. mexicana
AX48	L. mexicana
AX49	L. mexicana
AX50	L. mexicana
AX51	L. mexicana
AX53	L. mexicana
AX56	L. mexicana
BE66	L. mexicana
BF35	L. mexicana
BF55	L. mexicana
BF56	L. mexicana
BF73	L. mexicana
BF74	L. mexicana
BH05	L. mexicana
BH06	L. mexicana
BH16	L. mexicana
BH17	L. mexicana
BH27	L. mexicana
BH28	L. mexicana
AE59	L. sericata
AF47	L. sericata
AJ76	L. sericata
AM19	L. sericata
AO51	L. sericata
AQ39	L. sericata
AX36	L. sericata
AZ12	L. sericata
AZ38	L. sericata
AZ41	L. sericata
AZ50	L. sericata
AZ70	L. sericata
BF32	L. sericata
BF60	L. sericata
BF62	L. sericata
BG37	L. sericata
AF57	L. silvarum
AF58	L. silvarum
AF59	L. silvarum
AF60	L. silvarum
AR23	L. silvarum
AT77	L. silvarum
AU62	L. silvarum
AU63	L. silvarum
BI01	L. thatuna
BI02	L. thatuna
AB62	P. regina
AB64	P. regina
AD71	P. regina
A23	S. triplasia
AA27	S. triplasia
AL10	S. triplasia
AL15	S. triplasia
AR20	S. triplasia
AT27	S. triplasia
AT28	S. triplasia
E24	S. triplasia
E25	S. triplasia
E27	S. triplasia
AE22	S. utilis
AE23	S. utilis
AE24	S. utilis
AT19	S. utilis
E42	S. utilis
AV21	Sb. flavipalpis
BG79	Sx. lambens
BG80	Sx. lambens
AC25	Ti. alata
F63	Ti. luculenta
AQ68	Tp. importuna
AE56	W. vigil

Family Muscidae

E46	Mu. atumnalis
BG75	Mu. domestica
BG76	Mu. domestica

AD72	P. regina
AE67	P. regina
AF39	P. regina
AG01	P. regina
AI17	P. regina
AI18	P. regina
AJ29	P. regina
AM03	P. regina
AS01	P. regina
AS03	P. regina
AT18	P. regina
AT38	P. regina
AT39	P. regina
AT63	P. regina
AT64	P. regina
AU35	P. regina
BF05	P. regina
BF36	P. regina
E51	P. regina
AT02	Po. labialis
AP60	Po. pediculata
AR74	Po. pediculata
AS70	Po. pediculata
AS71	Po. pediculata
AU78	Po. pediculata
BA12	Po. pediculata
BB37	Po. pediculata
BG57	Po. pediculata
AQ33	Po. rudis
AR75	Po. rudis
AV81	Po. rudis
AW13	Po. rudis
AZ63	Po. rudis
AF10	Pr. terranovae
AI04	Pr. terranovae
AI05	Pr. terranovae

Table 5. Intraspecific nucleotide diversity (%) for seven species with multiple specimens (N), calculated as the average diversity between all specimens within a species (Pi). Sliding window analysis was calculated for 600bp windows of the COI-COII region.

Species	N	Sliding window analysis				COI (%)	COII (%)	COI-COII (%)	ND4 (%)	COI-COII-ND4 (%)
		Max (%)	Midpoint (s)	Min (%)	Midpoint (s)					
C. vicina	5	0.300	2309-2509	0	2909-3146	0.162	0.063	0.127	0.062	0.122
C. vomitoria	2	0.500	2701-2871, 3248-3268	0.167	1759-1863, 2506-2661, 3308-	0.334	0.154	0.267	0.156	0.237
L. illustris	4	0.833	1990-2030	0.167	2755-2900	0.463	0.230	0.380	0.312	0.356
L. sericata	3	0.222	1767-1776	0	1781-1841, 2451-3462	0.130	0	0.088	0.104	0.090
L. cuprina	6	0.244	2033-2490	0	2640-3176	0.174	0.162	0.162	0.116	0.183
S. Africa	3	0.222	1891-2026	0	2509-2724, 3339-3404	0.088	0.101	0.116	0.104	0.113
S. bullata	3	2.556	2151-2176, 2351-2386	1.0	2761-2766	2.018	1.118	1.740	1.996	1.804
P. regina	4	1.667	2511-2571	0.083	3118-3488	0.753	0.076	0.514	0.572	0.385
Total	-	-	-	-	-	8.407	8.028	8.124	7.752	7.877

Table 6. Intraspecific nucleotide diversity (%) for seven species with multiple specimens (N), calculated as the average diversity between all specimens within a species (Pi) for 3 commonly sequenced regions of the COI gene.

Species	N	Barcoding	"2183"	"2792"
C. vicina	5	0.088	0.0223	0
C. vomitoria	2	0.296	0.374	0.339
L. illustris	4	0.495	0.502	0.184
L. sericata	3	0.094	0	0
L. cuprina	6	0.207	0.179	0
S. africa	3	0.095	0.082	0.113
S. bullata	3	2.194	1.958	1.478
P. regina	4	0.143	1.288	0.085
Total absolute divergence	-	7.982	8.806	7.076
Total relative divergence	-	98.25%	108.39 %	87.10 %

Table 7. Interspecific nucleotide diversity (Pi%) for 5 species pairs for the COI-COII region. Sliding window analysis was calculated for 600bp windows of the COI-COII region.

Species	N	Sliding window analysis				COI (%)	COII (%)	COI-COII (%)	ND4 (%)	COI-COII-ND4 (%)
		Max (%)	Midpoint (s)	Min (%)	Midpoint (s)					
C. vicina x *C. vomitoria*	7	5.820	2487-2497	1.651	3169-3184	4.712	2.757	3.952	4.272	4.024
L. sericata x *L. illustris*	7	7.856	2551	3.803	3098, 3118-3123	5.804	4.856	5.362	5.330	5.226
L. sericata x *L. cuprina*	9	1.345	2371-2436	0.502	2971-3137	0.940	1.015	0.925	0.873	0.900
L. illustris x *L. cuprina*	10	7.825	2555	3.584	3147-3157	5.742	4.856	5.315	4.995	5.099
S. Africa x *S. bullata*	6	12.353	2529	6.921	2989-3008, 3275	9.548	7.694	8.737	11.098	9.274
Mean	-	-	-	-	-	5.349	4.236	4.858	5.314	4.905

Table 8. Interspecific nucleotide diversity (%) for 5 species pairs for the COI-COII region.

Species	Barcoding	2183	2792
C. vicina x *C. vomitoria*	4.630	4.793	1.711
L. sericata x *L. illustris*	4.943	6.775	3.597
L. sericata x *L. cuprina*	0.804	1.026	0.508
L. illustris x *L. cuprina*	5.056	6.598	3.403
S. africa x *S. bullata*	7.623	11.386	7.708

Table 9. Estimates of overall genetic distance and mean intra- and interspecific diversity for COI, COII and ND4 genes.

	Overall genetic distance
COI	0.084
COII	0.084
ND4	0.079
COI-COII	
COI-COII-ND4	0.080

Table 10. DNA sequence data for the reference database for species identification of forensically important Diptera

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#MEGA
!Title For NIJ final report July 2011;
!Format
   DataType=Nucleotide CodeTable=Invertebrate_Mitochondrial
   NSeqs=506 NSites=1172
   Identical=. Missing=? Indel=-;


!Domain=Data property=Coding CodonStart=1;
#Ag._housei_AM10_ME_(Hancock)_USA
TTA YTA YTA GTA AGC AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAY TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATC TCY TCG ATT TTA GGA GCA GTA
AAT TTT ATT ACC ACA GTT ATT AAT ATA CGA TCA ACW GGW ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCT TTA CTT TTA TTA TTA TCT TTA CCT GTA CTT GCT GGA GCA ATC ACC ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCG GGA GGA GGA GAT CCT ATT TTA TAC CAA CAT TTA TTT TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT CTC CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACA TTC GGT TCA CTA GGA ATA ATT TAT GCT ATA CTA GCT ATC GGA TTA TTA GGA TTT ATC GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGT ATA GAC GTT GAT ACA CGA GCT TAT TTC ACT TCT GCA ACT ATA ATT ATT GCT GTA CCT ACC GGT ATT
AAA ATT TTC AGT TGA TTA GCT ACC CTT TAT GGA ACA CAA CTA AAT TAT TCT CCA GCT ATA CTT TGA GCT TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTA ATT CTT GCT AAT TCA TCA GTA GAT ATT GTT CTT CAT GAC ACA
TAC TAT GTA GTA GCT CAT TTT CAC TAC GTC CTA TCA ATA GGA GCT GTA TTC GCA ATT ATA GCA GGA TTC GTA CAC TGA
TAC CCT TTA TTT ACT GGT TTA ACA TTA AAT ACA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTA AAT
TTA ACT TTC TTT CCC CAA CAT TTT TTA GGT CTT GCT GGT ATA CCT CGT CGT TAT TCA GAT TAC CCT GAT GCT TAT ACA
ACA TGA AAC GTA ATT TCT ACA ATT GGA TCA ACA ATT TCA TTA CTA GGG ATT TTA TTC TTT TTC TTT ATT ATT TGA GAA
AGT TTA GTT ACT CAA CGT CAA GTT TTA TTC CCA GTA CAA CTA AAT TCT TCA ATT GAA TGA CTT CAA AAT ACT CCC CCT
GC
#B._alcedo_AY09_NM_(Grant)_USA
CTA TTA TTA ACA AGA AGT ATA GTA GAA AAC GGA GCT GGA ACA GGT TGA ACT GTT TAT CCT CCT CTT TCA TCT AAT ATT
GCC CAT AGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATT TCT TCC ATC CTA GGA GCA GTA
AAT TTT ATT ACA ACA GTT ATT AAT ATA CGA TCT ACA GGT ATC ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GCA ATT ACT GCT TTA TTA TTA CTT CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCT TTT TTC GAC CCA GCA GGT GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCA GAA GTC TAC ATT TTA ATT CTA CCT GGA TTT GGT ATA ATT TCA CAC ATT ATT AGT CAA GAA TCT GGA AAA AAA GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA CTA GCA ATT GGT CTA TTA GGA TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGA ATA GAT GTA GAT ACC CGA GCT TAC TTT ACT TCT GCT ACT ATA ATT ATT GCA GTT CCA ACT GGA ATT
AAA ATT TTT AGA TGA CTA GCT ACT CTT TAT GGT ACA CAA CTT AAT TAT TCC CCA GCA ATT ATA TGA GCT ATT GGA TTT
GTC TTT TTA TTT ACT GTA GGA GGA TTA ACA GGA GTG GTT TTA GCT AAC TCT TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTT GTA GCA CAT TTT CAT TAT GTA CTT TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTC CAT TGA
TAT CCA CTA TTT ACT GGT TTA ACA CTA AAT GTA AAA ATA TTA AAA AGT CAA TTT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTT CCA CAA CAT TTT TTA GGA CTT GCT GGA ATA CCT CGA CGT TAC TCT GAC TAT CCA GAT GCT TAC ACA
ACT TGA AAC ATT ATT TCA ACT ATT GGT TCA ACA ATT TCA TTC TTA GGT ATC CTA TAT TTC TTT TTT ATC ATT TGA GAA
AGT TTA ACT TCT CAA CGT CAA GTA ATA TTT CCA GTA CAA TTA AAT TCA TCA ATT GAT TGA CTC CAA AAT GTT CCT CCT
GC
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GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAC TTA GCT GGT ATT TCT TCT ATT TTA GGA GCT GTA
AAT TTT ATT ACC ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAC CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA TTA CTC CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCT TTC TTT GAC CCT GCA GGA GGA GGA GAC CCA ATT TTA TAT CAA CAC TTA TTT TGA TTC TTT GGT CAT
CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGT ATA ATT TCT CAT ATT ATT AGT CAA GAA TCT GGT AAA AAA GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCC ATA CTA GCA ATT GGT TTA TTA GGT TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGA ATG GAT GTT GAT ACT CGA GCT TAT TTT ACT TCT GCC ACT ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAA ATT TTT AGA TGA CTA GCA ACT CTT TAT GGT ACA CAA CTT AAT TTC TCT CCA GCA ATT TTA TGA GCC CTT GGA TTT
GTA TTT TTA TTT ACC GTA GGT GGA TTA ACA GGA GTA GTA TTA GCT AAT TCT TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTT GTA GCA CAT TTT CAC TAT GTC CTT TCT ATA GGA GCA GTG TTT GCA ATT ATA GCA GGA TTT GTA CAT TGA
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TAT TCT TTA TTC ACT GGT TTA ACC CTA AAT GTT AAT ATA TTA AAA AGT CAA TTT ATT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTT CCT CAA CAT TTT TTA GGA CTT GCT GGA ATA CCT CGA CGT TAC TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTT ATT TCA ACT ATT GGT TCA ACA ATT TCA TTC CTA GGA ATT CTA TAT TTC TTT TAC ATT ATT TGA GAA
AGT CTA ACT TCT CAA CGT CAA GTA ATA TTT CCT GTA CAA TTA AAT TCA TCA ATT GAA TGA TTT CAA AAT ACT CCG CCW
GC
#B._caridei_AW29_NM_(Grant)_USA
CTT CTC CTA GTA AGT AGA ATA GTA GAA AAT GGG GCT GGG ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCC AAC ATC
GCT CAT GGA GGA GCA TCT GTC GAT CTA GCA ATT TTC TCC CTA CAT TTA GCT GGA ATT TCA TCT ATC CTA GGA GCA GTA
AAT TTT ATT ACT ACA GTC ATT AAC ATA CGA TCT TCT GGA ATT ACT TTT GAC CGT ATA CCT TTA TTT GTT TGG TCT GTA
GTA ATT ACT GCC CTT CTA TTA CTT CTA TCC TTA CCT GTT CTT GCA GGA GCA ATC ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTT GGA CAC
CCT GAA GTT TAC ATT TTA ATC CTT CCT GGA TTC GGT ATA ATT TCT CAC ATT ATT AGT CAA GAA TCT GGT AAA AAG GAA
ACT TTT GGT TCT CTT GGG ATA ATT TAT GCT ATA CTA GCA ATT GGT TTA TTA GGT TTC ATC GTC TGA GCC CAT CAC ATA
TTT ACA GTA GGA ATG GAT GTT GAT ACT CGA GCA TAC TTC ACT TCT GCT ACA ATA ATC ATT GCT GTC CCA ACT GGT ATT
AAA ATT TTT AGT TGA TTA GCC ACT CTT TAC GGA ACA CAA CTA AAT TAT TCA CCA GCA ATT CTA TGA GCC TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACA GGT GTT GTT TTA GCC AAT TCT TCT ATC GAC ATT ATT TTA CAT GAC ACT
TAC TAT GTG GTT GCT CAT TTC CAC TAT GTA CTC TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTA CAC TGA
TAT CCT TTA TTT ACT GGT TTA ACT TTA AAC ACA AAA ATA CTA AAA AGT CAA TTC ATT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTT CCT CAA CAT TTT TTA GGT CTT GCT GGT ATA CCT CGT CGA TAC TCC GAC TAT CCA GAC GCT TAC ACA
ACC TGA AAT GTA ATT TCA ACT ATT GGT TCA ACA ATC TCT TTA CTA GGA ATC TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGA CTA ACT TCC CAA CGT CAA GTT CTA TTC CCT ATT CAA TTA AAT TCA TCA ATC GAA TGA CTC CAA AAC AC- --- ---
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#B._cessator_AW27_NM_(Grant)_USA
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GCT CAC GGA GGG GCT TCT GTT GAT TTA GCA ATT TTC TCT CTT CAC TTA GCT GGA ATT TCT TCC ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACT GGT ATT ACT TTT GAC CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTA ATT ACT GCT TTA TTA TTA CTT CTT TCT CTA CCT GTA CTT GCC GGA GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAT CCA GCA GGA GGA GAC CCA ATT TTA TAT CAA CAC TTA TTT TGA TTT TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGT TCA CTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGT TTA TTA GGT TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTG GGA ATG GAT GTA GAT ACT CGA GCT TAT TTT ACA TCT GCT ACA ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTT AGT TGA CTA GCA ACT CTA TAT GGA ACA CAA CTT AAT TAT TCT CCA GCA ATT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACT GTA GGA GGA TTA ACA GGA GTT GTT CTA GCT AAT TCT TCA ATT GAT ATC ATT TTA CAT GAT ACT
TAT TAT GTA GTA GCA CAT TTC CAT TAT GTA TTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCT GGA TTT GTA CAC TGA
TAC CCT TTA TTT ACT GGT TTA ACA TTA AAT AGA AAG ATA CTA AAA AGT CAA TTT ATT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTC CCT CAA CAT TTC TTA GGT CTT GCT GGA ATA CCT CGA CGT TAT TCT GAC TAC CCA GAT GCT TAC ACA
ACT TGA AAT GTA ATT TCA ACT ATT GGT TCA ACA ATT TCA TTA TTA GGA ATT CTA TTC TTC TTC TTT ATT ATT TGA GAA
AGT TTA ACT TCT CAA CGT CAA GTT ATA TTC CCT GTA CAA TTA AAT TCA TCA ATT GAA TGA --- --- --- --- --- ---
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#B._eleodis_AY05_NM_(Grant)_USA
TTA TTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGT TGA ACT GTA TAT CCA CCT CTT TCA TCT AAC ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATT TCT TCT ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGT ATA CCT TTA TTT GTT TGA TCC GTA
GTA ATT ACT GCT TTA TTA TTA CTT CTT TCT TTA CCA GTA CTT GCT GGA GCA ATT ACT ATA CTC TTA ACT GAC CGA AAT
ATT AAT ACT TCT TTC TTT GAT CCA GCA GGA GGA GGT GAC CCA ATT TTA TAT CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATG ATT TCT CAT ATT ATT AGT CAA GAA TCT GGA AAA AAG GAA
ACA TTT GGA TCA TTA GGA ATA ATT TAT GCT ATG CTA GCA ATT GGT TTA TTA GGT TTT ATT GTC TGA GCT CAT CAC ATA
TTT ACT GTA GGA ATA GAC GTA GAT ACT CGA GCC TAT TTT ACT TCT GCA ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACA CAA CTT AAT TAT TCC CCA GCA ATT TTA TGA GCT CTT GGA TTT
GTA TTT TTA TTT ACT GTA GGT GGA TTA ACA GGA GTA GTA TTG GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAC TAT GTA GTA GCA CAT TTT CAT TAC GTA CTT TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTA CAT TGA
TAC CCA TTA TTT ACT GGT TTA ACA TTA AAT ACA AAA ATA TTA AAA AGT CAA TTT ATT ATT ATA TTT ATA GGA GTA AAT
TTA ACA TTC TTT CCG CAA CAT TTT TTA GGT CTT GCT GGA ATA CCT CGA CGT TAT TCT GAT TAC CCA GAT GCT TAC ACA
TCT TGA AAT GTT GTT TCA ACT ATT GGT TCA ACA ATT TCC TTA CTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
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GC
#B._arizona_AW36_NM_(Grant)_USA
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AAT TTT ATT ACC ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAC CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA TTA CTC CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCT TTC TTT GAC CCT GCA GGA GGA GGA GAC CCA ATT TTA TAT CAA CAC TTA TTT TGA TTC TTT GGT CAT
CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGT ATA ATT TCT CAT ATT ATT AGT CAA GAA TCT GGT AAA AAA GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCC ATA CTA GCA ATT GGT TTA TTA GGT TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGA ATG GAT GTT GAT ACT CGA GCT TAT TTT ACT TCT GCC ACT ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAA ATT TTT AGA TGA CTA GCA ACT CTT TAT GGT ACA CAA CTT AAT TTC TCT CCA GCA ATT TTA TGA GCC CTT GGA TTT
GTA TTT TTA TTT ACC GTA GGT GGA TTA ACA GGA GTA GTA TTA GCT AAT TCT TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTT GTA GCA CAT TTT CAC TAT GTC CTT TCT ATA GGA GCA GTG TTT GCA ATT ATA GCA GGA TTT GTA CAT TGA
TAT TCT TTA TTC ACT GGT TTA ACC CTA AAT GTT AAT ATA TTA AAA AGT CAA TTT ATT ATT ATA TTT ATA GGA GTA AAT
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ACT TGA AAT GTT ATT TCA ACT ATT GGT TCA ACA ATT TCA TTC CTA GGA ATT CTA TAT TTC TTT TAC ATT ATT TGA GAA
AGT CTA ACT TCT CAA CGT CAA GTA ATA TTT CCT GTA CAA TTA AAT TCA TCA ATT GAA TGA TTT CAA AAT ACT CCG CCA
GC
#B._plinthopyga_AC79_FL_(Highland)_USA
TTA TTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCC CAT GGA GGA GCA TCT GTT GAT TTA GCA ATT TTC TCT CTT CAC TTA GCT GGA ATT TCA TCT ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA TTA CTT CTT TCT TTG CCT GTA CTT GCT GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCA GGA GGA GGA GAT CCA ATT CTA TAC CAA CAC TTA TTC TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCC CAT ATT ATT AGT CAA GAA TCT GGT AAA AAG GAA
ACA TTT GGT TCA TTA GGG ATA ATT TAT GCA ATG TTA GCA ATT GGT TTA TTA GGT TTC ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGA ATG GAC GTA GAT ACT CGT GCT TAT TTT ACA TCT GCA ACA ATA ATT ATT GCT GTT CCT ACT GGA ATT
AAA ATT TTC AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCA ATT TTA TGA GCC TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCT TCT ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTT GCA CAT TTT CAC TAT GTA CTT TCT ATA GGA GCA GTA TTT GCA ATT ATA GCT GGA TTC GTA CAC TGA
TAC CCT CTA TTT ACT GGA CTA ACA TTA AAT AGA AAG ATA TTA AAA AGT CAA TTT ATT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTT TTC CCT CAA CAC TTC TTA GGA CTT GCT GGA ATA CCT CGA CGT TAT TCA GAC TAT CCA GAT GCT TAT ACT
ACT TGA AAT GTT ATT TCA ACT ATT GGA TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA ACT TCC CAA CGT CAA GTG ATA TTC CCT ATC CAA CTA AAT TCA TCA ATT GAA TGA CTT CAA AAT ACC CCA CCT
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#B._plinthopyga_AE50_CA_(Glen)_USA
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--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- TTT GAT CGA ATG CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA TTA CTT CTT TCT TTA CCT GTA CTT GCT GGT GCA ATT ACT ATA TTA TTT ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCC CAT ATT ATT AGT CAA GAA TCT GGT AAA AAG GAA
ACA TTT GGT TCA TTA GGG ATA ATT TAT GCA ATG TTA GCA ATT GGT TTA TTA GGT TTC ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGA ATG GAC GTA GAT ACT CGT GCT TAT TTT ACA TCT GCA ACA ATA ATT ATT GCT GTT CCT ACT GGA ATT
AAA ATT TTC AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCA ATT TTA TGA GCC TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCT TCT ATT GAT ATT ATC TTA CAT GAT ACT
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TTA ACT TTT TTC CCT CAA CAC TTC TTA GGG CTT GC- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#B._plinthopyga_AG29_OR_(Crook)_USA
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GCC CAT GGA GGA GCA TCT GTT GAT TTA GCA ATT TTC TCT CTT CAC TTA GCT GGA ATT TCA TCT ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATG CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA TTA CTT CTT TCT TTA CCT GTA CTT GCT GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCA GGA GGA GGA GAT CCA ATT CTA TAC CAA CAC TTA TTC TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCC CAT ATT ATT AGT CAA GAA TCT GGT AAA AAG GAA
ACA TTT GGT TCA TTA GGG ATA ATT TAT GCA ATG TTA GCA ATT GGT TTA TTA GGT TTC ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGA RTG GAC GTA GAT ACT CGT GCT TAT TTT ACA TCT GCA ACA ATA ATT ATT GCT GTT CCT ACT GGA ATT
AAA ATT TTC AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCA ATT TTA TGA GCC TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCT TCT ATT GAT ATT ATC TTA CAT GAT ACT
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TAC CCT CTA TTT ACT GGA CTA ACA TTA AAT AGA AAG ATA TTA AAA AGT CAA TTT ATT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTT TTC CCT CAA CAC TTC TTA GGA CTT GCT GGA ATA CCT CGA CGT TAT TCA GAC TAT CCA GAT GCT TAT ACT
ACT TGA AAT GTT ATT TCA ACT ATT GGA TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA ACT TCC CAA CGT CAA GTA ATA TTC CCT ATT CAA CTA AAT TCA TCA ATT GAA TGA CTT CAA AAT ACC CCA CCT
GC
#B._plinthopyga_AH77_OR_(Crook)_USA
TTA TTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCC CAT GGA GGA GCA TCT GTT GAT TTA GCA ATT TTC TCT CTT CAC TTA GCT GGA ATT TCA TCT ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATG CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT CTA TTA TTA CTT CTT TCT TTA CCT GTA CTT GCT GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCA GGA GGA GAT CCA ATT CTA TAC CAA CAC TTA TTC TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCC CAT ATT ATT AGT CAA GAA TCT GGT AAA AAG GAA
ACA TTT GGT TCA TTA GGG ATA ATT TAT GCA ATG TTA GCA ATT GGT TTA TTA GGT TTC ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGA ATG GAC GTA GAT ACT CGT GCT TAT TTT ACA TCT GCA ACA ATA ATT ATT GCT GTT CCT ACT GGA ATT
AAA ATT TTC AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCA ATT TTA TGA GCC TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCT TCT ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTT GCA CAT TTT CAC TAT GTA CTT TCT ATA GGA GCA GTA TTT GCA ATT ATA GCT GGA TTC GTA CAC TGA
TAC CCT CTA TTT ACT GGA CTA ACA TTA AAT AGA AAG ATA TTA AAA AGT CAA TTT ATT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTT TTC CCT CAA CAC TTC TTA GGA CTT GCT GGA ATA CCT CGA CGT TAT TCA GAC TAT CCA GAT GCT TAT ACT
ACT TGA AAT GTT ATT TCA ACT ATT GGA TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA ACT TCC CAA CGT CAA GTA ATA TTC CCT ATC CAA CTA AAT TCA TCA ATT GAA TGA CTT CAA AAT ACC CCA CCT
GC
#B._sp_AJ80_OR_(Jefferson)_USA
TTA TTA TTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAT CCT CCC CTT TCA TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCT ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACC TTT GAT CGA ATA CCC TTA TTT GTT TGA TCT GTA
GTA ATT ACC GCC TTA TTA TTA TTA CTT TCT TTA CCA GTC CTT GCT GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAC
ATT AAT ACT TCT TTC TTT GAT CCT GCA GGA GGA GGG GAT CCA ATT TTA TAT CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCA GAA GTT TAC ATT TTA ATT TTA CCG GGA TTT GGT ATA ATT TCT CAT ATT ATT AGT CAA GAA TCT GGT AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA CTA GCA ATT GGT TTA TTA GGT TTT ATT GTT TGA GCT CAT CAC ATA
TTT ACT GTA GGA ATA GAT GTA GAT ACT CGA GCA TAT TTT ACT TCT GCT ACT ATA ATT ATT GCT GTC CCA ACT GGA ATT
AAA ATT TTC AGT TGA TTA GCA ACT CTT TAT GGT ACA CAA CTT AAT TAC TCT CCA GCA ATT TTA TGG GCT CTT GGA TTT
GTA TTT TTA TTT ACT GTA GGT GGA TTA ACA GGA GTA GTT TTA GCT AAC TCT TCA ATT GAT ATT ATT TTA CAT GAT ACC
TAT TAT GTA GTA GCA CAT TTT CAC TAT GTA CTT TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTA CAC TGA
TAT CCT TTA TTT ACT GGA TTA ACA TTA AAT AAA AAA ATA TTA AAA AGT CAA TTT ATT ATT ATA TTC ATA GGA GTT AAT
TTA ACT TTC TTT CCA CAA CAT TTT TTA GGT CTT GCT GGA ATA CCT CGA CGT TAC TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTT ATT TCA ACT ATC GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA ACT TCT CAA CGT CAA GTA ATA TTT CCT GTA CAA TTA AAT TCT TCA ATT GAA TGA CTT CAA AAT ACC CCA CCA
GC
#B._sp_AK01_OR_(Jefferson)_USA
TTA TTG TTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAT CCT CCC CTT TCA TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATT TCT TCT ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCC TTA TTT GTT TGA TCT GTA
GTA ATT ACC GCC TTA TTA TTA TTA CTT TCT TTA CCA GTC CTT GCT GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAC
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ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA CTA GCA ATT GGT TTA TTA GGT TTT ATT GTT TGA GCT CAT CAC ATA
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#B._plinthopyga_AK02_OR_(Jefferson)_USA
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AAA ATT TTT AGA TGA TTA GCT ACT CTT TAC GGA ACA CAA CTA AAT TAT TCC CCA GCA ATT TTA TGA GCT TTA GGA TTT
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ACA TTT GGT TCA TTA GGG ATA ATT TRT GCA ATG TTA GCA ATT GGT TTA TTA GGT TTC ATT GTT TGA GCT CAT CAT ATA
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AAA ATT TTC AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCA ATT TTA TGA GCC TTA GGA TTT
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AGT TTA ACT TCC CAA CGT CAA GTA ATA TTC CCT ATC CAA CTA AAT TCA TCA ATT GAA TGA CTT CAA AAT ACC CCA C--
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TTA CTA TTG GTA AGC AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAT CCC CCC CTA TCC TCT AAC ATT
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AAA ATT TTT AGT TGA CTA GCT ACA TTA TAC GGA ACC CAA TTA AAT TAC TCT CCA GCC ACT TTA TGA GCA TTA GGG TTT
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GC
#Bo._latisterna_E22_OH_(Hocking)_USA
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#Bo._latisterna_AA12_FL_(Columbia)_USA
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ACT TGA AAC GTA ATT TCA ACC ATT GGC TCA ACA ATT TCA CTT CTA GGA ATT TTA TTT TTC TTC TAC ATT ATC TGA GAA
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TTT ACT GTA GGA ATA GAC GTA GAT ACA CGA GCT TAT TTT ACT TCA GCC ACT ATA ATC ATT GCT GTA CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCT ACA TTA TAT GGA ACC CAA TTG AAT TAC TCT CCA GCT ACT TTA TGA GCC TTA GGA TTC
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TTA ACC TTT TTC CCT CAA CAT TTT TTA GGA CTT GCT GGT ATA CCT CGA CGA TAT TCA GAT TAT CCA GAC GCT TAT ACA
ACT TGA AAC GTA ATT TCA ACC ATT GGC TCA ACA ATT TCA CTT CTA GGA ATT TTA TTT TTC TTC TAC ATT ATC TGA GAA
AGT TTA GTA TCA CAA CGA CAA GTA ATA TAT CCT GTT CAA TTA AAT TCA TCA ATT GAG TGA CTT CAA AAT ACA CC- ---
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#Bo._latisterna_AM70_ME_(Hancock)_USA
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#Bo._latisterna_E49_TN_(Washington)_USA
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GCT CAT GGA GGA GCT TCA GTA GAT TTA GCA ATT TTT TCA CTA CAT CTA GCA GGA ATT TCC TCA ATT TTA GGG GCT GTA
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#Bo._latisterna_E53_TN_(Washington)_USA
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#Bo._litorosa_AG26_OR_(Clatsop)_USA
TTA TTA TTA GTA AGT AGT ATA GTG GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT CTA TCC TCT AAT ATT
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#Br._sarcophagina_AR69_WI_(Waukesha)_USA
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--- --- GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCT GGA ATT TCT TCT ATT TTA GGA GCT GTT
AAT TTT ATT ACA ACA GTA ATT AAT ATA CGT GCT ACA GGA ATT TCA TTC GAC CGT ATA CCT TTA TTT GTT TGA TCA GTA
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#C._coloradensis_AG53_OR_(Jefferson)_USA
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AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
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#C._coloradensis_AJ79_OR_(Jefferson)_USA
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#C._coloradensis_AZ01_NM_(Grant)_USA
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TAT TAT GTA GTT GCC CAT TTC CAC TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAC TGA
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#C._coloradensis_BA04_NM_(Grant)_USA
TTA TTG TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAT CCT CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCA GTA GAT TTA GCT ATT TTT TCT CTA CAT TTA GCA GGA ATT TCC TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTC GAC CGA ATA CCA TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCT TTA TTA CTT CTA TTA TCT TTA CCA GTA CTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTT TTT GAT CCT GCA GGA GGA GGA GAT CCA ATT TTA TAT CAA CAT TTA TTT TGA TTT TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
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TTT ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTG GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAC TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAC TGA
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ATT ACA TTT TTC CCT CAA CAC TTT TTA GGA TTA GCA GGA ATA CCT CGA CGA TAT TCA GAC TAC CCA GAT GCT TAT ACA
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AGT TTA GTT TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCT TCA ATT GAA TGA TTA CAA AAT ACT CCG CCA
GC
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AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTC GAC CGA ATA CCA TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCT TTA TTA CTT CTA TTA TCT TTA CCA GTA CTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTT TTT GAT CCT GCA GGA GGA GGA GAT CCA ATT TTA TAT CAA CAT TTA TTT TGA TTT TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTG GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAC TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAC TGA
TAT CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
ATT ACA TTT TTC CCT CAA CAC TTT TTA GGA TTA GCA GGA ATG CCT CGA CGA TAT TCA GAC TAC CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTC TTC ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCT TCA ATT GAA TGA TTA CAA AAT ACT CCG CCA
GC
#C._grahami_AJ02_OR_(Coos)_USA
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--- -TT ATT ACA ACA GTA ATT AAT ATA CGA TCA ACT GGA ATT ACC TTT GAT CGA ATA CCA TTA TTT GTA TGA TCA GTA
GTA ATC ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAC CGA AAT
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CCT GAA GTT TAT ATT CTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGA ATA GAC GTT GAT ACC CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCC GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAC GGA ACG CAA TTA AAT TCT TCC CCA GCT ACT CTA TGA GCT TTA GGG TTT
GTC TTT TTA TTT ACA GTA GGG GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAC CCT TTA TTT ACA GGA TTA ACA TTA AAT AAT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
ATC ACA TTT TTC CCT CAA CAT TTC TTA GGT TTA GCA GGA ATA CCT CGA CGA TAC TCA GAT TAT CCT GAT GTT TAT ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGA TCA ACA ATC TCT TTA CTA GGA ATT TTA TTT TTC TTT TTT ATT ATA TGA GAA
AGT TTA ATT TCA CAA CGT CAA GTT TTA TAC CCT GTT CAT TTA AAT TCA TCA ATT GAA TGA TTA CCA AAT TAC TCC AC-
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#C._grahami_AJ10_OR_(Coos)_USA
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GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACA ACA GTA ATT AAT ATA CGA TCA ACT GGA ATT ACC TTT GAT CGA ATA CCA TTA TTT GTA TGA TCA GTA
GTA ATC ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAC CGA AAT
CTT AAT ACT TCA TTC TTT GAT CCC GCC GGA GGA GGA GAC CCA ATT TTA TAT CAA CAT TTA TTC TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT CTA ATT TTA CCK GGA TTT GGA ATA ATT TCT CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGA ATA GAC GTT GAT ACC CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCC GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAC GGA ACG CAA TTA AAT TCT TCC CCA GCT ACT CTA TGA GCT TTA GGG TTT
GTC TTT TTA TTT ACA GTA GGG GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAC CCT TTA TTT ACA GGA TTA ACA TTA AAT AAT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
ATC ACA TTT TTC CCT CAA CAT TTC TTA GGT TTA GCA GGA ATA CCT CGA CGA TAC TCA GAT TAT CCT GAT GTT TAT ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGA TCA ACA ATC TCT TTA CTA GGA ATT TTA TTT TTC TTT TTT ATT TTT TGA GAA
AGT TTA ATT TCA CAA CGT CAA --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#C._latifrons_AF14_OR_(Clackamas)_USA
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--- -AT GGA TGA CCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
CTT AAT ACC TCA TTT TTT GAC CCT GCA GGA GGA GGA GAC CCT ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGG ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
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ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGC TTA GTT TCA CAA CGT CAA --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#C._latifrons_AF15_OR_(Clackamas)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCC TTA TCT TCT AAT ATT
GCC CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGG ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
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TAT TAT GTA GTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
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ATT ACA TTT TTC CCC CAA CAT TTC TTA GGA TTA GCG GGA ATA CCA CGA CGA TAT TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT AC- --- ---
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#C._latifrons_BG58_AF21_WA(Clark)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCC TTA TCT TCT AAT ATT
GCC CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
CTT AAT ACC TCA TTT TTT GAC CCT GCA GGA GGA GGA GAC CCT ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GRW TTC GGG ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT WWK KWR KTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
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GC
#C._latifrons_AG16_OR_(Benton)_USA
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GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
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ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA A-- --- --- ---
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#C._latifrons_AG22_OR_(Clatsop)_USA
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GCC CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
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#C._latifrons_AG37_OR_(Benton)_USA
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GCC CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
CTT AAT ACC TCA TTT TTT GAC CCT GCA GGA GGA GAC CCT ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGT CAT
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ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
ATT ACA TTT TTC CCC CAA CAT TTC TTA GGA TTA GCG GGA ATA CCA CGA CGA TAT TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACC CCA CCA
GC
#C._latifrons_AK48_OR_(Curry)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCC TTA TCT TCT AAT ATT
GCC CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGG ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
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TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
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ATT ACA TTT TTC CCC CAA CAT TTC TTA GGA TTA GCG GGA ATA CCA CGA CGA TAT TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACC CCA CCA
GC
#C._latifrons_AS40_WI_(Madison)_USA
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--- -AT GGA GGA CCT TCT GTT GAT TTA GCA CTT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT AAA ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
CTT AAT ACC TCA TTT TTT GAC CCT GCA GGA GGA GGA GAC CCT ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGG ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
ATT ACA TTT TTC CCC CAA CAT TTC TTA GGA TTA GCG GGA ATA CCA CGA CGA TAT TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGC TTA GTT TCA CA- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#C._latifrons_AZ31_NM_(Grant)_USA
--- --- --- --- --- --- --- --- --- AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCC TTA TCT TCT AAT ATT
GCC CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
CTT AAT ACC TCA TTT TTT GAC CCT GCA GGA GGA GGA GAC CCT ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGG ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
ATT ACA TTT TTC CCC CAA CAT TTC TTA GGA TTA GCG GGA ATA CCA CGA CGA TAT TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT TAA TGA TTG --- --- --- --- ---
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#C._latifrons_AZ33_NM_(Grant)_USA
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--- CTT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
CTT AAT ACC TCA TTT TTT GAC CCT GCA GGA GGA GGA GAC CCT ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGT CAT
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ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
ATT ACA TTT TTC CCC CAA CAT TTC TTA GGA TTA GCG GGA ATA CCA CGA CGA TAT TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA A-- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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GCC CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
CTT AAT ACC TCA TTT TTT GAC CCT GCA GGA GGA GGA GAC CCT ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGG ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
ATT ACA TTT TTC CCC CAA CAT TTC TTA GGA TTA GCG GGA ATA CCA CGA CGA TAT TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACC CCA CCA
GC
#C._latifrons_BA05_NM_(Grant)_USA
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GCC CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAC CGA ATA CCT CTT TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCC GGT GCT ATT ACT ATA CTA TTA ACA GAT CGA AAT
CTT AAT ACC TCA TTT TTT GAC CCT GCA GGA GGA GGA GAC CCT ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGG ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTT CAC TAC GTT CTA TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
ATT ACA TTT TTC CCC CAA CAT TTC TTA GGA TTA GCG GGA ATA CCA CGA TAT TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGG ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACC CCA CCA
GC
#C._latifrons_BA09_NM_(Grant)_USA
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGG ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTC GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGG CTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACC TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCT CCA GCT ACA TTA TGA GCA TTA GGA TTT
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ACT TGA AAT GTA GTT TCT ACT ATT GGG TCA ACA ATC TCA TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACC CCA CCA
GC
#C._livida_AH57_OR_(Crook)_USA
TTA TTG TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAT CCT CCT TTA TCT TCT AAT ATC
GCA CAT GGA GGA GCT TCA GTA GAT TTA GCT ATT TTT TCT CTA CAT TTA GCA RGA ATT TCC TCA ATT TTA GGG GCT GTA
AAT TTT ATT ACT ACA GTC ATT AAT ATA CGA TCA ACA GGA ATT ACT TTC GAC CGA ATA CCA TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA CTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTT TTT GAC CCT GCA GGA GGA GGA GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGG TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGG ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCC CCA GCT ACT TTA TGA GCT TTA GGG TTT
GTA TTT CTA TTC ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAC TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAC TGA
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ATT ACA TTT TTC CCT CAA CAC TTT TTA GGA TTA GCA GGA ATG CCT CGA CGA TAT TCA GAC TAC CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACT ATT TCA CTA TTA GGA ATT TTA TTT TTC TTC TTC ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TT- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#C._livida_AH66_OR_(Crook)_USA
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AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTC GAC CGA ATA CCA TTA TTT GTT TGG TCA GTA
GTA ATT ACA GCT TTA TTA CTT CTA TTA TCT TTA CCA GTA CTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTT TTT GAC CCT GCA GGA GGA GGA GAT CCA ATT TTA TAT CAA CAT TTA TTT TGA TTT TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAG TCA GGA AAA AAG GAA
ACT TTC GGG TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTG TTA GGA TTT ATT GTA TGA GCC CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCG CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAC TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGG TTT GTT CAC TGA
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ATT ACA TTT TTC CCT CAA CAC TTT TTA GGA TTA GCA GGA ATA CCT CGA CGA TAT TCA GAC TAC CCA GAT GCT TAC ACA
ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTC TTC ATT ATT TGA GAA
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GC
#C._livida_AP64_NY_(Schuyler)_USA
TTA TTG TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAT CCT CCT TTA TCT TCT AAT ATC
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AAT TTT ATT ACT ACA GTC ATT AAT ATA CGA TCA ACA GGA ATT ACT TTC GAC CGA ATA CCA TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA CTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTT TTT GAC CCT GCA GGA GGA GGA GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGG TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTT CCA ACA GGG ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCC CCA GCT ACT TTA TGA GCT TTA GGG TTT
GTA TTT CTA TTC ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAC TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAC TGA
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ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACT ATT TCA CTA TTA GGA ATT TTA TTT TTC TTC TTC ATT ATT TGA GAA
AGT TTA GTT TCA CAA CGT CAA GTT TT- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#C._livida_AQ07_NY_(Schuyler)_USA
TTA TTG TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAT CCT CCT TTA TCT TCT AAT ATC
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GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA CTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
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ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACT ATT TCA CTA TTA GGA ATT TTA TTT TTC TTC TTC ATT TTT TGA GAA
AGT TTA GTT TCA CAA CGT CAA --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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GTA ATT ACA GCT TTA TTA CTT CTA TTA TCT TTA CCA GTA CTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
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TTT ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCG CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
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TAT TAT GTA GTT GCC CAT TTC CAC TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAC TGA
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GC
#C._livida_BA01_NM_(Grant)_USA
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GCA CAT GGA GGA GCT TCA GTA GAT TTA GST ATT TTT TCT CTA CAT TTA GCA GGA ATT TCC TCA ATT TTA GGG GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTC GAC CGA ATA CCA TTA TTT GTT TGG TCA GTA
GTA ATT ACA GCT TTA TTA CTT CTA TTA TCT TTA CCA GTA CTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
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TTT ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAC TCT TCA CCA GCT ACT TTA TGA GCT TTA GGA TTT
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AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA TCT TTA GGA TTT
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AAA ATT TT- AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA TCT TTA GGA TTT
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TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTC CAC TGA
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ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAC ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCA GGA ATA CCT CGA CGA TAC TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA TGT CAA GTT TTA TAC CCT GTT TAT TTA ACT TCA TCA A-- --- --- --- --- --- --- --- ---
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#C._vicina_AM12_ME_(Hancock_County)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAC CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACA TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATC TTG TAC CAA CAT ??? ??? ??? ??? ??? ??? ???
?CT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCA CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAC ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCA GGA ATA CCT CGA CGA TAC TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#C._vicina_AP58_NY_(Schuyler)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAC CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACA TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATC TTG TAC CAA CAT TTA TTT TGA TTT TTT GGC CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCA CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAC ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCA GGA ATA CCT CGA CGA TAC TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA TGT CAA GTT TTT TAC CCT GTT CAA GGA ACT TCA TCA ATT GAA TGA TTA CAA --- --- --- ---
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#C._vicina_AP69_NY_(Schuyler)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAC CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACA TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATC TTG TAC CAA CAT TTA TTT TGA TTT TTT GGC CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCA CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAC ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCA GGA ATA CCT CGA CGA TAC TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCA CCA
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#C._vicina_AS41_WI_(Marathon)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAC CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACA TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATC TTG TAC CAA CAT TTA TTT TGA TTT TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCA CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
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AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCA GGA ATA CCT CGA CGA TAC TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#C._vicina_AT53_ND_(Trail)_USA
--- --- --- --- --- --- --- --- --- --- --- --- GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAC CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACA TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATC TTG TAC CAA CAT TTA TTT TGA TTT TTT GGC CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCA CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAC ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCA GGA ATA CCT CGA CGA TAC TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA --- --- --- --- --- ---
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#C._vicina_AV57_NY_(Niagara)_USA
--- --- --- --- --- --- --- --- --- -GA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAC CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACA TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATC TTG TAC CAA CAT TTA TTT TGA TTT TTT GGC CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCA CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAC ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCA GGA ATA CCT CGA CGA TAC TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAC CCT GTT CAT TGA AAT TCA TCA ATT GAA TGA TTA --- --- --- --- ---
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#C._vicina_AV70_NY_(Niagara)_USA
--- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- -AT TAC CCA CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAC CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACA TCA TTC TTT GAC CCA GCA GGA GGA GAC CCA ATC TTG TAC CAA CAT TTA TTT TGA TTT TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCA CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA ACC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCA GGA ATA CCT CGA CGA TAC TCA GAT TAC CCT GAT GCT TAC ACA
ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA T-- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#C._vicina_AV74_NY_(Niagara)_USA
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--T CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAC CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACA TCA TTC TTT GAC CCA GCA GGA GGA GAC CCA ATC TTG TAC CAA CAT TTA TTT TGA TTT TTT GGC CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCA CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAC ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
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ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TT- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#C._vicina_BB52_MN_(Koochiching)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAC CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGT GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACA TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATC TTG TAC CAA CAT TTA TTT TGA TTT TTT GGC CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCA CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
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AAG ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACC CAA TTA AAT TCT TCC CCA GCT ACT TTA TGA GCC TTA GGG TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT ATT TTA GCT AAT TCT TCA GTA GAC ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA TTA TCT ATA GGA GCT GTA TTC GCT ATT ATA GCA GGA TTC GTT CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAT GGT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGG GTT AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCA GGA ATA CCT CGA CGA TAC TCA GAT TAC CCT GAT GCT TAC ACA
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ACT TGA AAC GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#C._vomitoria_AF11_CA_(Siskiyou)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT CTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC T?? ??? ??? ??? ??? ??? ???
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ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA ACC GGT AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTA AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCT GAC GCT TAC ACA
ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCG CCA
GC
#C._vomitoria_AF63_OR_(Crook)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CMT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAC GGT AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTA AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCT GAC GCT TAC ACA
ACT TGA AAT GTA ATT TCT ACT ATT GGG TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#C._vomitoria_AK68_GA_(Rabun)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
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TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
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TAC CCT TTA TTT ACA GGA TTA ACT TTA AAC GGT AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTA AAT
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AGT TTA GTA TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#C._vomitoria_AM27_ME_(Hancock)_USA
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GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT CTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
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GC
#C._vomitoria_AM75_GA_(Rabun)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT CTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
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TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAC GGT AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTA AAT
ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCT GAC GCT TAC ACA
ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCG CCA
G-
#C._vomitoria_AM77_GA_(Rabun)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
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GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
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ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCT GAC GCT TAC ACA
ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#C._vomitoria_AO01_TN_(Monroe)_USA
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--- --- --- --- --- --- --T TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAC GGT AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTA AAT
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ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC --- --- --- --- --- ---
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#C._vomitoria_AO02_TN_(Monroe)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT CTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
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ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCG CCA
GC
#C._vomitoria_AP08_NY_(Chautauqua)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT CTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
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AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
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ATT ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCT GAC GCT TAC ACA
ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCG CCA
GC
#C._vomitoria_AP57_NY_(Schuyler)_USA
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--- --- --- --- --- --T GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
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ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
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GC
#C._vomitoria_AQ29_NY_(Rockland)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
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ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA T-- --- --- --- --- --- --- --- --- ---
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#C._vomitoria_AS31_WI_(Marathon)_USA
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GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT CTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACT TTA AAC GGT AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTA AAT
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ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCG CCA
GC
#C._vomitoria_AS32_WI_(Marathon)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT CTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
TAT TAT GTA GTT GCT CAT TTC CAT TAT GTG TTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
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ACT TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA CTA TTA GGG ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGT CAA GTT TTA TAT CCT GTT CAT TTA AAT TCA TCA ATT GAA TGA TTA CAA AAT ACT CCG CCA
GC
#C._vomitoria_AT10_WI_(Douglas)_USA
TTA CTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAT CCA CCT TTA TCT TCT AAT ATT
GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT CTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC TTA TTA CTT TTA TTA TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
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TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
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#C._vomitoria_BB53_MN_(Koochiching)_USA
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GCA CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT CTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGT ATT ACC TTC GAC CGA ATA CCG TTA TTT GTT TGA TCA GTA
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CTT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTT GGT CAC
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TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCT GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
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GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
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#C._vomitoria_BC50_NY_(Rockland)_USA
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AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACT CAA TTA AAT TCT TCC CCA GCC ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT ATT TTA GCT AAT TCT TCA GTA GAT ATT ATT CTT CAT GAC ACA
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TAC CCT TTA TTT ACA GGA TTA ACT TTA AAC GGT AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTA AAT
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#Ch._megacephala_BG60_FL_(Monroe)_USA
TTA TTA TTA GTA AGT AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCT TCT AAT ATT
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AAG ATT TTC AGT TGA TTA GCA ACT CTT TAC GGA ACA CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCT TTA GGA TTT
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#Ch._rufifacies_AC70_FL_(Highland)_USA
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#Ch._rufifacies_AC77_FL_(Highland)_USA
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TTC ACT GTA GGA ATG GAT GTA GAT ACT CGA GCA TAT TTC ACT TCA GCT ACA ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTA GTT TTA GCT AAT TCA TCT ATW GAT ATT ATT TTA CAT GAC ACA
TAC TAT GTA GTA GCT CAC TTC CAT TAT GTT CTT TCA ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAT TGA
TTC CCA TTA TTT ACT GGA TTA ACC TTA AAT AAT AAA ATA CTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGA GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTT TTA GGA CTA GCT GGT ATA CCT CGA CGA TAC TCA GAC TAT CCA GAT GCT TAC ACA
ACA TGA AAT GTT ATT TCA ACA ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
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GCA CAT GGT GGA GCA TCA GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCT GGA ATT TCA TCA ATT TTA GGG GCC GTA
AAT TTT ATT ACA ACT GTT ATT AAT ATA CGA TCT ACA GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCA GGA GGG GGA GAC CCT ATT TTA TAT CAA CAC TTA TTT TGA TTC TTT GGT CAT
CCA GRA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACC TTK GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTC ACT GTA GGA ATG GAT GTA GAT ACT CGA GCA TAT TTC ACT TCA GCT ACA ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTA GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
TAC TAT GTA GTA GCT CAC TTC CAT TAT GTT CTT TCA ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAT TGA
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TTA ACA TTC TTC CCT CAA CAT TTT TTA GGA CTA GCT GGT ATA CCT CGA CGA TAC TCA GAC TAT CCA GAT GCT TAC ACA
ACA TGA AAT GTT ATT TCA ACA ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGA CAA GTT CTA TTT CCT ATT CAA TTA AAT TCA TCA ATT GAA TGA CTT CAA AAT ACT CCT CCA
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--- --- --- --- --- -CT GTT ATT AAT ATA CGA TCT ACA GGA ATT ACT TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCA GGA GGG GGA GAC CCT ATT TTA TAT CAA CAC TTA TTT TGA TTC TTT GGT CAT
CCA GAA GTT TAT ATT TTA ATT TTA CYT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACC TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
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AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCC TTA RGA TTT
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TTC CCA TTA TTT ACT GGA TTA ACC TTA AAT AAT AAA ATA CTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGA GTA AAT
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ACA TGA AAT GTT ATT TCA ACA ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTA --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
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TTA AAT ACT TCA TTC TTT GAT CCA GCA GGA GGG GGA GAC CCT ATT TTA TAT CAA CAC TTA TTT TGA TTC TTT GGT CAT
CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACC TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
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AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTA GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
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TTA ACA TTC TTC CCT CAA CAT TTT TTA GGA CTA GCT TGG ATA CCT CGA CGA TAC TCT GAC TAT CC- --- --- --- ---
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--- --- --- --- --- --- --- --- --- --- --- --T TCT TTA CAC TTA GCT GGA ATT TCA TCA ATT TTA GGG GCC GTA
AAT TTT ATT ACA ACT GTT ATT AAT ATA CGA TCT ACA GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
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CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACC TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTC ACT GTA GGA ATG GAT GTA GAT ACT CGA GCA TAT TTC ACT TCA GCT ACA ATA ATT ATT GCT GTA CCA ACT GGA ATT
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ACA TGA AAT GTT ATT TCA ACA ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
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GCA CAT GGT GGA GCA TCA GTT GAT TTA GCT ATT TTT TCT TTA CAC TTA GCT GGA ATT TCA TCA ATT TTA GGG GCC GTA
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GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
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CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
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AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCC TTA GGA TTT
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TTA ACA TTC TTC CCT CAA CAT TTT TTA GGA CTA GCT GGT ATA CCT CGA CGA TAC TCA GAC TAT CCA GAT GCT TAC ACA
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AAT TTT ATT ACA ACT GTT ATT AAT ATA CGA TCT ACA GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA WTA TWA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCA GGA GGG GGA GAC CCT ATT TTA TAT CAA CAC TTA TTT TGA TTC TTT GGT CAT
CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACC TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTC ACT GTA GGA ATG GAT GTA GAT ACT CGA GCA TAT TTC ACT TCA GCT ACA ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTA GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
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TTC CCA TTA TTT ACT GGA TTA ACC TTA AAT AAT AAA ATA CTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGA GTA AAT
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ACA TGA AAT GTT ATT TCA ACA ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
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GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCA GGA GGG GGA GAC CCT ATT TTA TAT CAA CAC TTA TTT TGA TTC TTT GGT CAT
CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACC TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTC ACT GTA GGA ATG GAT GTA GAT ACT CGA GCA TAT TTC ACT TCA GCT ACA ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTA GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
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TTC CCA TTA TTT ACT GGA TTA ACC TTA AAT AAT AAA ATA CTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGA GTA AAT
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ACA TGA AAT GTT ATT TCA ACA ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
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AAT TTT ATT ACA ACT GTT ATT AAT ATA CGA TCT ACA GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCA GGA GGG GGA GAC CCT ATT TTA TAT CAA CAC TTA TTT TGA TTC TTT GGT CAT
CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACC TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTC ACT GTA GGA ATG GAT GTA GAT ACT CGA GCA TAT TTC ACT TCA GCT ACA ATA ATT ATT GCT GTA CCA ACT GGA ATT
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GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTA GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
TAC TAT GTA GTA GCT CAC TTC CAT TAT GTT CTT TCA ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAT TGA
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ACA TGA AAT GTT ATT TCA ACA ATT GGA TCA ACA ATT TCA TTA TTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
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AAT TTT ATT ACA ACT GTT ATT AAT ATA CGA TCT ACA GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCA GGA GGG GGA GAC CCT ATT TTA TAT CAA CAC TTA TTT TGA TTC TTT GGT CAT
CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACC TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTC ACT GTA GGA ATG GAT GTA GAT ACT CGA GCA TAT TTC ACT TCA GCT ACA ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCC TTA GGA TTT
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TTC CCA TTA TTT ACT GGA TTA ACC TTA AAT AAT AAA ATA CTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGA GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTT TTA GGA CTA GCT GGT ATA CCT CGA CGA TAC TCA GAC TAT CCA GAT GCT TAC ACA
ACA TGA AAT GTT ATT TCA ACA ATT GGA TCA ACA ATT TCA TTA TTA --- --- --- --- --- --- --- --- --- --- ---
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--- --- --- --- --- --- --- --- --- --- --- --- -CT TTA CAC TTA GCT GGA ATT TCA TCA ATT TTA GGG GCC GTA
AAT TTT ATT ACA ACT GTT ATT AAT ATA CGA TCT ACA GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTT ATT ACT GCT CTT CTT TTA TTA TTA TCA TTA CCA GTA TTA GCA GGT GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
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CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATC ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACC TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTC ACT GTA GGA ATG GAT GTA GAT ACT CGA GCA TAT TTC ACT TCA GCT ACA ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCC TTA GGA TTT
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TTC CCA TTA TTT ACT GGA TTA ACC TTA AAT AAT AAA ATA CTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGA GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTT TTA GGA CTA GCT GGT ATA CCT CGA CGA TAC TCA GAC TAT CCA GAT GCT TAC ACA
ACA TGA AAT GTT ATT TCA ACA ATT GGA TCA ACA ATT TCA TTA TTA --- --- --- --- --- --- --- --- --- --- ---
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#Co._ macellaria_AA28_FL_(Madison)_USA
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GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
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CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
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TAT CCT CTA TTT ACA GGA TTA ACT TTA AAT AGA AAG TTA TTA AAG AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA TTA GCA GGT ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAT ACT
ACT TGA AAT GTA ATC TCT ACA ATT GGT TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTT ACT CAA CGA CAA GTA TTA TTC CCA GTT CAA TTA AAT TCA TCA ATT GAA TGA ATA CAA AAT ACT CCA CCA
GC
#Co._ macellaria_AA29_FL_(Madison)_USA
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C?T GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAT CCT CTA TTT ACA GGA TTA ACT TTA AAT AGA AAG TTA TTA AAG AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA TTA GCA GGT ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAT ACT
ACT TGA AAT GTA ATC TCT ACA ATT GGT TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTT ACT CAA CGA CAA GTA TTA TTC CCA GTT CAA TTA AAT TCA TCA ATT GAA TGA CTA CAA AAT ACT CCA CCA
GC
#Co._macellaria_AA30_FL_(Madison)_USA
TTA TTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAC GGA GGA GCT TCA GTT GAT CTA GCT ATT TTC TCT CTT CAT TTA GCC GGA ATT TCA TCA ATT TTA GGA GCA GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAT CGA ATG CCT TTA TTC GTA TGA TCA GTA
GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GAT CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAT CCT CTA TTT ACA GGA TTA ACT TTA AAT AGA AAG TTA TTA AAG AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA TTA GCA GGT ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAT ACT
ACT TGA AAT GTA ATC TCT ACA ATT GGT TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
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AGT TTA GTT ACT CAA CGA CAA GTA TTA TTC CCA GTT CAA TTA AAT TCA TCA ATT GAA TGA CTA CAA AAT ACT CCA CCA
GC
#Co._macellaria_AA49b_FL_(Walton)_USA
TTA TTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAC GGA GGA GCT TCA GTT GAT CTA GCT ATT TTC TCT CTT CAT TTA GCC GGA ATT TCA TCA ATT TTA GGA GCA GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAT CGA ATG CCT TTA TTC GTA TGA TCA GTA
GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAT CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA G-- --- --- --- --- --- --- --- --- --- --- --- ---
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#Co._macellaria_AA50_FL_(Walton)_USA
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AAT TTC ATT ACG ACT GTA ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAT CGA ATG CCT TTA TTC GTA TGA TCA GTA
GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAT CCT CTA TTT ACA GGA TTA ACT TTA AAT AGA AAG TTA TTA AAG AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA TTA GCA GGT ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAT ACT
ACT TGA AAT GTA ATC TCT ACA ATT GGT TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTC A-- --- --- ---
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#Co._macellaria_AA51_FL_(Walton)_USA
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TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
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#Co._macellaria_AB39_FL_(Washington)_USA
TTA TTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAC GGA GGA GCT TCA GTT GAT CTA GCT ATT TTC TCT CTT CAT TTA GCT GGA ATT TCA TCA ATT TTA GGA GCA GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAT CGA ATG CCT TTA TTC GTA TGA TCA GTA
GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAT CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAT CCT CTA TTT ACA GGA TTA ACT TTA AAT AGA AAG TTA TTA AAG AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA TTA GCA GGT ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAT ACT
ACT TGA AAT GTA ATC TCT ACA ATT GGT TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTT ACT CAA CGA CAA GTA TTA TTC CCA GTT CAA TTA AAT TCA TCA ATT GAA TGA CTA CAA AAT ACT CCA CCA
GC
#Co._macellaria_AB61_FL_(Washington)_USA
--- --- --- --- --- --- --- --- --- --- --- --- GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAC GGA GGA GCT TCA GTT GAT CTA GCT ATT TTC TCT CTT CAT TTA GCC GGA ATT TCA TCA ATT TTA GGA GCA GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAT CGA ATG CCT TTA TTC GTA TGA TCA GTA
GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCT GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAC CCT CTA TTT ACA GGA TTA ACT TTA AAT AGA AAG TTA TTA AAG AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA TTA GCA GGT ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAT ACT
ACT TGA AAT GTA ATC TCT ACA ATT GGT TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTT ACT CAA CGA CAA GTA TTA TTC CCA GTT CAA TTA AAT TC- --- --- --- --- --- --- --- --- --- ---
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#Co._macellaria_AB67_FL_(Washington)_USA
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TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAT CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAT CCT CTA TTT ACA GGA TTA ACT TTA AAT AGA AAG TTA TTA AAG AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA TTA GCA GGT ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GC- --- ---
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#Co._macellaria_AD22_FL_(Highland)_USA
TTA TTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAC GGA GGA GCT TCA GTT GAT CTA GCT ATT TTC TCT CTT CAT TTA GCC GGA ATT TCA TCA ATT TTA GGA GCA GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAT CGA ATG CCT TTA TTC GTA TGA TCA GTA
GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAT CCT CTA TTT ACA GGA TTA ACT TTA AAT AGA AAG TTA TTA AAG AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA TTA GCA GGT ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAT ACT
ACT TGA AAT GTA ATC TCT ACA ATT GGT TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTT ACT CAA CGA CAA GTA TTA TTC CCA GTT CAA TTA AAT TCA TCA ATT GAA TGA CTA CAA AAT ACT CCA CCA
GC
#Co._macellaria_AE09_SC_(Newberry)_USA
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CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GC- --- --- --- --- --- --- --- ---
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#Co._macellaria_AE10_SC_(Newberry)_USA
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AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAT CGA ATG CCT TTA TTC GTA TGA TCA GTA
GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA CTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAC CCT CTA TTT ACA GGA TTA ACT TTA AAT AGA AAG TTA TTA AAG AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA TTA GCA GGT ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAT ACT
TCT TGA AAT GTA ATC TCT ACA ATT GGT TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TT- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#Co._macellaria_AE27_SC_(Newberry)_USA
TTA TTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAC GGA GGA GCT TCA GTT GAT CTA GCT ATT TTC TCT CTT CAT TTA GCC GGA ATT TCA TCA ATT TTA GGA GCA GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAT CGA ATG CCT TTA TTC GTA TGA TCA GTA
GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAC CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAT CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAC TCA TCA ATT GAT ATT ATC TTA CAT GAT ACT
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA TTA TCT ATA GGA GCA GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
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AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACA GGA ATT ACA TTC GAT CGA ATG CCT TTA TTC GTA TGA TCA GTA
GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAT CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
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ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
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AAT ACT CCA CCA GC
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GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
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CCT GAA GTA TAT ATT TTA ATT CTG CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
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ACT TGA AAT GTA ATC TCT ACA ATT GGT TCA ACA ATT TCA TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
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AAG ATT TTC AGT TGA TTA GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACA CTA TGA GCT TTA GGG TTC
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ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
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#Co._macellaria_AY54_NM_(Grant)_USA
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CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
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#Co._macellaria_BA70_MN_(Kandiyohi)_USA
--- --- --- --- --- --- --- --- --- AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
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TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
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TAC CCT CTA TTT ACA GGA TTA ACT TTA A-- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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GTA ATT ACT GCT CTT TTA CTT TTA TTA TCT TTA CCA GTT TTA GCC GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
TTA AAT ACT TCA TTC TTT GAT CCA GCC GGA GGA GGA GAT CCA ATT TTA TAC CAA CAC TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTA TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCA CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACA TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTT TGA GCT CAT CAC ATG
TTT ACT GTT GGA ATA GAC GTT GAT ACT CGA GCT TAC TTC ACT TCA GCT ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
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#Co._macellaria_BE47_TX_(Fort_Bend)_USA
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#Co._macellaria_BF44_NM_(Dona_Ana)_USA
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#Co._macellaria_BF52_TX_(El_Paso)_USA
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GCT CAT GGA GGA GCA TCA GTT GAT TTA GCT ATT TTC TCT TTA CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
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CTA AAT ACT TCA TTC TTT GAT CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTC GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTC GGA TCT TTA GGA ATG ATT TAT GCT ATA CTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAC CAC ATG
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GC
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GC
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GC
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CCA GAA GTT TAC ATT TTA ATT TTA CCT GGA TTT GGG ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACA TTT GGA TCA CTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTT TTA GGT TTT ATT GTT TGA GCT CAT CAT ATA
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GC
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GCT CAT GGA GGA GCT TCT GTA GAT TTA GCT ATC TTT TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT TCA GGA ATT ACT TTT GAC CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCC TTA TTA TTG TTA TTA TCG TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA TTA TTA ACA GAT CGA AAT
ATT AAT ACT TCT TTC TTT GAC CCT GCG GGA GGA GGA GAT CCA ATT CTT TAC CAA CAT TTA TTT TGA TTT TTT GGA CAT
CCA GAA GTT TAC ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACA TTT GGA TCA CTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTT TTA GGT TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCA GCT ACT ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAA ATT TTC AGT TGA TTA GCA ACC CTT TAT GGA ACT CAA CTA AAT TAT TCC CCT GCT ACA CTT TGA GCA TTA GGA TTT
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TAT TAC GTT GTT GCT CAT TTC CAC TAT GTA CTT TCT ATA GGA GCA GTA TTT GCA ATC ATG GCA GGA TTT GTA CAT TGA
TAC CCT CTT TTC ACA GGA TTA ACT CTA AAT ACA AAG ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ACA GGA GTA AAT
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GCA TGA AAT GTA ATT TCT ACT ATT GGA TCA ACA ATT TCA TTA CTA GGA ATT TTA TTC TTT TTC TTT ATT ATT TGA GAA
AGT CTT GCA TCT CAA CGA CAA GTA ATA TTC CCA GTG CAA TTA AAT TCA TCA ATT GAA TGA CTT CAA AAT ACT CCA CCA
GC

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#L._cluvia_BF79_FL_Highland           ---------- ---------- ---------- ---------- ---------- ---------- ---------- -------
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- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
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TTTACATGGA TTCGGAATAA TTTCACATAT TATTAGTCAA GAATCAGGGA AAAAGGAAAC ATTCGGGTCT TTAGGAATAA TTTATGCTAT ATTAGCCATT GGATTATTAG
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TATACTTTTA ACTGATCGAA ACCTTAATAC TTCATTCTTT GACCCTGCCG GAGGGGGAGA CCCAATTTTA TACCAACATT TATTTTGATT TTTTGGTCAC CCTGAAGTTT
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AATTAAAATT TTTAGTTGAT TAGCAACACT TTATGGAACT CAATTAAATT ATTCCCCAGC TACTTTATGA GCCTTAGGAT TTGTATTTTT ATTTACAGT- ---------- --
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GAATTCTATT TTTCTTTTTT ATTATTTGAG AAAGTCTTGT TACTCAACGT CAAGTTTTAT TC-------- ---------- ---------- ---------- ---------- --
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#L._coeruleiviridis_AW14_NY_Monroe     ---------- ---------- ---------- ---------- ---------- CCCTTATCTT
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#L._coeruleiviridis_AX13_OH_Hamilton   ---------- ---------- ---------- ---------- --GGATGAAC GGTTTGCCCC CCCTTATCTT
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#L._coeruleiviridis_AX16_OH_Hamilton   ---------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
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TTAGGATTGG CCGGAATACC TCGACGATGA TCAGACTATC CAGATGCTTA CACAACTTGA AATGTAATTT ATAC------ ---------- ---------- ---------- --
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GG-------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- --------TG TACCAACTGG
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GAATTTTATT TTTCTTTTTC ATTATTTGAG AAAGTCTTGT AACTCAACGT CAAGTTTTAT GCCCTGTTCA ---------- ---------- ---------- ---------- --
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#L._illustris_AT54_ND_Trail            ---------- ---------- ---------- ---------- ---------- ---------- ---------- -------
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GAATTTTATT TTTCTTTTTC ATTATTTGAG AAAGTCTTGT AACTCAACGT CAAGTTTTAT TCCTGGT--- ---------- ---------- ---------- ---------- --
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TCAACATTTT TTAGGACTAG CAGGAATACC GCGACGATAC TCAGATTACC CAGATGCTTA CACAACTTGA AATGTAATTT CTACAATTGG GTCAACAATT TCCCTATTAG
GAATTTTATT TTTCTTTTTC ATTATTTGAG AAAGTCTTGT AACTCAACGT CAAGTTTTAT TCCCTGTTCA ATTAAATTCA TCAATTGAAT GACTACAAAA TACTCCA--- --
#L._illustris_AX11_OH_Hamilton         ---------- ---------- ---------- ---------- ---------- ---------- ---------- --------
--- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------
- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ----TAGCTG GAGCTATAAC TATACTTTTA
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TTCATTGATA TCCTCTATTT ACAGGACTAA CTTTAAATGC AAAGATGTTA AAGAGTCAAT TTACTATTAT A--------- ---------- ---------- ---------- ----------
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#L._illustris_BA61_MN_Winona           ---------- ---------- ---------- ---------- ---------- ---------- ---------- -------
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GAATTTTATT TTTCTTTTTC ATTATTTGAG AAAGTCTTGT AACTCAACGT CAAG------ ---------- ---------- ---------- ---------- ---------- --
#L._illustris_BB44_MN_Koochichin       ---------- ---------- ---------- ---------- --------AA GAATTTCATA AATTTTAGGA GCTGTAAATT TTATTACTAC AGTTATTAAT
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CAGGAGTAGT TTTAGCTAAC TCTTCTGTTG ATATCATTTT ACACGATACA TACTATGTAG TAGCTCA--- ---------- ---------- ---------- ---------- --
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GAATTATATT TTTCTTTTTT ATTATTTTAG AAAGTCTT-- ---------- ---------- ---------- ---------- ---------- ---------- ---------- --
#L._mexicana_AX41_NM_Grant            ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ---------- ----------
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-------- ---------- ------ATAT TATTAGTCAA GAATCAGGAA AAAAGGAAAC ATTTGGGTCT TTAGGAATAT TTTATGCCAT ATTAGCTATT GGATTATTAG
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TTT ACT GTA GGA ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACT ATA ATT ATT GCT GTT CCT ACT GGA ATT
AAA ATT TTC AGA TGA TTA GCC ACT CTC TAT GGA ACA CAA TTA AAT TAC TCA CCA GCT ATT TTA TGA GCT CTT GGA TTC
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TAT TAT GTA GTA GCT CAT TTC CAC TAT GTC CTA TCA ATA GGA GCT GTA TTT GCA ATT ATG GCT GGA TTT GTT CAT TGA
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TTT ACC GTA GGA ATA GAC GTA GAT ACT CGA GCT TAC TTT ACA TCA GCT ACA ATA ATT ATT GCC GTT CCA ACA GGT ATT
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TTT ACA GTA GGA ATA GAC GTA GAT ACG CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCG GTT CCT ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACT CTT TAT GGT ACA CAA TTA AAT TAT TCT CCA GCT ACC TTA TGA GCT TTA GGA TTT
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AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
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CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CT? ??? ??? ??? ??? ??? ??? ??? ??? ??? ???
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#P._regina_AE67_CA_(Glenn)_USA
CTA TTG TTA GTT AGT AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT C?? ??? ??? ??? ??? ??? ??? ??? ??? ??? ???
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TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT TCA TCT ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#P._regina_AF39_CA_(Yolo)_USA
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GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AG01_OR_(Crook)_USA
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AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT AC- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AI17_OR_(Douglas)_USA
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AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ---
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#P._regina_AI18_OR_(Douglas)_USA
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--- --- --- --- --- --- GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AJ29_OR_(Jefferson)_USA
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GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA CCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GG? ???
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT TCA TCT ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#P._regina_AM03_ME_(Hancock)_USA
CTA TTG TTA GTT AGT AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT T-- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AS01_WI_(Waukesha)_USA
CTA TTG TTA GTT AGT AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT T-- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AS03_WI_(Waukesha)_USA
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GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT T-- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AT18_WI_(Douglas)_USA
CTA TTG TTA GTT AGT AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT T-- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AT38_MN_(Kandiyohi)_USA
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GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
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GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT T-- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AT39_MN_(Kandiyohi)_USA
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GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT T-- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AT63_ND_(Trail)_USA
CTA TTG TTA GTT AGT AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAA TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT T-- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AT64_ND_(Trail)_USA
CTA TTG TTA GTT AGT AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT T-- --- --- --- --- --- --- --- --- --- ---
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#P._regina_AU35_WI_(Marathon)_USA
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--- --- ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#P._regina_BF05_TX_(Dallas)_USA
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GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
ATT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
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AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TGA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT TCA TCT ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#P._regina_BF36_NM_(Dona_Ana)_USA
CTA TTG TTA GTT AGT AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTW WTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT GAA GTT TAT ATT TTA ATT CTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AGT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATC GAT ATT ATT CTT CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TTA AAT AAT AAG TTA TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTA GCT GGA ATG CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACG
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTC CCT GTA CAA TTA AAT TCA TCT ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#P._regina_E51_TN_(Washington)_USA
CTA TTG TTA GTT AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCA TCT GTT GAT CTA GCT ATT TTC TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTC ATT ACA ACT GTA ATT AAT ATA CGA TCA ACT GGA ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTT ATT ACT GCT CTA TTA CTT TTA TTA TCT TTA CCT GTA TTA GCC GGT GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
TTA AAC ACT TCA TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTC TGA TTC TTT GGT CAC
CCT G-- --- --- --- --- --- --- --- --- --- --- --- --T ATT ATT AGT CAA GAA TCA GGA AAG AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTA TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTT GGA ATA GAC GTT GAT ACA CGA GCT TAC TTT ACT TCA GCA ACT ATA ATT ATT GCT GTA CCA ACT GGA ATT
AAA ATT TTC AAT TGA CTA GCA ACT CTT TAT GGA ACT CAA TTA AAT TAC TCT CCA GCA ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGT GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT CTT CAC GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA TTA TCA ATA GGA GCT GTA TTC GCT ATT ATA GCT GGA TGT GTC CAC TGA
TTC CCT TTA TTT ACT GGA TTA ACA TT- --- --- --- --A TTA AAA AGT CAA TTT GCT ATT ATA TTT ATT GGG GTA AAT
TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA TTG GCT GGA ATA CCT CGA CGA TAC TCA GAT TAC CCA GAT GCT TAC ACA
GCT TGA AAC GTA ATC TCT ACA ATT GGT TCA ACA ATC TCA TTA TTA GGA ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGT CAA GTT TTA TTT CCT GTA CAA TTA AAT TCA TCT ATT GAA TGA TTA CAA AAT ACT CCA CCA
GC
#Po._labialis_AT02_WI_(Douglas)_USA
CTA CTG TTA GTA AGT AGT ATA GTG GAA AAC GGA GCT GGA ACA GGA TGA ACT GTC TAC CCC CCA CTA TCA TCT AAC ATT
GCT CAT GGA GGA GCC TCT GTT GAT TTA GCT ATT TTT TCC CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACT GTA ATT AAT ATA CGA TCT ACA GGT ATT ACA CTT GAC CGA ATA CCC TTG TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTG TTA CTT CTT TTG TCT TTA CCA GTA TTA GCA GGA GCT ATT ACT ATA TTA TTA ACA GAT CGA AAT
TTA AAT ACT TCA TTT TTT GAC CCA GCA GGA GGA GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTT GGT CAC
CCA GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGG ATG ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAA AAA GAA
ACT TTT GGG GCT TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT TTA CTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACT GTA GGA ATA GAT GTT GAT ACT CGA GCT TAT TTT ACA TCT GCT ACT ATA GTA ATT GCA GTT CCT ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCA ACC TTA TAT GGA ACT CAA ATA AAT CAT TCC CCA GCT ACT TTA TGG TCT TTG GGA TTT
ATT TTT TTG TTC ACA GTA GGA GGG TTG ACA GGA GTT GTA CTA GCT AAC TCT TCA CTA GAT ATT ATT CTC CAT GAT ACT
TAT TAT GTA GTT GCT CAT TTT CAC TAT GTA CTT TCA ATA GGA GCT GTA TTT GCT ATT ATA GCC GGA TTT GTA CAT TGA
TAC CCT CTT TTT ACA GGT TTA ACA ATA AAT TCA ATA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
TTA ACT TTT TTC CCC CAA CAT TTC TTA GGA TTA GCA GGA ATA CCT CGT CGA TAT TCA GAT TAT CCT GAT GCT TAT ACA
ACT TGA AAT GTA ATT TCT TCA ATT GGA TCA ACA ATT TCA TT- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#Po._pediculata_AP60_NY_(Schuyler)_USA
TTA TTA TTG GTG AGC AGT ATA GWG GAA AAC GGA GCW GGG ACA GGA TGA ACT GTT TAC CCA CCT CTA TCT TCT AAT ATT
GCT CAT GGA GGG GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTT
AAT TTT ATT ACA ACT GTA ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCA TTA TTA CTT CTT TTA TCC TTA CCT GTA TTA GCA GGA GCT ATC ACT ATA TTA TTA ACA GAT CGA AAT
TTA AAT ACT TCC TTT TTT GAT CCT GCA GGA GGA GGA GAC CCA ATT TTA TAT CAA CAT TTA TTT TGA TTT TTT GGA CAC
CCA GAA GTG TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGA GCT TTA GGA ATA ATT TAT GCA ATA CTA GCT ATT GGC TTA TTA GGA TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGG ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCT GCT ACA ATA GTT ATT GCA GTT CCT ACT GGA ATT
AAA ATT TTT AGC TGA TTA GCA ACC CTT TAC GGA ACT CAA ATA AAT CAC TCC CCA GCC ACA TTA TGA TCT TTA GGA TTT
ATT TTT TTA TTT ACA GTA GGA GGA CTA ACT GGT GTT GTT CTT GCT AAT TCT TCC CTA GAC ATT ATT CTT CAT GAT ACT
TAC TAT GTA GTT GCT CAT TTT CAC TAT GTA CTT TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
TAC CCT CTT TTT ACA GGA TTA ACA ATA AAT ACA ATA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
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ACT TGA AAT GTA ATT TCT ACT ATT GGA TCG ACA ATT TCA TTT TTA GGA ATT CTA TTC TTT TTT TAT ATT ATT TGA GAA
AGT TTA ATA TCA CAA CGT CAA GTT TTA TTC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA CTA CAA AAT ACA CCA CCA
GC
#Po._pediculata_AR74_WI_(Waukesha)_USA
TTA TTA TTG GTG AGC AGT ATA GTG GAA AAC GGA GCT GGG ACA GGA TGA ACT GTT TAC CCA CCT CTA TCT TCT AAT ATT
GCT CAT GGA GGG GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTT
AAT TTT ATT ACA ACT GTA ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTT TGA TCT GTA
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TTA AAT ACT TCC TTT TTT GAT CCT GCA GGA GGA GGA GAC CCA ATT TTA TAT CAA CAT TTA TTT TGA TTT TTT GGA CAC
CCA GAA GTG TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGA GCT TTA GGA ATA ATT TAT GCA ATA CTA GCT ATT GGC TTA TTA GGA TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGG ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCT GCT ACA ATA GTT ATT GCA GTT CCT ACT GGA ATT
AAA ATT TTT AGC TGA TTA GCA ACC CTT TAC GGA ACT CAA ATA AAT CAC TCC CCA GCC ACA TTA TGA TCT TTA GGA TTT
ATT TTT TTA TTT ACA GTA GGA GGA CTA ACT GGT GTT GTT CTT GCT AAT TCT TCC CTA GAC ATT ATT CTT CAT GAT ACT
TAC TAT GTA GTT GCT CAT TTT CAC TAT GTA CTT TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
TAC CCT CTT TTT ACA GGA TTA ACA ATA AAT ACA ATA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
TTA ACT TTT TTT CCT CAA CAT TTC TTA GGA CTA GCA GGT ATA CCA CGA CGA TAT TCA GAT TAT CCT GAT GCT TAC ACA
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ACT TGA AAT GTA ATT TCT ACT ATT GGA TCG ACA ATT TCA TTT TTA GGA ATT CTA TTC TTT TTT TAT ATT ATT TGA GAA
AGT TTA ATA TCA CAA CGT CAA GTT TTA TTC CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA CTA CAA AAT ACA CCA CCA
GC
#Po._pediculata_AS70_WI_(Waukesha)_USA
TTA TTA TTG GTG AGC AGT ATA GTG GAA AAC GGA GCT GGG ACA GGA TGA ACT GTT TAC CCA CCT CTA TCT TCT AAT ATT
GCT CAT GGA GGG GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTT
AAT TTT ATT ACA ACT GTA ATT AAT ATA CGA TCT ACA GGT ATT ACA TTW GAC CGA ATA CCT TTA TTT GTT TGA TYT GTA
GTA ATT ACA GCA TTA TTA CTT CTT TTA TCC TTA CCT GTA TTA GCA GGA GCT ATC ACT ATA TTA TTA ACA GAT CGA AAT
TTA AAT ACT TCC TTT TTT GAT CCT GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTT GGA CAC
CCA GAA GTG TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGA GCT TTA GGA ATA ATT TAT GCA ATA CTA GCT ATT GGC TTA TTA GGA TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGG ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCT GCT ACA ATA GTT ATT GCA GTT CCT ACT GGA ATT
AAA ATT TTT AGC TGA TTA GCA ACC CTT TAC GGA ACT CAA ATA AAT CAC TCC CCA GCC ACA TTA TGA TCT TTA GGA TTT
ATT TTT TTA TTT ACA GTA GGA GGA CTA ACT GGT GTT GTT CTT GCT AAT TCT TCC CTA GAC ATT ATT CTT CAT GAT ACT
TAC TAT GTA GTT GCT CAT TTT CAC TAT GTA CTT TCA ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
TAC CCT CTT TTT ACA GGA TTA ACA ATA AAT ACA ATA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATT GGA GTT AAT
TTA ACT TTT TTT CCT CAA CAT TTT TTA GGT CTA GCA GGT ATA CCA CGA CGA AAT TCA --- --- --- --- --- --- ---
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#Po._pediculata_AS71_WI_(Waukesha)_USA
TTA TTA TTG GTG AGC AGT ATA GTG GAA AAC GGA GCT GGG ACA GGA TGA ACT GTT TAC CCA CCT CTA TCT TCT AAT ATT
GCT CAT GGA GGG GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTT
AAT TTT ATT ACA ACT GTA ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCA TTA TTA CTT CTT TTA TCC TTA CCT GTA TTA GCA GGA GCT ATC ACT ATA TTA TTA ACA GAT CGA AAT
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CCA GAA GTG TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
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GTA TTT TTA TTT ACT GTA GGA GGA TTA ACT GGA GTT GTT CTA GCT AAC TCT TCT ATT GAT ATT ATT TTA CAC GAT ACA
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TTA TTA TTA GTA AGT AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCT TCT AAT ATT
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#R._floridensis_AA01_FL_(Duval)_USA
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#R._floridensis_AA03_FL_(Duval)_USA
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#R._lherminieri_AA36_FL_(Madison)_USA
TTA CTT CTA GTG AGT AGT ATA GTA GAA AAT GGA GCT GGA ACT GGA TGA ACT GTT TAC CCA CCA TTA TCT TCC AAT ATC
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AAA ATT TTC AGA TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAC TCC CCA GCT ACT CTT TGA GCT TTA GGA TTT
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#R._lherminieri_AN14_TN_(Jefferson)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACT GGA TGA ACT GTT TAC CCA CCA TTA TCT TCT AAT ATC
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#R._lherminieri_AN15_TN_(Jefferson)_USA
-TA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACT GGA TGA ACT GTT TAC CCA CCA TTA TCT TCT AAT ATC
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AGT TTA GCA TCA CAA CGA CAA GTT TTA TTC CCT ATT CAA TTA AAT TCA TCA A-- --- --- --- --- --- --- --- ---
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#R._lherminieri_AN16_TN_(Jefferson)_USA
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#R._lherminieri_AN17_TN_(Jefferson)_USA
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#R._planifrons_AE45_OR_(Klamath)_USA
TTA TTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAT ATT
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AGT TTA GCA TCA CAA CGA CAA GTG TTA TTC CCT GTA CAA TTA AAT TCA TCA ATT GAA TGA CTT CAA AAT ACT CCA CCA
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#R._planifrons_AF05_CA_(Siskiyou)_USA
TTA TTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTA
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GTA ATT ACT GCT TTA CTT TTA CTT TTA TCT TTA CCA GTT CTT GCA GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTT TTA GGA TTC ATT GTT TGA GCC CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACT CGA GCA TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCT CCT GCT ACT TTA TGA GCT TTA GGA TTC
GTA TTC TTA TTT ACT GTA GGA GGT CTA ACA GGA GTT GTT CTA GCT AAT TCT TCT ATT GAC ATT ATT CTT CAT GAT ACT
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA CTA TCT ATA GGA GCT GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
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ACT TGA AAT GTT ATC TCA ACA ATT GGA TCA ACA ATT TCT CTG TTA GGA ATT TTA TTC TTT TTT TAT ATT ATT TGA GAA
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TTA TTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA CTT TTA CTT TTA TCT TTA CCA GTT CTT GCA GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAT CCA GCA GGA GGA GGA GAC CCT ATT TTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACT TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTT TTA GGA TTC ATT GTT TGA GCC CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACT CGA GCA TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCT CCT GCT ACT TTA TGA GCT TTA GGA TTC
GTA TTC TTA TTT ACT GTA GGA GGT CTA ACA GGA GTT GTT CTA GCT AAT TCT TCT ATT GAC ATT ATT CTT CAT GAT ACT
TAT TAT GTA GTT GCC CAT TTC CAT TAT GTA CTA TCT ATA GGA GCT GTA TTT GCA ATT ATA GCA GGA TTT GTT CAC TGA
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ACT TGA AAT GTT ATC TCA ACA ATT GGA TCA ACA ATT TCT CTG TTA GGA ATT TTA TTC TTT TTT TAT ATT ATT TGA GAA
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AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA CTT TTA CTT TTA TCT TTA CCA GTT CTT GCA GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
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AAA ATT TTT AGT TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCT CCT GCT ACT TTA TGA GCT TTA GGA TTC
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AAT TTT ATT ACT ACA GTT ATT AAC ATA CGA TCA ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCC GTA
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AAA ATT TTC AGT TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCA TAC TTT ACT TCA GCC ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTC AGT TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
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TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAC ACA
ACT TGA AAT GTT ATC TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTC TTT TTT TAT ATT ATC TGA GAA
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AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCC GTA
GTA ATT ACT GCT TTA TTG TTA CTT TTA TCT TTA CCA GTT CTT GCA GGA GCA ATT ACT ATA CTT TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAT CCA GCA GGA GGA GGA GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACT TTT GGT TCT CTA GGA ATA ATT TAT GCT ATA TTA GCT ATT GGT CTT TTA GGT TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCA TAT TTT ACT TCA GCA ACA ATA ATT ATT GCG GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA TTA GCC ACA CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCT TCT ATT GAT ATT ATC CTT CAT GAT ACT
TAT TAT GTA GTA GCT CAT TTC CAT TAT GTT CTA TCT ATG GGA GCT GTA TTT GCA ATT ATA GCA GGA TTT GTA CAT TGA
TAC CCT TTA TTT ACA GGA TTA ACT CTA AAT AGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACA TTC TTT CCT CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAC TCT GAT TAT CCA GAT GCT TAC ACA
ACT TGA AAT GTT ATC TCA ACA ATT GGA TCA ACA ATT TCT TTA CTA GGT ATT TTA TTC TTT TTT TAC ATT ATC TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTA TTA TTC CCT GTA CAA TTA AAT TCA TCA ATT GAA TGA CTT CAA AAT A-- --- ---
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AAT TTT ATT ACT ACA GTT ATT AAC ATA CGA TCA ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCC GTA
GTA ATT ACT GCT TTA TTA TTA CTT TTA TCT TTA CCA GTT CTT GCG GGA GCA ATT ACT ATA CTT TTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACT TTT GGT TCA CTA GGA ATA ATT TAC GCT ATA TTA GCT ATT GGT CTT TTA GGT TTT ATT GTT TGA GCT CAT CAT ATA
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AAA ATT TTC AGT TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCT TCT ATT GAT ATT ATC CTT CAT GAC ACT
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTT CTT TCT ATA GGA GCT GTA TTT GCA ATT ATA GCA GGA TTT GTA CAT TGA
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TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAC ACA
ACT TGA AAT GTT ATC TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTC TTT TTT TAT ATT ATC TGA GAA
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TTA CTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTA TAC CCT CCC TTA TCA TCT AAT ATC
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AAT TTT ATT ACT ACA GTT ATT AAC ATA CGA TCA ACA GGA ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCC GTA
GTA ATT ACT GCT TTA TTA TTA CTT TTA TCT TTA CCA GTT CTT GCA GGA GCA ATT ACT ATA CTT TTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCA TAC TTT ACT TCA GCC ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTC AGT TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCT TCT ATT GAT ATT ATC CTT CAT GAC ACT
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TTA ACA TTC TTC CCT CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAC ACA
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AAT TTT ATT ACT ACA GTT ATT AAC ATA CGA TCA ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCC GTA
GTA ATT ACT GCT TTA TTA TTA CTT TTA TCT TTA CCA GTT CTT GCG GGA GCA ATT ACT ATA CTT TTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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TAT CCT TTA TTT ACA GGA TTA ACT CTA AAT AGA AAG ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
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ACT TGA AAT GTT ATC TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTC TTT TTT TAT ATT ATC TGA GAA
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GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCC GTA
AAT TTT ATT ACT ACA GTT ATT AAC ATA CGA TCA ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCC GTA
GTA ATT ACT GCT TTA TTA TTA CTT TTA TCT TTA CCA GTT CTT GCG GGA GCA ATT ACT ATA CTT TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAT CCA GCA GGA GGA GGT GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTC TTC GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCA TAC TTT ACT TCA GCC ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTC AGT TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCT TCT ATT GAT ATT ATC CTT CAT GAC ACT
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#R._lherminieri_A22_OH_(Hocking)_USA
TTA TTA CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAC CCA CCA TTA TCT TCT AAT ATT
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GTA ATC ACT GCT TTA TTA CTT CTT TTA TCA TTA CCA GTT CTT GCT GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
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CCT GAA GTT T?? ??? ??? ??? ?TA YCA GGA TTC GGA ATA ATC TCT CAT ATT ATT AGT CAA GAA TCT GGT AAA AAG GAA
ACT TTT GGA TCT TTA GGA ATA ATT TAT GCT ATA CTA GCT ATT GGT CTT TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
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AAA ATC TTC AGA TGA TTA GCT ACA CTT TAC GGA ACT CAA TTA AAT TAC TCC CCA GCT ACT CTT TGA GCT TTA GGA TTT
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GC
#R._lherminieri_AQ58_NY_(Saratoga)_USA
TTA TTA CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGA TGA ACT GTT TAC CCA CCA TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCC TCT GTT GAT CTA GCT ATC TTC TCT CTA CAT TTA GCA GGA ATT TCA TCA ATT TTA GGT GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCA GTA
GTA ATC ACT GCT TTA TTA CTT CTT TTA TCA TTA CCA GTT CTT GCT GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTC GGA ATA ATC TCT CAT ATT ATT AGT CAA GAA TCT GGT AAA AAG GAA
ACT TTT GGA TCT TTA GGA ATA ATT TAT GCT ATA CTA GCT ATT GGT CTT TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
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TTT ACA GTA GGA ATA GAT GTT GAT ACT CGA GCA TAT TTT ACC TCA GCA ACA ATA ATT ATT GCT GTA CCC ACA GGA ATT
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#R._querula_AW30_NM_(Grant)_USA
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AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA GCA GGA ATT ACT TTT GAT CGA ATA CCT CTA TTT GTT TGA TCT GTA
GTA ATT ACT GCC TTG TTA TTA CTT TTA TCT TTA CCA GTT CTT GCT GGA GCA ATT ACT ATA CTT TTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACC TTT GGA TCA CTA GGT ATA ATT TAT GCT ATA TTA GCT ATT GGT CTT TTA GGT TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACT CGA GCT TAC TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTC AGA TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAC TAT TCT CCA GCT ACT TTA TGG GCT TTA GGG TTT
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TTA ACT TTC TTC CCT CAA CAT TTC TTA GGT CTT GCA GGA ATA CCT CGA CGA TAC TCT GAT TAC CCA GAT GCT TAT ACA
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AGT TTA GCA TCA CAA CGA CAA GTA TTA TTT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA CTT CAA A-- --- --- ---
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#R._querula_AZ61_VA_(Bland)_USA
TTA TTA CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTA TAC CCT CCC TTA TCA TCT AAT ATC
GCT CAT GGA GGA GCC TCT GTT GAT TTA GCT ATT TTT TCT CTA CAT TTA GCA GGA ATT TCT TCA ATT TTA GGG GCA GTA
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ACC TTC GGA TCA CTA GGT ATA ATT TAT GCT ATA TTA GCT ATT GGT CTT TTA GGT TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACT CGA GCT TAC TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTC AGA TGA TTA GCT ACA CTT TAT GGA ACT CAA TTA AAC TAT TCT CCA GCT ACT TTA TGG GCT TTA GGG TTT
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GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA GTA GGA ATT ACT TTT GAC CGA ATA CCT CTA TTT GTT TGA TCT GTA
GTA ATT ACT GCC TTG TTA TTA CTT TTA TCT TTA CCA GTT CTC GCT GGA GCA ATT ACT ATA CTT TTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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AAA ATT TTC AGA TGA TTA GCT ACA CTC TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT TTA TGA GCT TTA GGG TTT
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#R._stimulans_E7_OH_(Hamilton)_USA
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GCT CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTC TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTT
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
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GTT AAT ACT TCA TTT TTT GAT CCT GCT GGA GGA GGA GAT CCA ATT TTA TAC CAA CAT TT? ??? ??? ??? ??? ??? ???
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ACC TTT GGA TCA TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGT CTT TTA GGA TTT ATT GTT TGA GCT CAT CAT ATA
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AAA ATT TTT AGT TGA CTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCT GCT ACT TTA TGA GCT TTA GGA TTT
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GC
#R._stimulans_AR33_NY_(Saratoga)_USA
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AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACG GCT TTA TTA TTA CTT CTT TCT TTA CCA GTT CTT GCA GGA GCA ATC ACT ATA CTT TTA ACA GAT CGA AAT
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AAA ATT TTT AGT TGA CTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCT GCT ACT TTA TGA GCT TTA GGA TTT
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AAA ATT TTT AGT TGA TTA GCT ACA CTT TAT GGA ACT CAA CTA AAC TAT TCA CCT GCT ACT TTA TGA GCT CTA GGG TTT
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#R._stimulans_BA27_OH_(Hamilton)
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AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
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GTT AAT ACT TCA TTT TTT GAT CCT GCT GGA GGA GGA GAT CCA ATT TTA TAC CAA CAC TTA TTT TGA TTT TTC GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATC TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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#R._stimulans_AZ10_OH_(Hamilton)_USA
CTT CTT CTA GTT AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAT CCA CCC TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTC TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTT
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GTA ATT ACT GCT TTA TTA TTA CTT CTT TCT TTA CCA GTT CTT GCA GGA GCA ATC ACT ATA CTT TTA ACA GAT CGA AAT
GTT AAT ACT TCA TTT TTT GAC CCT GCT GGA GGA GGA GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTC GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATC TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACC TTT GGA TCA TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGT CTT TTA GGA TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACT CGA GCC TAT TTT ACT TCA GCT ACA ATA ATT ATT GCT GTT CCT ACA GGT ATT
AAA ATT TTT AGT TGA CTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCT GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACA GGA GTA GTA TTA GCT AAT TCA TCA ATT GAT A-- --- --- --- --- ---
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#R._stimulans_AZ45_WV_(Kanawha)_USA
CTT CTT CTA GTT AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAT CCA CCC TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTC TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTT
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA TTA CTT CTT TCT TTA CCA GTT CTT GCA GGA GCA ATC ACT ATA CTT TTA ACA GAT CGA AAT
GTT AAT ACT TCA TTT TTT GAT CCT GCT GGA GGA GGA GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTC GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATC TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACC TTT GGA TCA TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGT CTT TTA GGA TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACT CGA GCC TAT TTT ACT TCA GCT ACA ATA ATT ATT GCT GTT CCT ACA GGT ATT
AAA ATT TTT AGT TGA CTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCT GCT ACT TTA TGG GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACA GGA GTA GTA TTA GCT AAT TCA TCA ATT GAT ATT ATT CTT CAT GAT ACT
TAC TAT GTA G-- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#R._stimulans_AZ46_WV_(Kanawha)_USA
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GCT CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTC TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTT
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA TTA CTT CTT TCT TTA CCA GTT CTT GCA GGA GCA ATC ACT ATA CTT TTA ACA GAT CGA AAT
GTT AAT ACT TCA TTT TTT GAC CCT GCT GGA GGA GGA GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTC GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATC TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACC TTT GGA TCA TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGT CTT TTA GGA TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACT CGA GCC TAT TTT ACT TCA GCT ACA ATA ATT ATT GCT GTT CCT ACA GGT ATT
AAA ATT TTT AGT TGA CTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCT GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACA GGA GTA GTA TTA GCT AAT TCA TCA ATT GAT A-- --- --- --- --- ---
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#R._stimulans_AZ60_VA_(Balnd)_USA
--- --- CTA GTT AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAT CCA CCC TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTC TCT CTT CAT TTA GCA GGA ATT TCT TCA ATT TTA GGA GCA GTT
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA TTA CTT CTT TCT TTA CCA GTT CTT GCA GGA GCA ATC ACT ATA CTT TTA ACA GAT CGA AAT
GTT AAT ACT TCA TTT TTT GAT CCT GCT GGA GGA GGA GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTT TTC GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATC TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACC TTT GGA TCA TTA GGA ATA ATT TAT GCA ATA TTA GCT ATT GGT CTT TTA GGA TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACT CGA GCC TAT TTT ACT TCA GCT ACA ATA ATT ATT GCC GTT CCT ACA GGT ATT
AAA ATT TTT AGT TGA CTA GCT ACA CTT TAT GGA ACT CAA TTA AAT TAT TCC CCC GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACA GGA GTA GTA TTA GCT AAT TCA TCA ATT GAT ATT ATT CTT CAT GAT ACT
TAC TAT GTA GTA GCT CAC TTC CAT TAT GTT CTA TCT ATA GGA GCT GTA TTT GCA ATT ATA GCT GGA TTT GTA CAC TGA
TAT CCT TTA TTC ACA GGA TTA ACA TTA AAT AGA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ACA GGA GTA AAT
TTA ACT TTC TTC CCA CAA CAC TTC CTT GGT TTA GCG GGA ATA CCT CGA CGT TAT TCT GAC TAC CCA GAT GCC TAC ACA
ACA TGA AAT GTC ATC TCA ACA ATT GGA TCG ACA ATT TCA TTA TTA GGT ATT TTA TTC TTT TTT TAT ATT ATT TGA GAA
AGT TTA GCT TCA CAA CGA CAA GTA TTA TTC CCA GTA CAA TTA AAT TCA TCA ATT GAA TGA CTA CAA AAT ACC CCC CCA
GC
#Sx_lambens_BG79_FL_(Broward)_USA
TTA CTT CTT GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAT CCA CCT CTA TCT TCT AAT ATT
GCT CAT GGT GGA GCA TCT GTT GAT TTA GCT ATC TTT TCT CTT CAT TTA GCT GGA ATT TCA TCA ATT TTA GGA GCA GTA
AAT TTT ATC ACT ACA GTA ATT AAT ATA CGA TCT ACT GGA ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA CTT CTT CTT TCT TTA CCT GTT TTA GCA GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCG GGT AAA AAG GAA
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TTT ACT GTA GGA ATG GAC GTA GAT ACA CGA GCT TAT TTT ACA TCT GCT ACA ATA ATT ATT GCT GTC CCA ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCT ACT CTA TAC GGA ACA CAA CTA AAT TAT TCA CCA GCT ACA CTT TGA GCT CTT GGG TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACA GGA GTA GTA TTA GCT AAT TCT TCA ATT GAT ATT ATT CTT CAT GAT ACT
TAT TAT GTA GTA GCA CAT TTT CAT TAT GTT CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGG TTT GTA CAC TGA
TAT CCT TTA TTT ACA GGA TTA ACT ATA AAT ACA AAG ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTC CCT CAA CAC TTC TTA GGA CTT GCA GGA ATA CCT CGT CGA TAC TCA GAT TAT CCA GAT GCT TAT ACA
GCA TGA AAT GTA ATT TCA ACT ATC GGT TCA ACA ATT TCT TTA CTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGA TTA GTA TCC CAA CGA CAA GTA ATA TTT CCT GTT CAA TTA AAT TCA TCA ATT GAA TGA CTT CAA AAT AC- --- ---
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#Sx._lambens_BG80_FL_(Broward)_USA
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GCT CAT GGT GGA GCA TCT GTT GAT TTA GCT ATC TTT TCT CTT CAT TTA GCT GGA ATT TCA TCA ATT TTA GGA GCA GTA
AAT TTT ATC ACT ACA GTA ATT AAT ATA CGA TCT ACT GGA ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT TTA TTA CTT CTT CTT TCT TTA CCT GTT TTA GCA GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCA GCA GGA GGA GAT CCT ATT CTT TAT CAA CAT CTA TTT TGA TTT TTT GGG CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCG GGT AAA AAG GAA
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TTT ACT GTA GGA ATG GAC GTA GAT ACA CGA GCT TAT TTT ACA TCT GCT ACA ATA ATT ATT GCT GTC CCA ACT GGA ATT
AAA ATT TTT AGT TGA TTA GCT ACT CTA TAC GGA ACA CAA CTA AAT TAT TCA CCA GCT ACA CTT TGA GCT CTT GGG TTT
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GCA TGA AAT GTA ATT TCA ACT ATC GGT TCA ACA ATT TCT TTA CTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
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GC
#S._acrophila_AL34_GA_(Rabun)_USA
TTA CTT CTA GTA AGC AGT ATA GTA GAA AAC GGA GCC GGG ACA GGA TGA ACT GTT TAC CCC CCA TTA TCA TCT AAT ATT
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AAT TTT ATT ACT ACA GTA ATC AAT ATA CGA TCT ACA GGA ATT ACC TTT GAC CGA ATA CCT CTA TTT GTA TGG TCA GTA
GTA ATT ACT GCC CTT CTT CTA TTA CTT TCT TTA CCT GTT CTT GCC GGA GCT ATT ACT ATA TTA CTA ACA GAT CGA AAT
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AAA ATT TTT AGT TGA CTT GCC ACT CTT TAC GGA ACT CAA TTA AAT TAT TCC CCG GCT ACT TTA TGA GCT TTA GGA TTT
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GCT TGA AAT GTA ATC TCA ACA ATT GGA TCA ACT ATT TCT TTA TTA GGA ATT TTA TTT TTC TTT TAC ATT ATT TGA GAA
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GC
#S._aldrichi_E23_OH_(Hocking)_USA
TTA TTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
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GTA ATT ACA GCT TTA CTT TTA TTG CTT TCT TTA CCT GTA CTT GCA GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCG GCA GGA GGA GGA GAC CCT ATT TTA TAT CAA CAC TTA TTT TGA TTT TTT GGA CAT
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CCT GAA GTT TAT ATT TTA TTT TTA CCG GGA TTT GGA ATA ATT TCT CAC ATT ATT AGA CAA GAA TCA GGT AAA AAG GAA
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TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACC CTT TAC GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT CTA TGA GCT TTA GGA TTT
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GC
#S._aldrichi_NY_(Onondoga)_AV03
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AAC TTT ATC ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCT TTA CTT TTA TTG CTT TCT TTA CCT GTA CTT GCA GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
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ACA TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA CTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
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GC
#S._africa_AJ12_OR_(Coos)_USA
TTG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTA TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTC CAT TTA GCT GGA ATT TCT TCA ATT CTA GGA GCA GTA
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CCT GAA GTT TAT ATT ??? ??? ??A CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
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AGT TTA GCA TCT CAA CGA CAA GTA ATA TTC CCG GTT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._africa_AJ13_OR_(Coos)_USA
TTG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTA TAC CCT CCT TTA TCT TCT AAT ATT
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AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATC ACT TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
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AAA ATT TTC AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA TTA AAT TAC TCT CCA GCT ACT CTA TGA GCT TTA GGG TTT
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AGT TTA GCA TCT CAA CGA CAA GTA ATA TTC CCG GTT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._africa_AL31_GA_(Rabun_County)_USA
TTG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTA TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTC CAT TTA GCT GGA ATT TCT TCA ATT CTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATC ACT TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTA ATC ACA GCC CTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCC GGA GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAC CCG GCA GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TT? ??? ???
??? GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTC ACA GTA GGA ATA GAC GTA GAT ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA TTA AAT TAC TCT CCA GCT ACT CTA TGA GCT TTA GGG TTT
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCG TCA ATT GAT ATT ATT CTT CAT GAT ACA
TAC TAT GTA GTA GCT CAC TTC CAC TAT GTA CTT TCA ATA GGA GCA GTA TTT GCT ATT ATA GCA GGT TTT GTT CAT TGA
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TTA ACT TTC TTC CCT CAA CAT TTC CTA GGA CTT GCA GGT ATG CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACA ATT GGA TCA ACA ATT TCT CTA TTG GGA ATT TTA TTT TTC TTT TAT ATT ATT TGA GAA
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GC
#S._africa_AW42_NM_(Grant)_USA
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AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATC ACT TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTA ATC ACA GCC CTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCC GGA GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAC CCG GCA GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGG CAT
CCT GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTC ACA GTA GGA ATA GAC GTA GAT ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA TTA AAT TAC TCT CCA GCT ACT CTA TGA GCT TTA GGG TTT
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCG TCA ATT GAT ATT ATT CTT CAT GAT ACA
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TAC TAT GTA GTA GCT CAC TTC CAC TAT GTA CTT TCA ATA GGA GCA GTA TTT GCT ATT ATA GCA GGT TTT GTT CAT TGA
TAC CCT TTA TTT ACT GGG TTA ACA TTA AAT GCT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTC CCT CAA CAT TTC CTA GGA CTT GCA GGT ATG CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACA ATT GGA TCA ACA ATT TCT CTA TTG GGA ATT TTA TTT TTC TTT TAT ATT ATT TGA GAA
AGT TTA GCA TCT CAA CGA CAA GTA ATA TTC CCG GTT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._africa_BA20_NM_(Grant)_USA
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GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTC CAT TTA GCT GGA ATT TCT TCA ATT CTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATC ACT TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTA ATC ACA GCC CTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCC GGA GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAC CCG GCA GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGG CAT
CCT GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTC ACA GTA GGA ATA GAC GTA GAT ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA TTA AAT TAC TCT CCA GCT ACT CTA TGA GCT TTA GGG TTT
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCG TCA ATT GAT ATT ATT CTT CAT GAT ACA
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TTA ACT TTC TTC CCT CAA CAT TTC CTA GGA CTT GCA GGT ATG CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACA ATT GGA TCA ACA ATT TCT CTA TTG GGA ATT TTA TTT TTC TTT TAT ATT ATT TGA GAA
AGT TTA GCA TCT CAA CGA CAA GTA ATA TTC CCG GTT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._africa_AL31_GA_(Raburn)_USA
-TG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTA TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTC CAT TTA GCT GGA ATT TCT TCA ATT CTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATC ACT TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTA ATC ACA GCC CTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCC GGA GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAC CCG GCA GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGG CAT
CCT GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
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TTC ACA GTA GGA ATA GAC GTA GAT ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA TTA AAT TAC TCT CCA GCT ACT CTA TGA GCT TTA GGG TTT
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCG TCA ATT GAT ATT ATT CTT CAT GAT ACA
TAC TAT GTA GTA GCT CAC TTC CAC TAT GTA CTT TCA ATA GGA GCA GTA TTT GCT ATT ATA GCA GGT TTT GTT CAT TGA
TAC CCT TTA TTT ACT GGG TTA ACA TTA AAT GCT AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTC CCT CAA CAT TTC CTA GGA CTT GCA GGT ATG CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACA ATT GGA TCA ACA ATT TCT CTA TTG GGA ATT TTA TTT TTC TTT TAT ATT ATT TGA GAA
AGT TTA GCA TCT CAA CGA CAA GTA ATA TTC CCG GTT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._africa_AW43_NM_(Grant)_USA
TTG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTA TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTC CAT TTA GCT GGA ATT TCT TCA ATT CTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCA ACA GGA ATC ACT TTT GAT CGA ATA CCT TTA TTT GTA TGA TCT GTA
GTA ATC ACA GCC CTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCC GGA GCT ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAC CCG GCA GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGG CAT
CCT GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA TTA TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTC ACA GTA GGA ATA GAC GTA GAT ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA TTA AAT TAC TCT CCA GCT ACT CTA TGA GCT TTA GGG TTT
GTA TTC TTA TTC ACA GTA GGA GGA TTA ACA GGA GTT GTT TTA GCT AAT TCG TCA ATT GAT ATT ATT CTT CAT GAT ACA
TAC TAT GTA GTA GCT CAC TTC CAC TAT GTA CTT TCA ATA GGA GCA GTA TTT GCT ATT ATA GCA GGT TTT GTT CAT TGA
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TTA ACT TTC TTC CCT CAA CAT TTC CTA GGA CTT GCA GGT ATG CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACA ATT GGA TCA ACA ATT TCT CTA TTG GGA ATT TTA TTT TTC TTT TAT ATT ATT TGA GAA
AGT TTA GCA TCT CAA CGA CAA GTA ATA TTC CCG GTT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA A-- --- --- ---
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#S._argyrostoma_AE73_CA_(Shasta)_USA
--A CTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT CTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCC CTT TTT GTT TGA TCA GTA
GTA ATT ACC GCT TTA CTT CTC CTT CTA TCC CTA CCC GTA CTT GCA GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCA GCA GGA GGA GGA GAT CCA ATT CTA TAT CAA CAC TTA TTT TGA TTT TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGT TCA CTA GGA ATA ATC TAT GCT ATG CTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCC CAT CAC ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACA CGA GCC TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA CTA AAT TAT TCC CCA GCT ACT TTA TGA GCC TTA GGA TTC
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAC GTA CTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAT CCC CTA TTC ACT GGA TTA ACA TTA AAT ACA AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAC
TTA ACT TTC TTC CCT CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCA GAT TAT CCA GAT GCT TAC ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATC TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAC ACC CCA CCA
GC
#S._argyrostoma_AE74_CA_(Shasta)_USA
-TA CTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT CTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCC CTT TTT GTT TGA TCA GTA
GTA ATT ACC GCT TTA CTT CTC CTT CTA TCC CTA CCC GTA CTT GCA GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCA GCA GGA GGA GGA GAT CCA ATT CTA TAT CAA CAC TTA TTT TGA TTT TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAA GAA
ACA TTT GGT TCA CTA GGA ATA ATC TAT GCT ATA CTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCC CAT CAC ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACA CGA GCC TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA CTA AAT TAT TCC CCA GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAC GTA CTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAT CCC CTA TTC ACT GGA TTA ACA TTA AAT ACA AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAC
TTA ACT TTC TTC CCT CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCA GAT TAT CCA GAT GCT TAC ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATC TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGA CAA GTT ATG TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAC ACC CCA CCA
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#S._argyrostoma_AE76_CA_(Shasta)_USA
TTA CTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT CTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
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GTA ATT ACC GCT TTA CTT CTC CTT CTA TCC CTA CCC GTA CTT GCA GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAA GAA
ACA TTT GGT TCA CTA GGA ATA ATC TAT GCT ATA CTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCC CAT CAC ATA
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AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA CTA AAT TAT TCC CCA GCT ACT TTA TGA GCC TTA GGA TTT
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GC
#S._argyrostoma_BE01_KY_(Campbell)_USA
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GCT CAT GGA GGA GCT TCT GTT GAT CTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCC CTT TTT GTT TGA TCA GTA
GTA ATT ACC GCT TTA CTT CTC CTT CTA TCC CTA CCC GTA CTT GCA GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCA GCA GGA GGA GAT CCA ATT CTA TAT CAA CAC TTA TTT TGA TTT TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAA GAA
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AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA CTA AAT TAT TCC CCA GCT ACT TTA TGA GCC TTA GGA TTT
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TTA ACT TTC TTC CCT CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCA GAT TAT CCA GAT GCT TAC ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATC TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGA CAA GTT ATG TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAC ACC CCA CCA
GC
#S._argyrostoma_BE02_KY_(Kenton)_USA
TTA CTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT CTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCC CTT TTT GTT TGA TCA GTA
GTA ATT ACC GCT TTA CTT CTC CTT CTA TCC CTA CCC GTA CTT GCA GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCA GCA GGA GGA GGA GAT CCA ATT CTA TAT CAA CAC TTA TTT TGA TTT TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAA GAA
ACA TTT GGT TCA CTA GGA ATA ATC TAT GCT ATA CTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCC CAT CAC ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACA CGA GCC TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA CTA AAT TAT TCC CCA GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAC GTA CTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAT CCC CTA TTC ACT GGA TTA ACA TTA AAT ACA AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAC
TTA ACT TTC TTC CCT CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCA GAT TAT CCA GAT GCT TAC ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATC TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGA CAA GTT ATG TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAC ACC CCA CCA
GC
#S._argyrostoma_AS36_WI_(Marathon)_USA
TTA CTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT CTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCC CTT TTT GTT TGA TCA GTA
GTA ATT ACC GCT TTA CTT CTC CTT CTA TCC CTA CCC GTA CTT GCA GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCA GCA GGA GGA GGA GAT CCA ATT CTA TAT CAA CAC TTA TTT TGA TTT TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGT TCA CTA GGA ATA ATC TAT GCT ATG CTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCC CAT CAC ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACA CGA GCC TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA CTA AAT TAT TCC CCA GCT ACT TTA TGA GCC TTA GGA TTC
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAC GTA CTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
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#S._argyrostoma_BE14_KY_(Campbell)_USA
TTA CTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT CTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCC CTT TTT GTT TGA TCA GTA
GTA ATT ACC GCT TTA CTT CTC CTT CTA TCC CTA CCC GTA CTT GCA GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCA GCA GGA GGA GGA GAT CCA ATT CTA TAT CAA CAC TTA TTT TGA TTT TTT GGT CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAA GAA
ACA TTT GGT TCA CTA GGA ATA ATC TAT GCT ATA CTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCC CAT CAC ATA
TTT ACA GTA GGA ATA GAC GTA GAT ACA CGA SCY TAT TTT AYT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA CTA AAT TAT TCC CCA GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACT GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAC GTA CTA TCA ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAT CCC CTA TTC ACT GGA TTA ACA TTA AAT ACA AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAC
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GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATC TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GTA TCT CAA CGA CAA GTT ATG TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAC ACC CCA CCA
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#S._argyrostoma_BE16_OH_(Hamilton)_USA
TTA CTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT CTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCC CTT TTT GTT TGA TCA GTA
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AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA CTA AAT TAT TCC CCA GCT ACT TTA TGA GCC TTA GGA TTT
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#S._argyrostoma_BE18_KY_(Kenton)_USA
--A CTA CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT CTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
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#S._bullata_AA02_FL_(Duval)_USA
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#S._bullata_AA45_FL_(Walton)_USA
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GCC CAC GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCA GTA
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#S._bullata_AB07_FL_(Washington)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAC ATC
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#S._bullata_AD70_SC_(Newberry)_USA
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TTC ACA GTA GGA ATA GAT GTT GAC ACT CGA GCC TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTC CCA ACA GGG ATT
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#S._bullata_AE39_SC_(Newberry)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAC ATC
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#S._bullata_AF37_CA_(Yolo)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAC ATC
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#S._bullata_AD09_FL_(Highland)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAC ATC
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#S._bullata_BA69_MN_(Winona)_USA
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#S._bullata_BC10_OH_(Hamilton)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAC ATC
GCC CAC GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCA GTA
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#S._bullata_AQ05_NY_(Schuyler)_USA
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AAA ATT TTT AGC TGA CTT GCC ACT CTT TAC GGA ACT CAA TTA AAT TAT TCC CCA GCT ACA CTA TGA GCT CTT GGA TTT
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CCT GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATG ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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AAA ATT TTT AGC TGA CTT GCC ACT CTT TAC GGA ACT CAA TTA AAT TAT TCC CCA GCT ACA CTA TGA GCT CTT GGA TTT
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TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAC ATC
GCC CAC GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA CTT TTA CTT CTT TCC CTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTG ACT GAT CGA AAT
ATT AAT ACC TCA TTC TTT GAC CCT GCA GGA GGA GGG GAT CCA ATT CTA TAC CAA CAT TTA TTT TGG TTC TTT GGA CAC
CCT GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATG ATT TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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ACA TTT GGA TCA TTA GGT ATA ATT TAC GCA ATA CTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTC ACA GTA GGG ATA GAT GTT GAT ACT CGA GCC TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTC CCA ACA GGG ATT
AAA ATT TTT AGC TGA CTT GCC ACT CTT TAC GGA ACT CAA TTA AAT TAT TCC CCA GCT ACA CTA TGA GCT CTT GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGT CTA ACT GGA GTA GTC TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA CTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAC CCC CTA TTT ACT GGA CTA ACT TTA AAC TCG AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTC CCT CAA CAT TTT CTA GGA CTT GCA GGA ATA CCT CGA CGT TAC TCT GAC TAT CCT GAT GCT TAC ACA
TCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTT CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTG CAA AAT ACT CCA CCA
GC
#S._bullata_BC14_OH_(Hamilton)_USA
-TA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAC ATC
GCC CAC GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA CTT TTA CTT CTT TCC CTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTG ACT GAT CGA AAT
ATT AAT ACC TCA TTC TTT GAC CCT GCA GGA GGA GGA GAT CCA ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATG ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGT ATA ATT TAC GCA ATA CTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTC ACA GTA GGA ATA GAT GTT GAC ACT CGA GCC TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTC CCA ACA GGG ATT
AAA ATT TTT AGC TGA CTT GCC ACT CTT TAC GGA ACT CAA TTA AAT TAT TCC CCA GCT ACA CTA TGA GCT CTT GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGT CTA ACT GGA GTA GTC TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA CTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAC CCC CTA TTT ACT GGA CTA ACT TTA AAC TCG AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTC CCT CAA CAT TTT CTA GGA CTT GCA GGA ATA CCT CGA CGT TAC TCT GAC TAT CCT GAT GCT TAC ACA
TCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTT CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTG CAA --- --- --- ---
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#S._bullata_BG65_FL_(Broward)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCC TTA TCT TCT AAC ATC
GCC CAC GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA CTT TTA CTT CTT TCC CTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTG ACT GAT CGA AAT
ATT AAT ACC TCA TTC TTT GAC CCT GCA GGA GGA GGA GAT CCA ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATG ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGT ATA ATT TAC GCA ATA CTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTC ACA GTA GGA ATA GAT GTT GAC ACT CGA GCC TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTC CCA ACA GGG ATT
AAA ATT TTT AGC TGA CTT GCC ACT CTT TAC GGA ACT CAA TTA AAT TAT TCC CCA GCT ACA CTA TGA GCT CTT GGA TTT
GTA TTT T-- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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GCC CAC GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC TTA CAT TTA GCC GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA CTT TTA CTT CTT TCC CTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTG ACT GAT CGA AAT
ATT AAT ACC TCA TTC TTT GAC CCT GCA GGA GGA GGA GAT CCA ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAC ATT TTA ATT TTA CCA GGA TTT GGA ATG ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGT ATA ATT TAC GCA ATA CTA GCA ATT GGA CTW TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTC ACA GTA GGA ATA GAT GTT GAC ACT CGA GCC TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTC CCA ACA GGG ATT
AAA ATT TTT AGC TGA CTT GCC ACT CTT TAC GGA ACT CAA TTA AAT TAT TCC CCA GCT ACA CTA TGA GCT CTT GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGT CTA ACT GGA GTA GTC TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA CTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAC CCC CTA TTT ACT GGA CTA ACT TTA AAC TCG AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTC CCT CAA CAT TTT CTA GGA CTT GCA GGA ATA CCT CGA CGT TAC TCT GAC TAT CCT GAT GCT TAC ACA
TCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTT CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTG CAA AAT ACT CCA CCA
GC
#S._cooleyi_AH76_OR_(Crook)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC CTA CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA CTT TTA CTT CTT TCT CTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGT ATG ATT TAT GCA ATA CTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCT CAT CAT ATG
TTC ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTA CCA ACA GGA ATT
AAA ATT TTT AGC TGA CTT GCT ACT CTT TAT GGA ACC CAA TTA ACT TAT TCC CCA GCT ACA CTA TGA GCT CTT GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA CTA ACT GGA GTA GTC TTA GCT AAT TCA TCT ATC GAT ATT ATT CTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA CTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTC CAT TGA
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TTA ACT TTC TTC CCT CAA CAT TTT CTA GGG CTT GCA GGA ATA CCT CGA CGT TAC TCT GAC TAT CCT GAT GCT TAC ACA
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GC
#S._cooleyi_AF61_OR_(Crook)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC CTA CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA CTT TTA CTT CTT TCT CTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGT ATG ATT TAT GCA ATA CTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCT CAT CAT ATG
TTC ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTA CCA ACA GGA ATT
AAA ATT TTT AGC TGA CTT GCT ACT CTT TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACA CTA TGA GCT CTT GGA TTT
GTA TTT TTA TTT ACT GT- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---
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#S._cooleyi_AJ17_OR_(Jefferson)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC CTA CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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TTC ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTA CCA ACA GGA ATT
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GTA TTT TTA TTT ACT GTA GGA GGA CTA ACT GGA GTA GTC TTA GCT AAT TCA TCT ATC GAT ATT ATT CTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAC TAT GTA CTA TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTC CAT TGA
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TTA ACT TTC TTC CCT CAA CAT TTT CTA GGG CTT GCA GGA ATA CCT CGA CGT TAC TCT GAC TAT CCT GAT GCT TAC ACA
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AGT TTA GCA TCA CAA CGA CAA GTT ATA TTT CCA GTT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCA
GC
#S._crassipalpis_E74_CA_USA
TTG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACG GGG TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTA CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACC TTT GAT CGA ATA CCT TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC CTA CTT TTA CTT TTA TCT TTA CCG GTA CTT GCA GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACC TCT TTT TTC GAC CCA GCA GGA GGA GAT CCT ATT TTA TAC CAA CAC CTA TTT TGA TTT TTC GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTC GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA CTT CTA GGA TTC ATT GTA TGA GCT CAC CAT ATA
TTC ACA GTA GGA ATA GAC GTA GAC ACA CGA GCT TAT TTT AST TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAC GGA ACT CAA TTA AAT TAC TCT CCT GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAC ATT ATT TTA CAT GAT ACA
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TTA ACT TTC TTC CCG CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATC GGA TCA ACA ATT TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
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GC
#S._crassipalpis_AL12_GA_(Rabun)_USA
TTG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACG GGG TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTA CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
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GTA ATT ACA GCC CTA CTT TTA CTT TTA TCT TTA CCG GTA CTT GCA GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACC TCT TTT TTC GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC CTA TTT TGA TTT TTC GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTC GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA CTT CTT GGA TTC ATT GTA TGA GCT CAC CAT ATA
TTC ACA GTA GGA ATA GAC GTA GAC ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAC GGA ACT CAA TTA AAT TAC TCT CCT GCT ACT TTA TGA GCC TTA GGA TTT
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TTA ACT TTC TTC CCG CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATC GGA TCA ACA ATT TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAC ACT CCG CCA
GC
#S._crassipalpis_AL35_GA_(Rabun)_USA
-TG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACG GGG TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTA CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACC TTT GAT CGA ATA CCT TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC CTA CTT TTA CTT TTA TCT TTA CCG GTA CTT GCA GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTC GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA CTT CTA GGA TTC ATT GTA TGA GCT CAC CAT ATA
TTC ACA GTA GGA ATA GAC GTA GAC ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAC GGA ACT CAA TTA AAT TAC TCT CCT GCT ACT TTA TGA GCC TTA GGA TTT
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TTA ACT TTC TTC CCG CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATC GGA TCA ACA ATT TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
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G-
#S._crassipalpis_AL33_GA_(Rabun)_USA
-TG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACG GGG TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTA CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
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GTA ATT ACA GCC CTA CTT TTA CTT TTA TCT TTA CCG GTA CTT GCA GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACC TCT TTT TTC GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAC CAA CAC CTA TTT TGA TTT TTC GGT CAC
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TTC ACA GTA GGA ATA GAC GTA GAC ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
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GCT TGA AAT GTA ATT TCA ACA ATC GGA TCA ACA ATT TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
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GC

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#S._crassipalpis_AQ25_NY_(Rockland)_USA
-TG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACG GGG TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTA CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACC TTT GAT CGA ATA CCT TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC CTA CTT TTA CTT TTA TCT TTA CCG GTA CTT GCA GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACC TCT TTT TTC GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAC CAA CAC CTA TTT TGA TTT TTC GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTC GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA CTT CTA GGA TTC ATT GTA TGA GCT CAC CAT ATA
TTC ACA GTA GGA ATA GAC GTA GAC ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAC GGA ACT CAA TTA AAT TAC TCT CCT GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAC ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA CTT TCA ATA GGA GCT GTA TTT GCC ATT ATA GCA GGA TTT GTT CAC TGG
TAC CCT TTA TTT ACC GGA TTA ACA TTA AAT GCA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTC CCG CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATC GGA TCA ACA ATT TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAC A-- --- ---
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#S._crassipalpis_AR61_WI_(Waukesha)_USA
-TG CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACG GGG TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTA CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTA ATT AAT ATA CGA TCT ACA GGA ATT ACC TTT GAT CGA ATA CCT TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCC CTA CTT TTA CTT TTA TCT TTA CCG GTA CTT GCA GGA GCT ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACC TCT TTT TTC GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAC CAA CAC CTA TTT TGA TTT TTC GGT CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTC GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTC GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA CTT CTA GGA TTC ATT GTA TGA GCT CAC CAT ATA
TTC ACA GTA GGA ATA GAC GTA GAC ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAC GGA ACT CAA TTA AAT TAC TCT CCT GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAC ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAC TTC CAC TAT GTA CTT TCA ATA GGA GCT GTA TTT GCC ATT ATA GCA GGA TTT GTT CAC TGG
TAC CCT TTA TTT ACC GGA TTA ACA TTA AAT GCA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTC CCG CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAT TCA GAT TAC CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATC GGA TCA ACA ATT TCA TTA TTA GGA ATC TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GTA TCA CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAC ACT CCG CCA
GC
#S._georgiana_AB10_FL_(Washington)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAT CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGG GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCT TCT ATT TTA GGG GCA GTA
AAC TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCT CTA TTT GTT TGA TCC GTA
GTA ATT ACA GCT CTA CTT TTA CTT CTT TCT TTA CCA GTA CTT GCT GGA GCA ATT ACT ATA TTA CTA ACT GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAC CCA GCA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTC TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATC AGA CAA GAA TCA GGT AAG AAG GAA
ACA TTT GGA TCC TTA GGA ATA ATT TAT GCA ATA CTA GCA ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTT GGT ATA GAC GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACT ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACA CTA TGA GCT CTA GGA TTT
GTA TTT TTA TTT ACA GTT GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
TAT TAT GTA GTA GCT CAC TTT CAT TAT GTT CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
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TTA ACA TTC TTC CCT CAA CAT TTT TTA GGT CTT GCA GGA ATA CCT CGA CGT TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATT TCA ACA ATT GGG TCA ACT ATT TCT CTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATT TGA GAA
AGT TTA GTG TCA CAA CGA CAA GTA ATA TTT CCA GTA CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCT CCA
GC
#S._hinei_AV61_NY_(Niagara)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCC CTA TCA TCT AAC ATT
GCT CAT GGA GGA GCT TCT GTT GAT CTA GCA ATT TTT TCT TTA CAT CTA GCC GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTC ATT ACA ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACC TTT GAC CGA ATA CCT TTA TTT GTT TGA TCA GTA
GTG ATT ACA GCT TTA CTT TTA TTA CTT TCT TTA CCT GTC CTT GCT GGA GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAC CCG GCG GGA GGA GGA GAC CCT ATT CTA TAC CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCA GAA GTT TAT ATC TTA ATT TTA CCA GGG TTT GGA ATA ATC TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGA ATA ATT TAT GCA ATA CTA GCA ATT GGA CTT TTA GGT TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGG ATA GAT GTA GAC ACT CGA GCT TAT TTC ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGC TGA CTT GCT ACT CTT TAC GGA ACT CAA TTA AAT TAT TCC CCC GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
TAT TAT GTA GTA GCT CAT TTT CAT TAT GTA CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGG TTT GTT CAT TGA
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TTA ACC TTT TTT CCT CAA CAT TTC TTG GGA CTT GCA GGT ATG CCA CGA CGA TAC TCT GAT TAC CCA GAT GCT TAC ACA
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AGC TTA ACA TCC CAT CGA CAA GTT ATA TTC CCA ATT CAA CTA AAT TCA TCT ATT GAA TGA CTC CAA AAT ACC CCA CCT
GC
#S._houghi_AO50_OH_(Hamilton)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT CTA TCA TCT AAT ATT
GCC CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCT CTA CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACA ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACC TTT GAT CGA ATA CCT TTA TTT GTT TGA TCA GTA
GTA ATT ACA GCT CTA CTT TTA CTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA TTA TTA ACT GAC CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCG GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA --- --A CCA GGA TTT GGA ATA ATC TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGT TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCT ACT CTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
TAC TAT GTA GTA GCT CAT TTT CAT TAT GTA CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
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TTA ACT TTT TTT CCT CAA CAT TTC CTA GGA CTT GCA GGT ATA CCA CGA CGA TAT TCT GAC TAT CCA GAT GCT TAC ACA
ACT TGA AAT GTA ATT TCA ACA ATT GGT TCA ACA ATT TCT TTA TTA GGA ATT CTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA TCG TCT CAA CGA CAA GTT ATA TTT CCA ATT CAA TTA AAC TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCT
GC
#S._idonea_AT30_MN_(Winona)_USA
TTA CTT CTA GTA AGC AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCC CCA TTA TCA TCT AAT ATT
GCC CAT GGA GGA GCT TCT GTT GAT TTA GCT ATC TTC TCT CTT CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGA ATT ACC TTT GAT CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCT CTT TTA CTA CTT CTT TCT TTA CCT GTT CTT GCT GGA GCA ATT ACT ATA TTA TTA ACA GAT CGA AAT
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ATT AAT ACT TCA TTT TTT GAT CCA GCT GGG GGA GGA GAC CCT ATT TTA TAC CAA CAT CTA TTT TGA TTT TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGT ATA ATT TAT GCA ATA CTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCT CAC CAT ATA
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AAA ATT TTT AGT TGA CTT GCC ACT CTT TAT GGA ACT CAA TTA AAC TAT TCT CCG GCC ACT TTA TGA GCT TTA GGG TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAC ATT ATT TTA CAT GAT ACA
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TAT CCC CTA TTT ACT GGA CTA ACT TTA AAT GTA AAA ATA CTA AAA AGT CAA TTC ATT ATT ATA TTT ACA GGA GTA AAT
TTA ACC TTC TTT CCT CAA CAT TTC TTA GGA CTT GCA GGA ATA CCT CGT CGA TAT TCT GAT TAT CCA GAC GCT TAC ACA
GCT TGA AAT GTA ATA TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TAC ATC ATT TGA GAA
AGT TTA ATA TCC CAA CGA CAA GTA TTA TTT CCA ATT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACC CCC CCA
GC
#S._johnsoni_AQ40_NY_(Richmond)_USA
TTA TTA CTA GTG AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCA CAT GGG GGA GCT TCT GTT GAT TTA GCT ATT TTC TCT CTT CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA CTT TTA CTT CTT TCT TTG CCT GTG CTT GCC GGA GCA ATT ACT ATA TTA TTA ACA GAT CGA AAT
ATT AAC ACT TCT TTC TTT GAC CCA GCA GGA GGA GGA GAT CCT ATT TTA TAC CAA CAT CTA T-T TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGA CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCC TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA TTA TTA GGA TTT ATT GTA TGA GCA CAT CAT ATA
TTT ACA GTT GGA ATA GAC GTA GAT ACT CGA GCA TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACC CTT TAC GGA ACT CAA TTA AAT TAT TCC CCA GCT ACA TTA TGA GCC TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGT GGA TTA ACT GGA GTT GTT TTA GCA AAT TCA TCT CTT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAC TTT CAT TAT GTT CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAC TGA
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TTA ACA TTT TTT CCT CAA CAT TTT TTA GGT CTT GCA GGA ATA CCT CGA CGT TAT TCT GAT TAC CCA GAT GCC TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGT ATT TTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GTG TCA CAA CGA CAA GTA ATA TTC CCT GTA CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCT
GC
#S._mimoris_E39_OH_(Adams)_USA
TTA CTT CTA GTA AGC AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCC CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATT TCT TCA ATT TTA GGT GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGA ATT ACT TTT GAT CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACT GCT CTT CTA TTA TTA CTT TCT TTA CCT GTT CTT GCT GGA GCA ATT ACT ATA TTA TTA ACA GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCT GCT GGA GGA GGA GAT CCT ATT TTA TAT CAA CAT TTA TTT TGA TTT TTT GGA CAT
CCT GAA GTT TAT ATT TT? ??? ??? ??? ??? ??? ??? ?TA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGT ATA ATC TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
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AAA ATT TTT AGT TGA CTT GCC ACT CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
TAC TAT GTA GTA GCT CAT TTT CAT TAC GTC CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
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TTA ACT TTC TTT CCT CAA CAT TTC TTA GGT CTT GCA GGT ATA CCT CGC CGA TAC TCT GAT TAT CCA GAT GCT TAT ACA
GCT TGA AAT GTA GTC TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGG ATC TTA TTT TTC TTT TAT ATC ATT TGA GAA
AGT TTA GCA TCC CAA CGA CAA GTA TTA TTT CCT ATT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCG CCA
GC
#S._nearctica_AS38_WI_(Marathon)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCC GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTT CAC TAT GTA CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
TAT CCC CTA TTT ACT GGA TTA ACA TTA AAT ACA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGT GTA AAT
TTA ACT TTT TTT CCA CAA CAT TTC TTA GGA CTT GCC GGT ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTC CCA ATT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCT
GC
#S._nearctica_BB67_MN_(Kittson)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCC GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT AT? GAT ATT ATT TTA CAT GAT ACA
TAT ?AT GTA GTA GCT CAT TTT CAC TAT GTA CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
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ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTC CCA ATT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCT
G-
#S._nearctica_AQ52_NY_(Richmond)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT

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GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
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TAT CCC CTA TTT ACT GGA TTA ACA TTA AAT ACA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGT GTA AAT
TTA ACT TTT TTT CCA CAA CAT TTC TTA GGA CTT GCC GGT ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTC CCA ATT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCT
GC
#S._nearctica_AQ53_AQ52_NY_(Richmond)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCC GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTT CAC TAT GTA CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
TAT CCC CTA TTT ACT GGA TTA ACA TTA AAT ACA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGT GTA AAT
TTA ACT TTT TTT CCA CAA CAT TTC TTA GGA CTT GCC GGT ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTC CCA ATT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCT
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#S._nearctica_AR21_NY_(Saratoga)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCC GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTT CAC TAT GTA CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
TAT CCC CTA TTT ACT GGA TTA ACA TTA AAT ACA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGT GTA AAT
TTA ACT TTT TTT CCA CAA CAT TTC TTA GGA CTT GCC GGT ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTC CCA ATT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCT
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#S._nearctica_AR64_WI_(Waukesha)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
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CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
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TAT CCC CTA TTT ACT GGA TTA ACA TTA AAT ACA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGT GTA AAT
TTA ACT TTT TTT CCA CAA CAT TTC TTA GGA CTT GCC GGT ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
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#S._nearctica_AR78_WI_(Waukesha)_USA
-TA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCC GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
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TAT TAT GTA GTA GCT CAT TTT CAC TAT GTA CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
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TTA ACT TTT TTT CCA CAA CAT TTC TTA GGA CTT GCC GGT ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
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#S._nearctica_AS37_WI_(Marathon)_USA
-TA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCC GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
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TTA ACT TTT TTT CCA CAA CAT TTC TTA GGA CTT GCC GGT ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
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AGT TTA GCA TCA CAA CGA CAA GTT ATA TTC CCA ATT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCT
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#S._nearctica_AU24_MN_(Koochiching)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
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ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
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#S._nearctica_AU70_NY_(Onandaga)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCC GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
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TTA ACT TTT TTT CCA CAA CAT TTC TTA GGA CTT GCC GGT ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTC CCA ATT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA A-- --- --- ---
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#S._nearctica_AH21_OR_(Douglas)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCC GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCT TTA GGA ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
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TTA ACT TTT TTT CCA CAA CAT TTC TTA GGA CTT GCC GGT ATA CCT CGA CGA TAT TCT GAT TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATC TCA ACT ATT GGG TCT ACA ATT TCT CTT TTA GGA ATT TTA TTT TTT TTC TTT ATT ATT TGA GAA
AGT TTA GCA TCA CAA CGA CAA GTT ATA TTC CCA ATT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCA CCT
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#S._nearctica_AS62_WI_(Barron)_USA
CTA CTT CTA GTA AGC AGC ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT TTA CAT TTA GCC GGA ATC TCA TCA ATT TTA GGA GCC GTA
AAT TTC ATT ACT ACA GTG ATT AAT ATA CGA TCA ACA GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCC TTA CTT TTA TTA CTT TCT TTA CCT GTA CTT GCT GGA GCA ATT ACT ATA CTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCC GGA GGA GGA GAT CCT ATT CTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAC
CCT GAA GTT TAT ATT TTA ATT TTA CCT GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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TTT ACA GTA GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACC CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
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#S._polistensis_E43_OH_(Adams)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAC ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCC CTA CAC TTA GCT GGA ATT TCT TCA ATT TTA GGA GCT GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACA TTT GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTA CTT TTA CTT CTT TCC CTG CCT GTA CTT GCT GGA GCA ATT ACT ATA TTA TTA ACT GAT CGA AAT
ATT AAC ACT TCA TTC TTT GAC CCT GCA GGA GGA GGG GAT CCA ATT TTA TAC CAA CAT TTA TTT TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCC CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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TTT ACA GTA GGA ATA GAC GTC GAT ACT CGA GCC TAT TTC ACA TCA GCA ACA ATA ATT ATT GCT GTA CCA ACA GGA ATT
AAA ATT TTT AGC TGA CTT GCC ACT CTT TAT GGA ACC CAA TTA AAT TAT TCC CCG GCC ACA CTA TGA GCT CTT GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGA CTA ACT GGA GTA GTC TTA GCT AAT TCA TCT ATT GAC ATC ATT TTA CAC GAT ACA
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#S._saraceniodes_BC36_NY_(Suffolk)_USA
TTA CTA CTA GTA AGC AGT ATA GTA GAA AAT GGG GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
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AAT TTT ATC ACC ACA GTT ATT AAT ATA CGA TCA ACT GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCT TTA CTT TTA TTA TTA TCT TTA CCT GTA CTT GCT GGA GCA ATC ACA ATA CTA CTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCC GGA TTT GGA ATA ATC TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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GTA TTT TTA TTC ACA GTA GGG GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAC GTT CTT TCT ATG GGA GCT GTA TTC GCT ATT ATA GCT GGA TTT GTT CAT TGA
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TTA ACT TTC TTT CCC CAA CAC TTC TTA GGA CTC GCA GGA ATA CCT CGA CGA TAC TCT GAT TAC CCA GAT GCT TAT ACG
GCT TGA AAT GTA ATT TCA ACT ATT GGA TCA ACT ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GCT TCC CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._sp_(female)_AV79_NY_(Niagra)_USA
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ACA TTC GGA TCA CTA GGT ATA ATT TAT GCA ATG CTA GCA ATT GGA CTT TTA GGG TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATG GAC GTA GAT ACA CGA GCT TAT TTT ACT TCA GCA ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA CTA AAT TAT TCT CCA GCT ACT TTA TGA GCT TTA GGA TTC
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAC ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAT GTA CTA TCT ATA GGA GCC GTA TTT GCT ATT ATA GCG GGA TTT GTA CAT TGA
TAC CCC CTA TTT ACT GGA TTA ACA ATA AAT ACA AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ACA GGA GTA AAT
TTA ACT TTC TTC CCA CAA CAT TTC CTG GGA CTT GCA GGA ATA CCT CGA CGA TAT TCT GAT TAT CCT GAC GCT TAC ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GCA TCC CAA CGA CAA GTA TTA TTC CCA GTT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCC CCA
GC
#S._sarracenioides_AQ49_NY_(Richmond)_USA
TTA CTA CTA GTA AGC AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGG GGA GCT TCT GTT GAC TTA GCT ATT TTT TCT CTA CAT TTA GCT GGA ATC TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATC ACC ACA GTT ATT AAT ATA CGA TCA ACT GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCT TTA CTT TTA TTA TTA TCT TTA CCT GTA CTT GCT GGA GCA ATC ACA ATA CTA CTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAT CCT GCA GGA GGA GGA GAC CCT ATT TTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCC GGA TTT GGA ATA ATC TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGT GCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA CTT TTA GGG TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCC ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGG GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
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GCT TGA AAT GTA ATT TCA ACT ATT GGA TCA ACT ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GCT TCC CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._sarracenioides_AR01_NY_(Saratoga)_USA
TTA CTA CTA GTA AGC AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGG GGA GCT TCT GTT GAC TTA GCT ATT TTT TCT CTA CAT TTA GCT GGA ATC TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATC ACC ACA GTT ATT AAT ATA CGA TCA ACT GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCT TTA CTT TTA TTA TTA TCT TTA CCT GTA CTT GCT GGA GCA ATC ACA ATA CTA CTA ACT GAT CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCC GGA TTT GGA ATA ATC TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCC ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGG GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
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AGT TTA GCT TCC CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._sarracenioides_AX80_NM_(Grant)_USA
-TA CTA CTA GTA AGC AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGG GGA GCT TCT GTT GAC TTA GCT ATT TTT TCT CTA CAT TTA GCT GGA ATC TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATC ACC ACA GTT ATT AAT ATA CGA TCA ACT GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCT TTA CTT TTA TTA TTA TCT TTG CCT GTA CTT GCT GGA GCA ATC ACA ATA CTA CTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAT CCT GCA GGA GGA GGA GAC CCT ATT TTA TAT CAA CAT TTA TTT TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCC GGA TTT GGA ATA ATC TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCT ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCT CCA GCC ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGG GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAC GTT CTT TCT ATG GGA GCT GTA TTC GCT ATT ATA GCT GGA TTT GTT CAT TGA
TAC CCT CTA TTT ACA GGA TTA ACA TTA AAT ACA AAA ATA CTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTC TTT CCC CAA CAC TTC TTA GGA CTT GCA GGA ATA CCT CGA CGA TAC TCT GAT TAC CCA GAT GCT TAT ACG
GCT TGA AAT GTA ATT TCA ACT ATT GGA TCA ACT ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTT ATT ATT TGA GAA
AGT TTA GCT TCC CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._seagoi_AL80_GA_(Rabun)_USA
TTA CTT CTA GTA AGC AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCA CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTC TCT CTT CAT TTA GCT GGA ATT TCT TCA ATT TTA GGT GCA GTA
AAT TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGA ATT ACC TTT GAT CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACT GCT CTT CTT TTA TTA CTT TCT TTA CCT GTT CTT GCT GGA GCA ATT ACT ATA TTA TTA ACA GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCT GCT GGA GGA GGA GAT CCT ATT TTA TAT CAA CAC TTA TTT TGA TTT TTT GGA CAT
CCC GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAA GAA
ACC TTC GGA TCA TTA GGT ATA ATT TAT GCA ATA TTA GCA ATT GGA CTT TTA GGA TTT ATT GTA TGA GCT CAT CAT ATA
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TTT ACA GTG GGA ATA GAT GTA GAT ACA CGA GCT TAT TTT ACA TCA GCC ACA ATA ATT ATT GCT GTT CCA ACT GGA ATT
AAA ATT TTT AGT TGA CTC GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCC TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAC ATT ATT TTA CAT GAT ACA
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TAT CCT TTG TTT ACT GGA TTA ACC TTA AAT ACA AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ACA GGA GTA AAT
TTA ACT TTC TTT CCT CAA CAT TTC TTA GGT CTT GCA GGA ATA CCT CGA CGA TAC TCT GAC TAC CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA CTA GGA ATT TTA TTT TTC TTT TAT ATC ATT TGA GAA
AGT TTA GCA TCC CAA CGA CAA GTA TTA TTC ACA ATC CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAC ACT CCA CCA
TC
#S._shermani_AH47_OR_(Crook)_USA
TTA CTA CTA GTA AGC AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAC TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATC TCC TCG ATT TTA GGA GCA GTA
AAT TTT ATT ACC ACA GTT ATT AAT ATA CGA TCA ACT GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
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CCT GAA GTT TAT ATT TTA ATT TTA CCC GGA TTT GGA ATA ATC TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCC GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCC ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAT GTT CTT TCT ATG GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
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GCT TGA AAT GTA ATT TCA ACT ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTC ATT ATT TGA GAA
AGT TTA GCT TCC CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._shermani_AH22_OR_(Douglas)_USA
TTA CTA CTA GTA AGC AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAC TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATC TCC TCG ATT TTA GGA GCA GTA
AAT TTT ATT ACC ACA GTT ATT AAT ATA CGG TCA ACT GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCT TTA CTT TTA TTA TTA TCT TTA CCT GTA CTT GCT GGA GCA ATC ACC ATA TTA TTA ACT GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCT GCG GGA GGA GGA GAT CCC ATT TTA TAC CAA CAT TTA TTT TGA TTC TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCC GGA TTT GGG ATA ATC TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGT TCA TTA GGA ATA ATC TAT GCT ATA TTA GCA ATT GGA CTT TTA GGA TTC ATT GTA TGA GCT CAT CAT ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCC GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCC ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
TAT TAT GTA GTA GCT CAT TTC CAT TAT GTT CTT TCT ATG GGA GCT GTA TTT GCT ATT ATA GCT GGA TTT GTT CAT TGA
TAC CCT TTA TTC ACA GGA TTA ACA TTA AAT ACA AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGG GTA AAT
TTA ACT TTC TTT CCT CAA CAC TTC TTA GGA CTT GCA GGT ATA CCT CGA CGA TAC TCT GAT TAC CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACT ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTC ATT ATT TGA GAA
AGT TTA GCT TCC CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCG CCA
GC
#S._shermani_AH44_OR_(Crook)_USA
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TTT ACA GTA GGA ATA GAC GTT GAT ACA CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCC GTT CCA ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCC ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTC ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCT ATT GAT ATT ATT TTA CAT GAT ACA
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TTA ACT TTC TTT CCT CAG CAC TTC TTA GGG CTT GCA GGT ATA CCT CGA CGA TAC TCT GAT TAC CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACT ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTC ATT ATT TGA GAA
AGT TTA GCT TCC CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCA CCA
GC
#S._shermani_AH48_OR_(Crook)_USA
TTA CTA CTA GTA AGC AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAC TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATC TCC TCG ATT TTA GGA GCA GTA
AAT TTT ATT ACC ACA GTT ATT AAT ATA CGG TCA ACT GGT ATT ACA TTT GAC CGA ATA CCT TTA TTT GTA TGA TCA GTA
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CCT GAA GTT TAT ATT TTA ATT TTA CCC GGA TTT GGG ATA ATC TCT CAC ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
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AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCC ACT TTA TGA GCT TTA GGA TTT
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GCT TGA AAT GTA ATT TCA ACT ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTT TTC TTC TTC ATT ATT TGA GAA
AGT TTA GCT TCC CAA CGA CAA GTT ATA TTC CCA GTT CAA CTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACA CCG CCA
GC
#S._subvicina_AP07_NY_(Chautauqua)_USA
TTA CTA CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCC CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTC TCT CTC CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATC AAT ATA CGA TCT ACA GGT ATT ACT TTT GAC CGA ATA CCT TTA TTC GTG TGA TCA GTA
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AAA ATT TTT AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA CTA AAT TAT TCT CCA GCT ACT TTA TGA GCT TTA GGA TTC
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GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
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GC
#S._subvicina_AP06_NY_(Chautauqua)_USA
TTA CTA CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCC CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTC TCT CTC CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
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GTA ATT ACA GCT TTA CTT TTA TTA CTT TCT CTG CCT GTA CTT GCC GGA GCA ATC ACT ATA TTA TTA ACT GAC CGA AAT
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CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATG ATT TCT CAT ATT ATT AGC CAA GAA TCA GGT AAA AAG GAA
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AAA ATT TTT AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA CTA AAT TAT TCT CCA GCT ACT TTA TGA GCT TTA GGA TTC
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TTA ACT TTC TTC CCA CAA CAT TTC CTG GGA CTT GCA GGA ATA CCT CGA CGA TAT TCT GAT TAT CCT GAC GCT TAC ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT CTA TTT TTC TTT TTT ATT ATT TGA GAA
AGT TTA GCA TCC CAA CGA CAA GTA TTA TTC CCA GTT CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCC CCA
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#S._subvicina_AP72_NY_(Schuyler)_USA
TTA CTA CTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCC CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTC TCT CTC CAT TTA GCT GGA ATT TCT TCA ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATC AAT ATA CGA TCT ACA GGT ATT ACT TTT GAC CGA ATA CCT TTA TTC GTG TGA TCA GTA
GTA ATT ACA GCT TTA CTT TTA TTA CTT TCT CTG CCT GTA CTT GCC GGA GCA ATC ACT ATA TTA TTA ACT GAC CGA AAT
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AAA ATT TTT AGT TGA CTT GCT ACT CTT TAC GGA ACT CAA CTA AAT TAT TCT CCA GCT ACT TTA TGA GCT TTA GGA TTC
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TAC CCC CTA TTT ACT GGA TTA ACA ATA AAT ACA AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ACA GGA GTA AAT
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#S._triplasia_AA27_FL_(Liberty)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATT TCC TCA ATT CTA GGA GCA GTA
AAT TTT ATC ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTG CTT TTA CTT CTT TCT TTA CCT GTT CTT GCT GGA GCA ATT ACT ATA TTA TTA ACA GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAT TTA TTT TGA TTT TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAC TAT GTA GTA GCT CAC TTT CAT TAT GTA CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
TAT CCT TTA TTC ACT GGA TTA ACT TTA AAT ACA AAG ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
TTA ACT TTT TTT CCT CAA CAT TTC TTA GGA CTT GCT GGA ATA CCT CGA CGT TAT TCT GAT TAT CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTC TTC TTT TTT ATT ATC TGA GAA
AGT CTA GTA TCA CAA CGA CAA GTA ATA TTT CCA GTT CAA TTA AAT TCA TCT ATT GAA TGA CTA CAA AAT ACT CCC CCA
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#S._triplasia_AL10_GA_(Rabun)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATT TCC TCA ATT CTA GGA GCA GTA
AAT TTT ATC ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTG CTT TTA CTT CTT TCT TTA CCT GTT CTT GCT GGA GCA ATT ACT ATA TTA TTA ACA GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAT TTA TTT TGA TTT TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAT ACA
TAC TAT GTA GTA GCT CAC TTT CAT TAT GTA CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTT CAT TGA
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TTA ACT TTT TTT CCT CAA CAT TTC TTA GGA CTT GCT GGA ATA CCT CGA CGT TAT TCT GAT TAT CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTC TTC TTT TTT ATT ATC TGA GAA
AGT CTA GTA TCA CAA CGA CAA GTA ATA TTT CCA GTT CAA TTA AAT TCA TCT ATT GAA TGA CTA CAA AAT ACT CCC CCA
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#S._triplasia_E27_OH_(Hocking)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAC CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCT GGA ATT TCC TCA ATT CTA GGA GCA GTA
AAT TTT ATC ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTC GAT CGA ATA CCT TTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT TTG CTT TTA CTT CTT TCT TTA CCT GTT CTT GCT GGA GCA ATT ACT ATA TTA TTA ACA GAT CGA AAT
ATT AAT ACT TCA TTT TTT GAT CCA GCA GGA GGA GGA GAT CCT ATT TTA TAT CAA CAT TTA TTT TGA TTT TTT GGA CAT
CCT GAA GTT TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGT CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGG TCA TTA GGA ATA ATT TAT GCT ATA TTA GCA ATT GGA TTA TTA GGA TTT ATT GTA TGA GCT CAC CAT ATA
TTT ACA GTA GGA ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTT TAT GGA ACT CAA TTA AAT TAT TCC CCA GCT ACT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAT ACA
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TTA ACT TTT TTT CCT CAA CAT TTC TTA GGA CTT GCT GGA ATA CCT CGA CGT TAT TCT GAT TAT CCA GAT GCT TAT ACA
GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA TTA GGA ATT TTA TTC TTC TTT TTT ATT ATC TGA GAA
AGT CTA GTA TCA CAA CGA CAA GTA ATA TTT CCA GTT CAA TTA AAT TCA TCT ATT GAA TGA CTA CAA AAT ACT CCC CCA
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#S._utilis_E42_OH_(Adams)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAT CCT CCT TTA TCA TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCC TCA ATT TTA GGG GCA GTA
AAC TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAC CGA ATA CCT CTA TTT GTT TGA TCT GTA
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ACA TTT GGA TCC TTA GGA ATA ATT TAT GCA ATA CTA GCA ATT GGA TTA TTA GGA TTT ATT GTA TGA GCC CAC CAT ATA
TTT ACA GTT GGT ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACT CAA TTA AAT TAT TCT CCG GCT ACA TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACA GTA GGA GGA TTA ACT GGA GTT GTT TTA GCT AAT TCA TCA ATT GAT ATT ATT TTA CAT GAC ACA
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TAT TAT GTA GTA GCT CAT TTT CAT TAT GTC CTT TCT ATA GGA GCT GTA TTT GCT ATT ATA GCA GGA TTT GTA CAC TGA
TAC CCT TTA TTT ACA GGA TTA ACA TTA AAT ACA AAA ATA TTA AAA AGT CAA TTT ACT ATT ATA TTT ATA GGA GTA AAT
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GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATC TGA GAA
AGT TTA GTA TCA CAA CGA CAA GTA ATA TTT CCA GTA CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCC CCA
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#S._utilis_AE22_SC_(Newberry)_USA
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AAC TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAC CGA ATA CCT CTA TTT GTT TGA TCT GTA
GTA ATT ACA GCT CTA CTT TTA CTC CTT TCT TTA CCG GTA CTT GCT GGA GCT ATT ACT ATA TTA CTA ACA GAT CGA AAT
ATT AAT ACT TCA TTC TTT GAC CCA GCT GGA GGA GGA GAT CCT ATT TTA TAC CAA CAC TTA TTC TGA TTC TTT GGA CAC
CCC GAA GTT TAT ATT TTA ATT TTA CCG GGA TTT GGA ATA ATT TCC CAT ATT ATT AGA CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCC TTA GGA ATA ATT TAT GCA ATA CTA GCA ATT GGA TTA TTA GGA TTT ATT GTA TGA GCC CAC CAT ATA
TTT ACA GTT GGT ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACT CAA TTA AAT TAT TCT CCG GCT ACA TTA TGA GCT TTA GGA TTT
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TTA ACA TTC TTT CCT CAA CAT TTT TTA GGG CTT GCA GGA ATA CCT CGA CGT TAT TCT GAT TAC CCA GAT GCT TAT ACA
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#S._utilis_AE24_SC_(Newberry)_USA
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GCT CAT GGA GGA GCT TCT GTT GAT TTA GCT ATT TTT TCT CTT CAC TTA GCT GGA ATT TCC TCA ATT TTA GGA GCA GTA
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CCC GAA GTT TAT ATT TTA ATT TTA CCG GGA TTT GGA ATA ATT TCC CAT ATT ATT AGA CAA GAA TCA GGT AAA AAG GAA
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AGT TTA GTA TCA CAA CGA CAA GTA ATA TTT CCA GTA CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT A-- --- ---
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#S._utilis_AE23_SC_(Newberry)_USA
TTA CTT CTA GTA AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGT TGA ACT GTT TAT CCT CCT TTA TCA TCT AAT ATC
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GTA ATT ACA GCT CTA CTT TTA CTC CTT TCT TTA CCG GTA CTT GCT GGA GCT ATT ACT ATA TTA CTA ACA GAT CGA AAT
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CCC GAA GTT TAT ATT TTA ATT TTA CCG GGA TTT GGA ATA ATT TCC CAT ATT ATT AGA CAA GAA TCA GGT AAA AAG GAA
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TTT ACA GTT GGT ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCA GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACT CAA TTA AAC TAT TCT CCG GCT ACA TTA TGA GCT TTA GGA TTT
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GC
#S._utilis_AT19_WI_(Douglas)_USA
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AAC TTT ATT ACT ACA GTT ATT AAT ATA CGA TCT ACA GGT ATT ACT TTT GAC CGA ATA CCT CTA TTT GTT TGA TCT GTA
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CCC GAA GTT TAT ATT TTA ATT TTA CCG GGA TTT GGA ATA ATT TCC CAT ATT ATT AGA CAA GAA TCA GGT AAA AAG GAA
ACA TTT GGA TCC TTA GGA ATA ATT TAT GCA ATA CTA GCA ATT GGA TTA TTA GGA TTC ATT GTA TGA GCC CAC CAT ATA
TTT ACA GTT GGT ATA GAT GTA GAT ACT CGA GCT TAT TTT ACA TCG GCA ACA ATA ATT ATT GCT GTT CCT ACA GGA ATT
AAA ATT TTT AGT TGA CTT GCT ACT CTA TAT GGA ACT CAA TTA AAT TAT TCT CCG GCT ACA TTA TGA GCT TTA GGA TTT
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GCT TGA AAT GTA ATT TCA ACA ATT GGA TCA ACA ATT TCT TTA CTA GGA ATT TTA TTT TTC TTT TTC ATT ATC TGA GAA
AGT TTA GTA TCA CAA CGA CAA GTA ATA TTT CCA GTA CAA TTA AAT TCA TCT ATT GAA TGA CTT CAA AAT ACT CCC CCA
GC
#Sb._flavipalpis_AV21_NY_(Onondaga)_USA
TTA TTA CTA GTA AGT AGA ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTA TAT CCT CCT TTA TCA TCT AAT ATT
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTC TCT CTT CAT TTA GCA GGA ATT TCT TCT ATT TTA GGA GCA GTA
AAT TTT ATT ACT ACA GTT ATC AAT ATA CGA TCT ACA GGT ATT ACA TTT GAT CGA ATA CCA TTA TTT GTT TGA TCT GTA
GTA ATT ACT GCT CTA TTA TTA CTT CTT TCT TTA CCA GTA CTT GCT GGA GCT ATT ACT ATA CTT TTA ACT GAT CGA AAT
ATT AAT ACT TCT TTC TTT GAT CCA GCA GGA GGA GGA GAC CCA ATT TTA TAC CAA CAC TTA TTC TGA TTC TTC GGA CAT
CCT GAA GTG TAT ATT TTA ATT TTA CCA GGA TTT GGA ATA ATT TCT CAT ATT ATT AGC CAA GAA TCA GGA AAA AAG GAA
ACA TTT GGA TCT CTT GGA ATA ATT TAT GCT ATA TTA GCA ATT GGT CTT TTA GGT TTT ATT GTT TGA GCT CAT CAT ATA
TTT ACT GTA GGA ATA GAC GTA GAC ACA CGA GCT TAT TTC ACT TCT GCT ACT ATA ATT ATT GCT GTC CCA ACA GGA ATT
AAA ATT TTC AGT TGA TTA GCT ACT CTT TAC GGT ACC CAA CTT AAT TAT TCT CCA GCA ATT TTA TGA GCT TTA GGA TTT
GTA TTT TTA TTT ACT GTA GGA GGT CTT ACA GGA GTA GTT TTA GCT AAT TCT TCA GTT GAT ATT ATT TTA CAC GAT ACT
TAT TAT GTC GTA GCT CAC TTT CAC TAT GTT CTT TCT ATA GGA GCA GTA TTT GCA ATT ATA GCA GGA TTT GTT CAT TGA
TAC CCT TTA TTT ACT GGT TTA ACA TTA AAT ACA AAA ATA CTA AAA AGT CAA TTT ATT ATT ATA TTT ATA GGA GTA AAT
TTA ACC TTT TTC CCA CAA CAT TTC TTA GGA CTT GCT GGA ATA CCA CGT CGT TAC TCT GAT TAC CCA GAT GCT TAT ACA
ACT TGA AAT GTT GTT TCA ACT ATT GGA TCA ACA ATT TCT TTA CTA GGA ATT TTA TTT TTC TTT TAT ATT ATT TGA GAA
AGT TTA ATT TCT CAA CGA CAA GTT ATA TTC CCA GCA CAA TTA AAT TCA TCA ATT GAA TGA CTT CAA AAT ACT CCC CCA
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#Ti._alata_AC25_FL_(Sarasota)_USA
TTA TTA TTA GTT AGT AGT ATA GTA GAA AAT GGA GCT GGA ACA GGA TGA ACT GTT TAT CCT CCC TTA TCT TCT AAT ATT
GCT CAT GGA GGA GCT TCC GTT GAT TTA GCT ATT TTT TCT CTT CAT TTA GCA GGA ATC TCT TCA ATT TTA GGG GCA GTA
AAT TTT ATT ACA ACA GTA ATC AAT ATG CGA TCT ACA GGA ATT ACT TTT GAT CGT ATA CCT TTA TTT GTA TGA TCA GTA
GTA ATT ACA GCT TTA TTA TTA CTT CTT TCT TTA CCC GTA TTA GCT GGA GCC ATT ACT ATA CTT TTA ACA GAC CGA AAT
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CTA TTA TTA GTA AGC AGT ATA GTA GAA AAT GGA GCC GGG ACC GGA TGA ACT GTT TAC CCT CCT TTA TCT TCT AAT ATC
GCT CAT GGA GGA GCT TCT GTT GAT TTA GCA ATT TTT TCA CTT CAC TTA GCA GGA ATT TCT TCA ATT TTA GGT GCT GTA
AAC TTT ATT ACA ACA GTT ATT AAT ATA CGA TCT ACA GGA ATT ACT TTT GAT CGA ATA CCT TTA TTT GTT TGA TCA GTA
GTA ATT ACT GCT TTA CTA TTA CTC CTT TCT CTT CCA GTT CTT GCC GGA GCA ATT ACT ATA CTA TTA ACT GAC CGA AAT
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CCT GAA GTT TAC ATT TTA ATT TTA CCG GGA TTC GGA ATA ATT TCC CAC ATT ATT AGA CAA GAA TCA GGA AAA AAG GAA
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TTC ACT GTA GGA ATA GAC GTT GAT ACT CGG GCT TAT TTT ACT TCA GCT ACA ATA ATT ATT GCT GTG CCA ACT GGT ATT
AAA ATT TTT AGT TGA TTA GCT ACT CTT TAC GGA ACA CAA CTA AAT TAC TCA CCA GCC ACA TTA TGA GCC TTA GGG TTT
GTA TTT TTA TTC ACA GTA GGA GGA CTA ACA GGA GTA GTT TTA GCT AAT TCT TCT ATT GAT ATT ATT CTT CAT GAC ACT
TAT TAT GTA GTT GCT CAT TTC CAC TAT GTA CTT TCA ATA GGA GCT GTA TTT GCA ATT ATA GCT GGA TTC GTA CAT TGA
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TTA ACC TTT TTC CCT CAA CAT TTT CTT GGA CTT GCA GGA ATA CCT CGA CGA TAC TCA GAC TAT CCA GAT GCT TAT ACA
ACT TGA AAT GTA ATT TCT ACA ATT GGA TCT ACA ATC TCT CTT TTA GGA ATT CTA TTT TTC TTT TAT ATT ATT TGA GAA
AGC TTG GTG ACC CAA CGA CAA GTT ATA TAC CCT GTA CAA TTA AAC TCA TCA ATT GAA TGA TTC CAG AAT ACT CCA CCT
GC
#W._vigil_AE56_CA_(Glenn)_USA
TTA TTA TTA GTA AGT AGT ATA GTA GAA AAC GGA GCT GGA ACT GGT TGA ACT GTT TAC CCT CCA CTT TCA GCT AAT ATT
GCT CAT AGA GGA GCT TCT GTA GAT TTA GCA ATC TTC TCT CTT CAT TTG GCT GGA ATT TCT TCT ATT TTA GGG GCT GTA
AAT TTT ATT ACA ACT GTT ATT AAT ATA CGG TCA GCA GGA ATT ACA TTT GAT CGA ATA CCT CTA TTT GTT TGA TCT GTA
GTG ATT ACT GCT TTA TTA CTT CTT CTA TCC TTA CCT GTA TTA GCT GGA GCA ATC ACT ATA CTT TTA ACA GAT CGA AAT
CTT AAT ACT TCC TTT TTT GAC CCC GCA GGT GGA GGA GAT CCT ATT CTT TAT CAA CAT TTA TTT TGA TTT TTT GGA CAC
CCA GAA GTT TAT ATT TTA TTT CTA CCT GGA TTT GGT ATA ATT TCA CAC ATT ATT AGT CAA GAA TCA GGA AAA AAG GAA
ACT TTT GGT GCW TTW RGA AWW ATC TAT GCC ATA TTA GCT ATT GGT TTA TTA GGG TTT ATT GTA TGA GCA CAC CAC ATA
TTT ACA GTA GGA ATA GAC GTT GAT ACT CGA GCT TAT TTT ACT TCA GCA ACT ATA ATT ATT GCT GTT CCA ACA GGA ATT
AAA ATT TTC AGT TGA TTA GCC ACT CTT TAC GGT ACA CAA TTA AAT TAT TCC CCA GCT ATT CTT TGA GCT TTA GGA TTT
GTA TTC TTA TTT ACA GTA GGA GGA CTA ACA GGA GTA ATT CTT GCT AAT TCT TCA ATT GAT ATT ATT CTT CAT GAT ACT
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AGT TTA ATT TCT CAA CGT CAA GTT CTA TTT CCA ATC CAA TTA AAT TCA TCA ATT GAA TGA CTT CAA AAT ACA CCT CCT
GC
```

Table 11. Average Tamura-Nei-corrected distances within and between the groups indicated.

Average Intra-specific Distances	
L. cluvia	0.9%
L. coeruleiviridis	0.4%
L. cuprina	0.1%
L. illustris	0.5%
L. mexicana (NM and TX)	0.9%
L. mexicana (CA)	0.2%
L. sericata	0.1%
L. silvarum	0.3%

Average Inter-group Distances	
L. mexicana: CA vs. NM+TX	5.0%
L. cuprina vs. L. sericata	1.1%

3. **Figures:** The figure(s) is clearly designed and accurately describes a relevant aspect of the results. Figures should include a title as well as a legend that concisely conveys the content displayed in the figure.

Fig. 1. Bootstrap support for ME analysis for *L. cuprina* and *L. sericata*, based on 600bp windows of the COI-COII region.

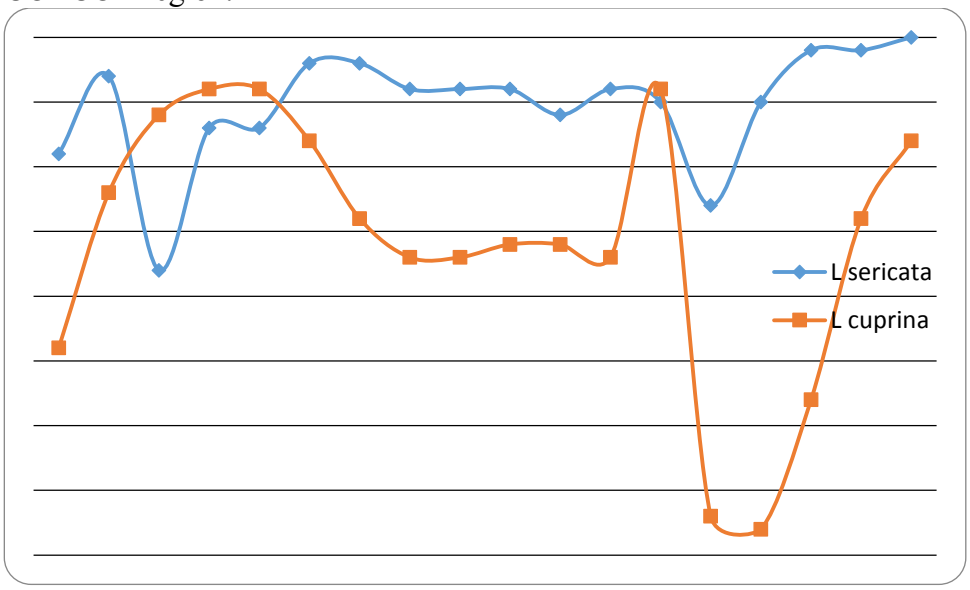
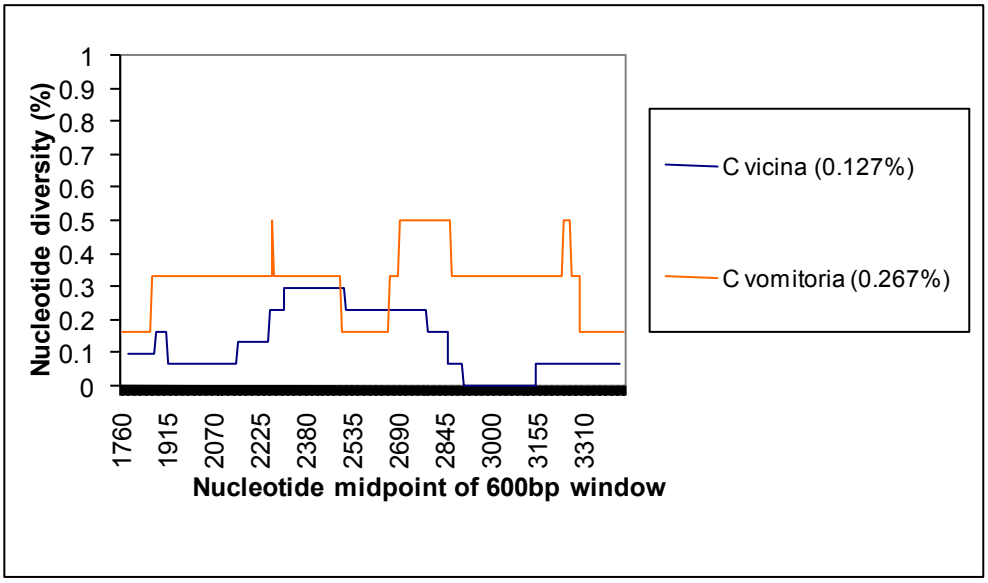
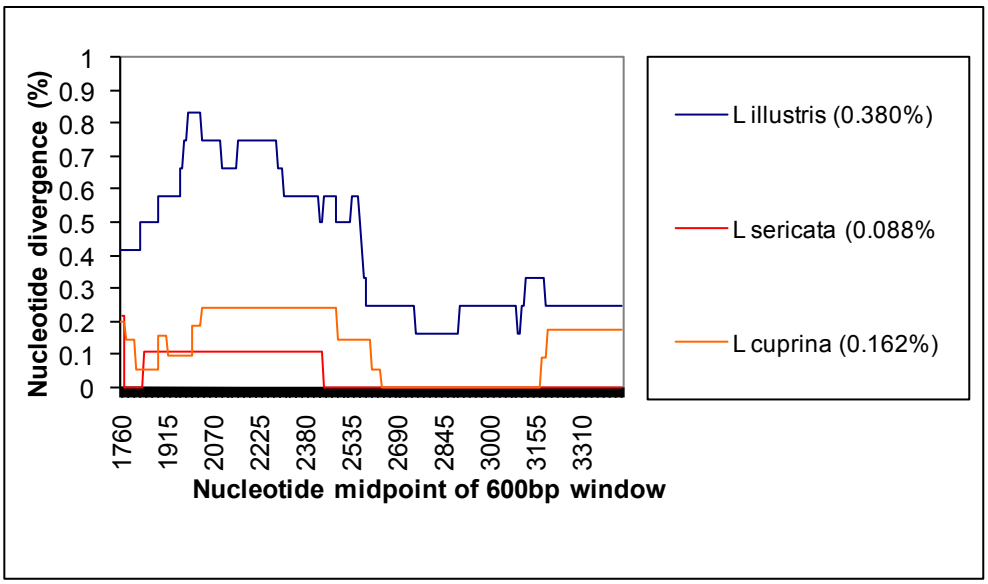
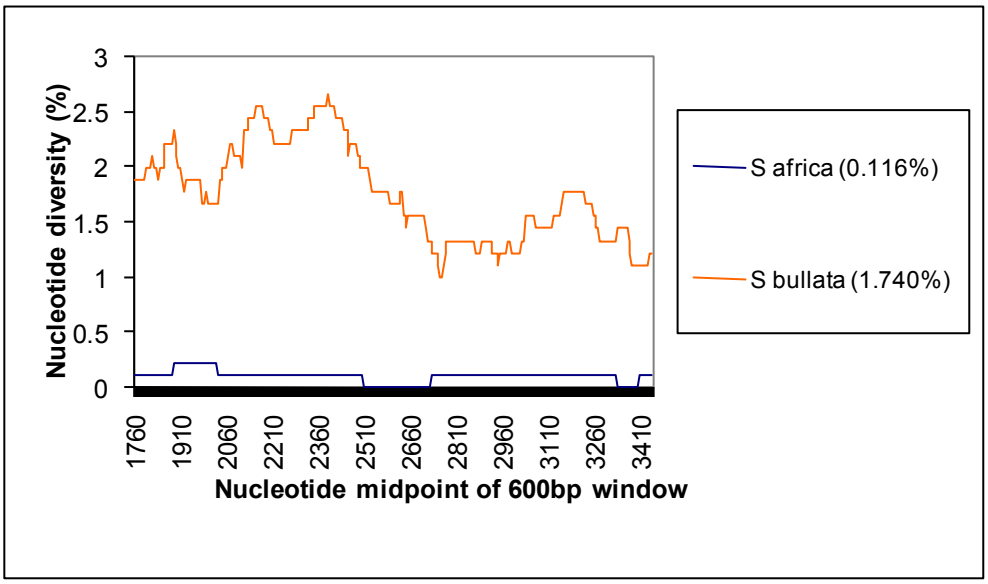


Fig 2. Sliding window profiles (600bp window) of COI-COII intraspecific nucleotide diversity.







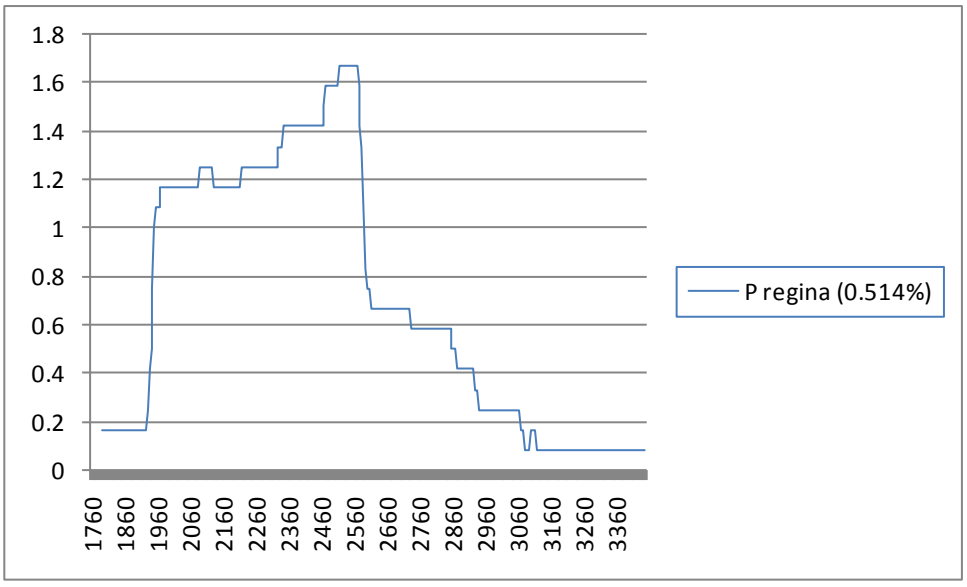


Fig. 3. Sliding window (600bp) analysis for five species pairs, based on analysis of the COI-COII region.

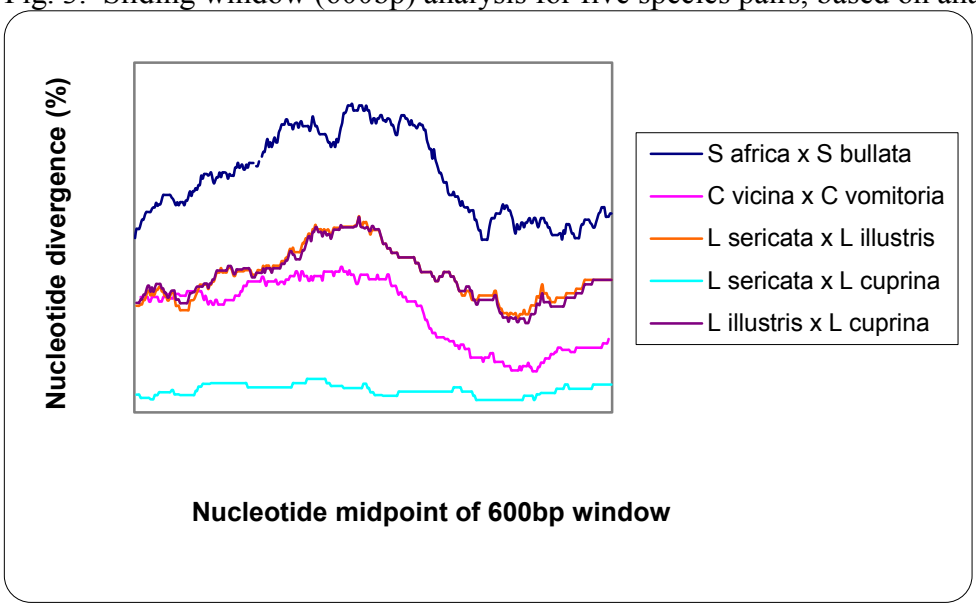


Fig. 4. Sliding window profile of mean relative divergence and ±1SD for all 5 sister pairs for the COI-II region.

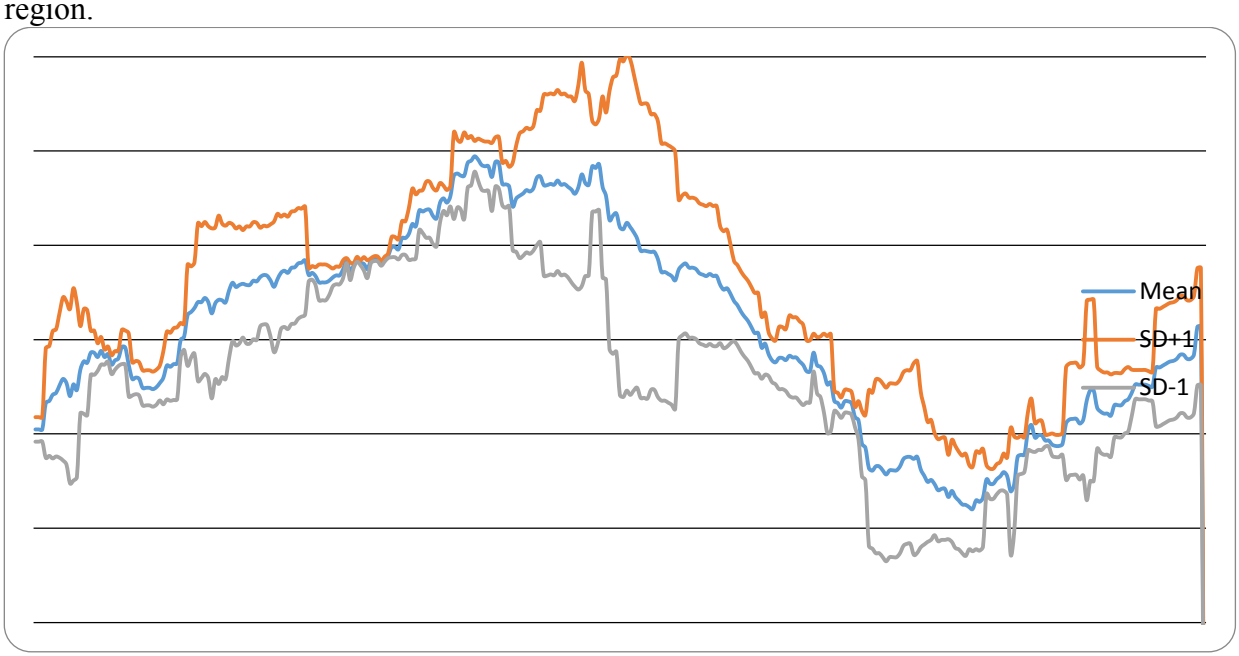


Fig. 5. ME tree based on 3 concatenated DNA sequences of the COI, COII and ND4 genes.

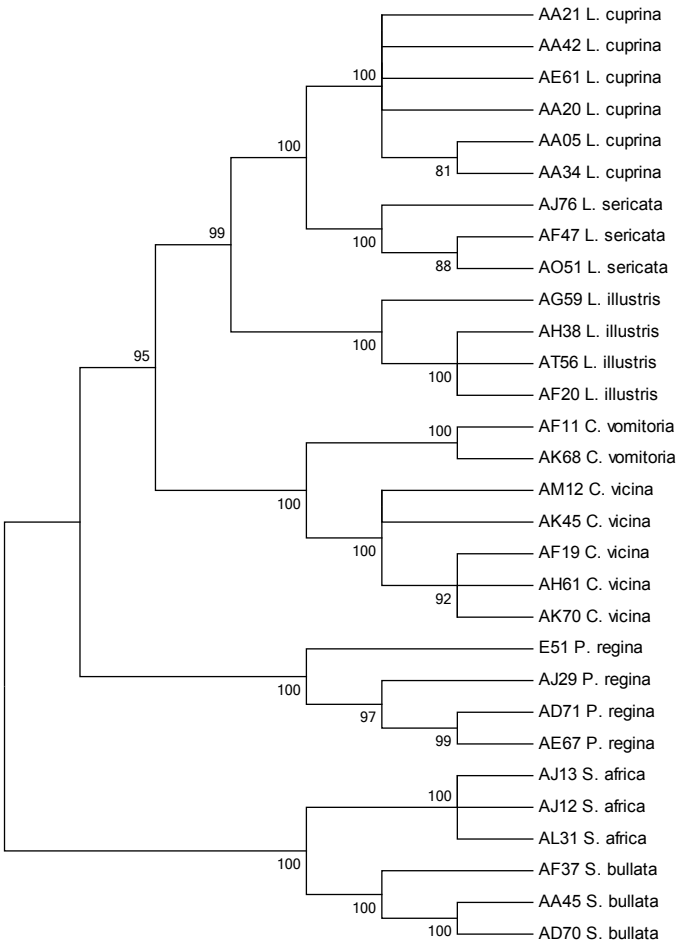


Fig. 6. Number of informative characters in the COI-COII region calculated for each adjacent 200bp window.

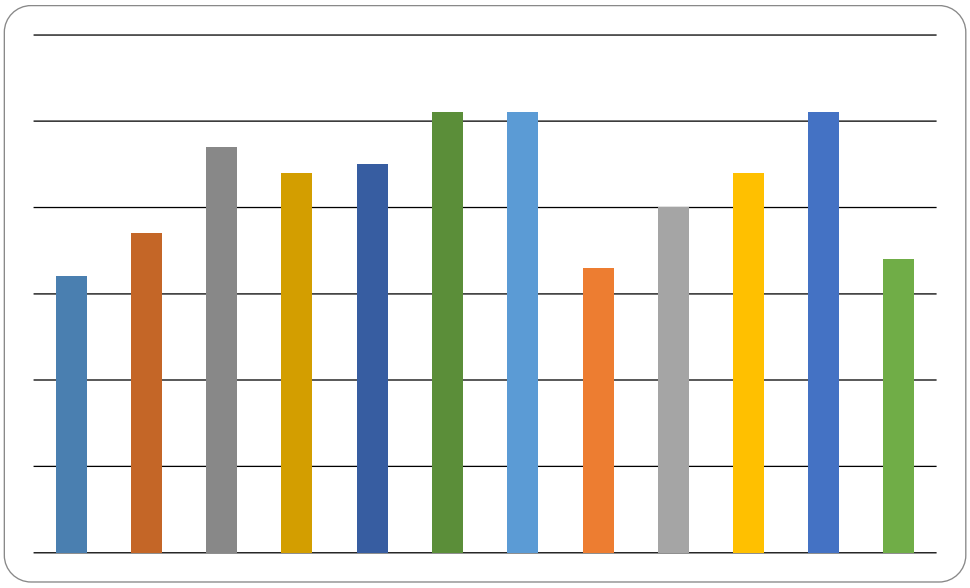


Fig. 7. Mean relative divergence for fragments of increasing length for concatenated DNA sequences of the COI, COII and ND4 genes starting at either the 5' end of COI, the midpoint of COI, COII and ND4 or the 5' end of ND4.

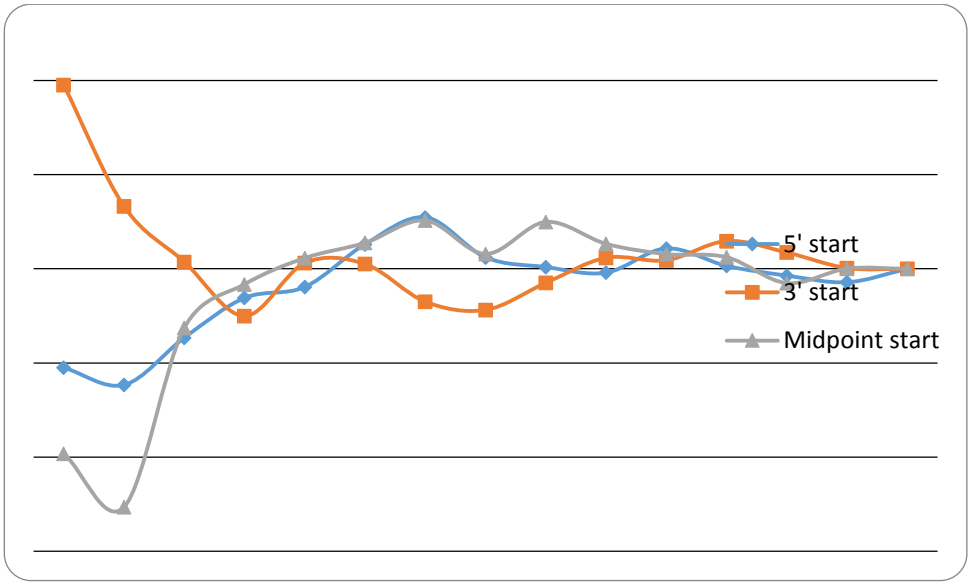


Fig. 8. ME tree based on a 200bp fragment at the 5' end of the COI gene.

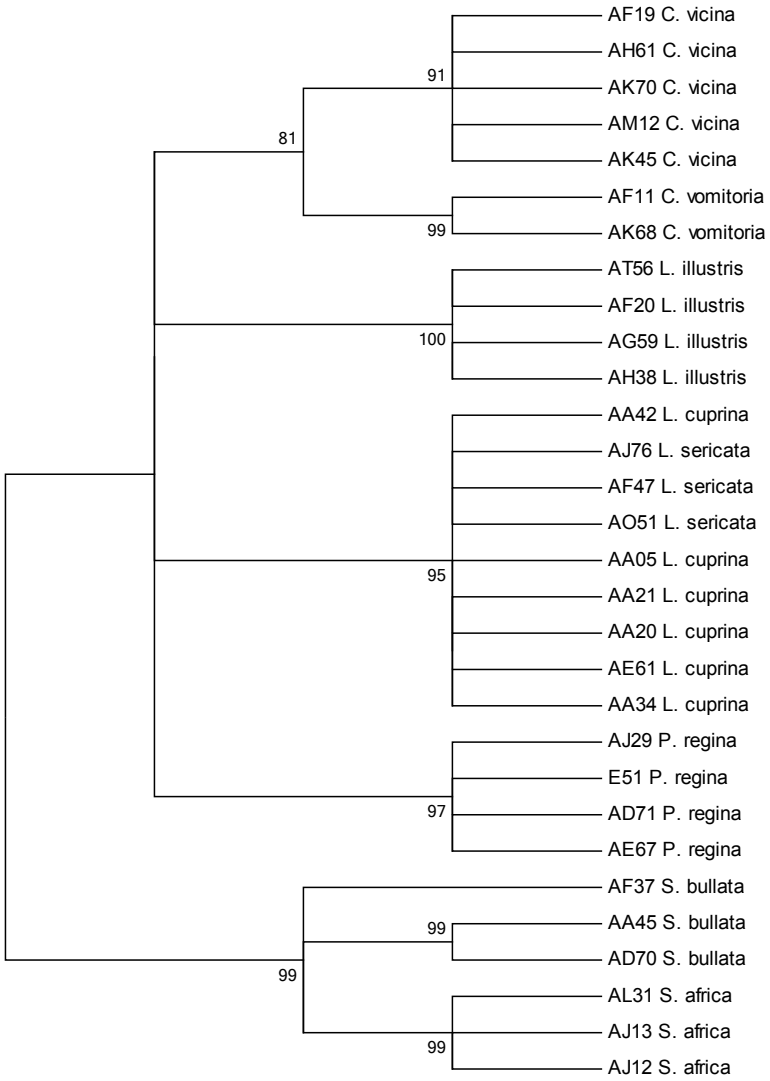


Fig. 9. Bootstrap support for increasing fragment length of *L. cuprina*.

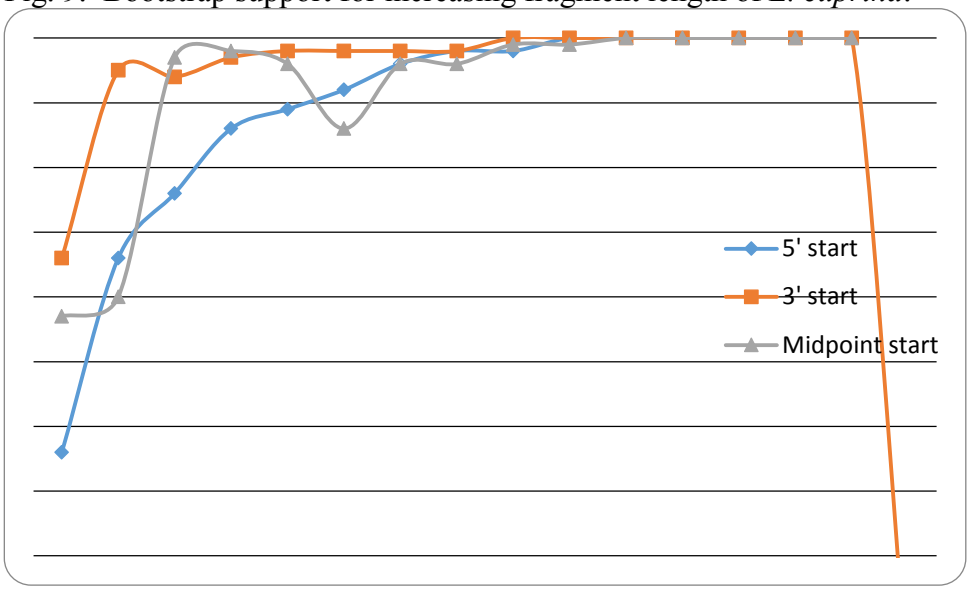


Fig. 10 ME phylogenetic analysis of the reference database. (Note: this is the largest that Word will allow for the figure. A larger sized PDF version will be uploaded as an Appendix)

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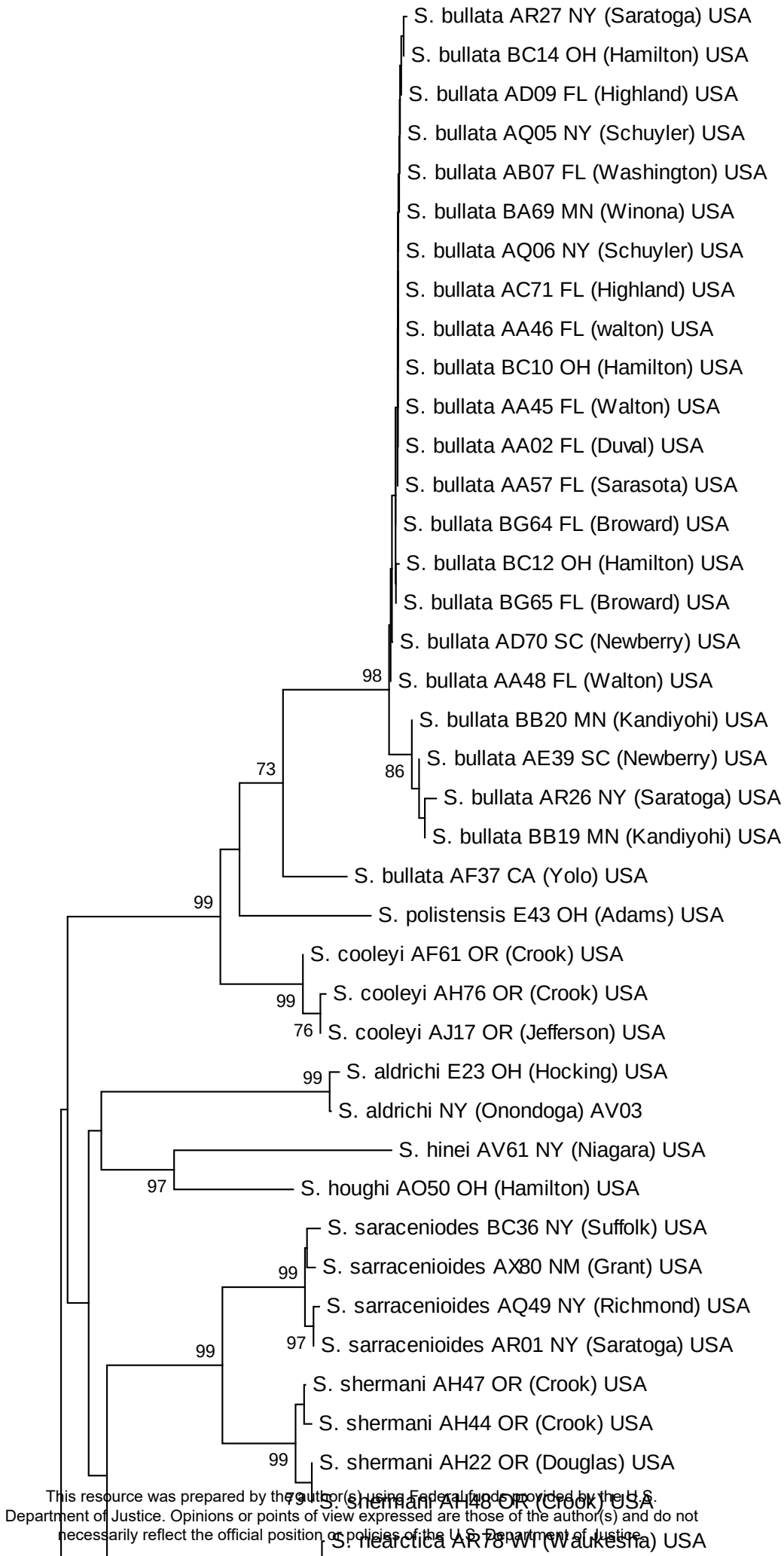

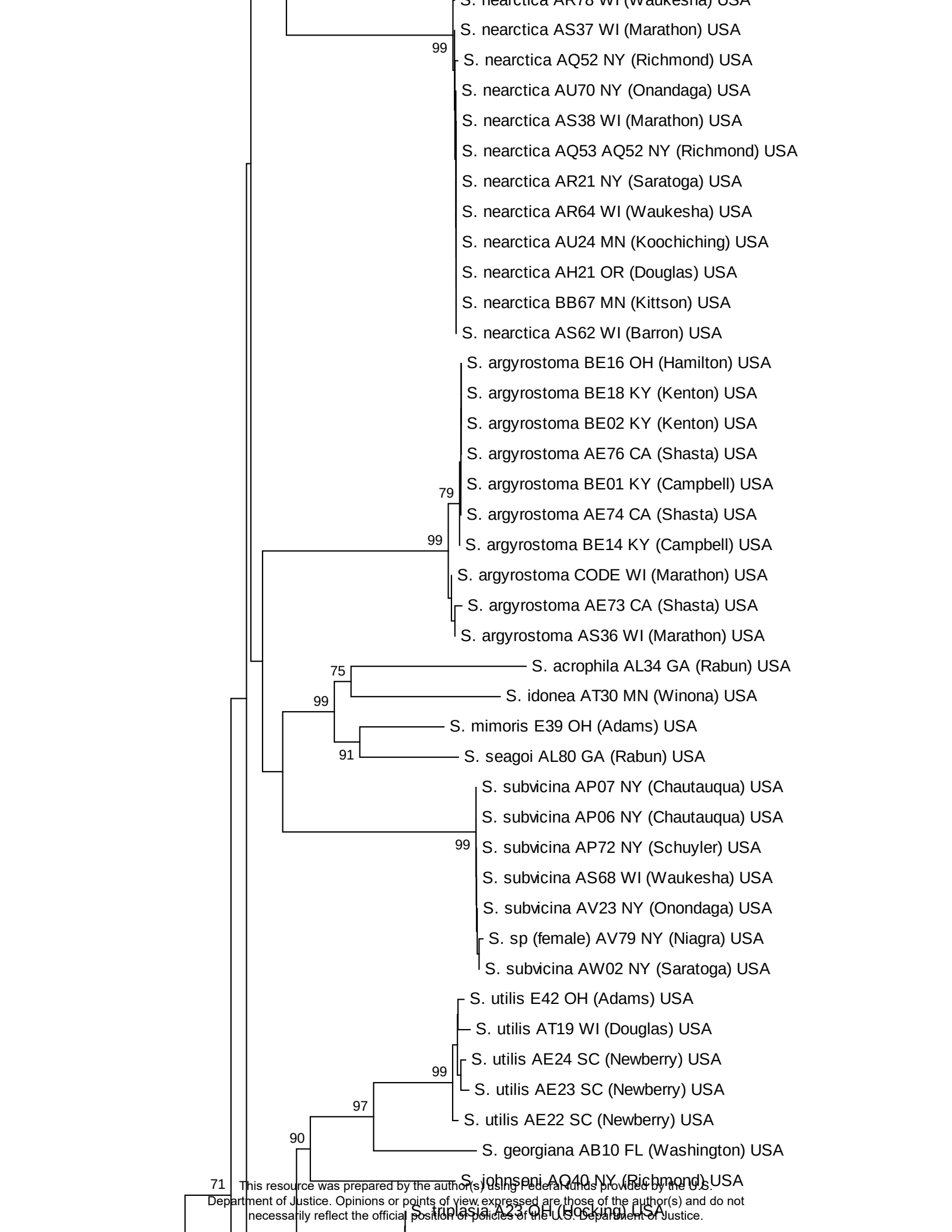

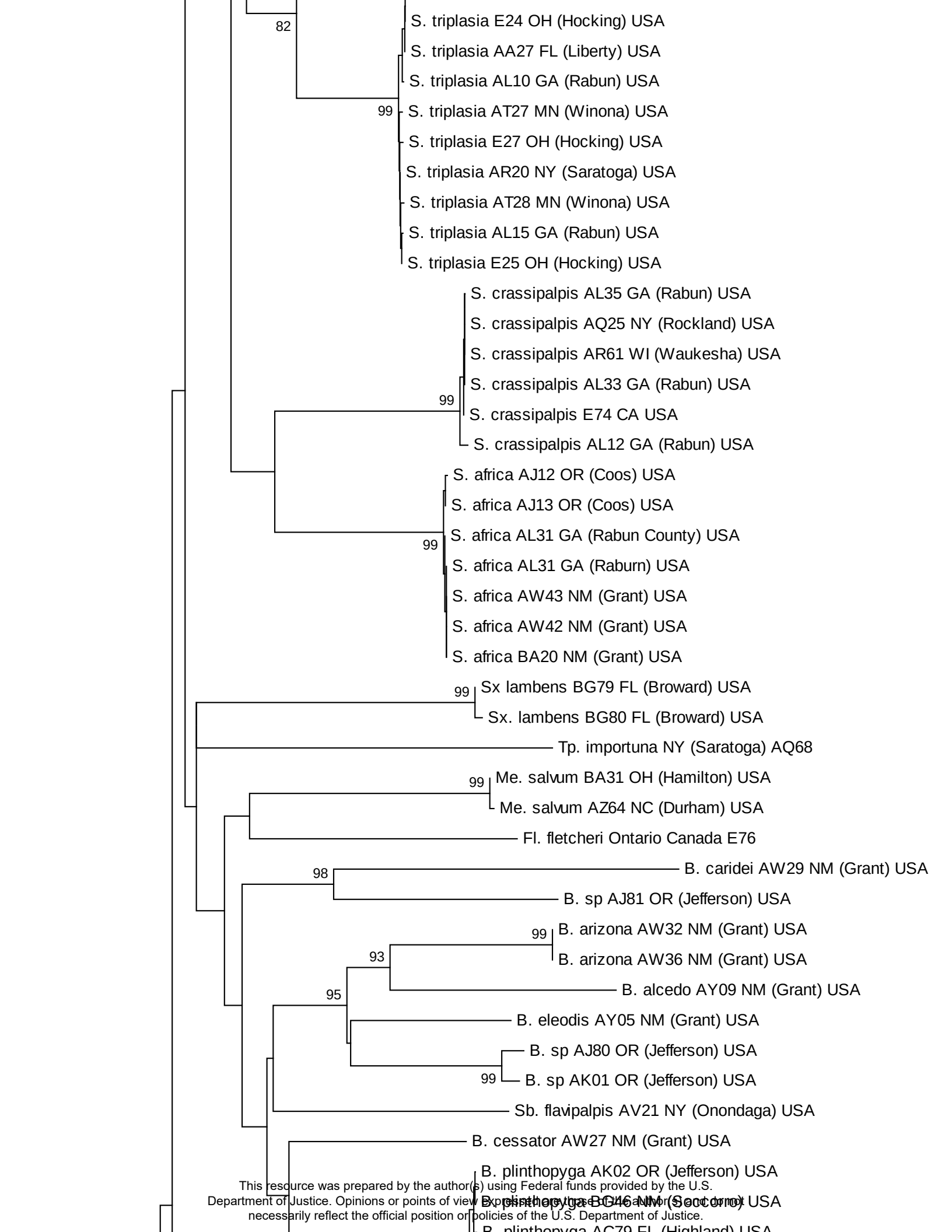

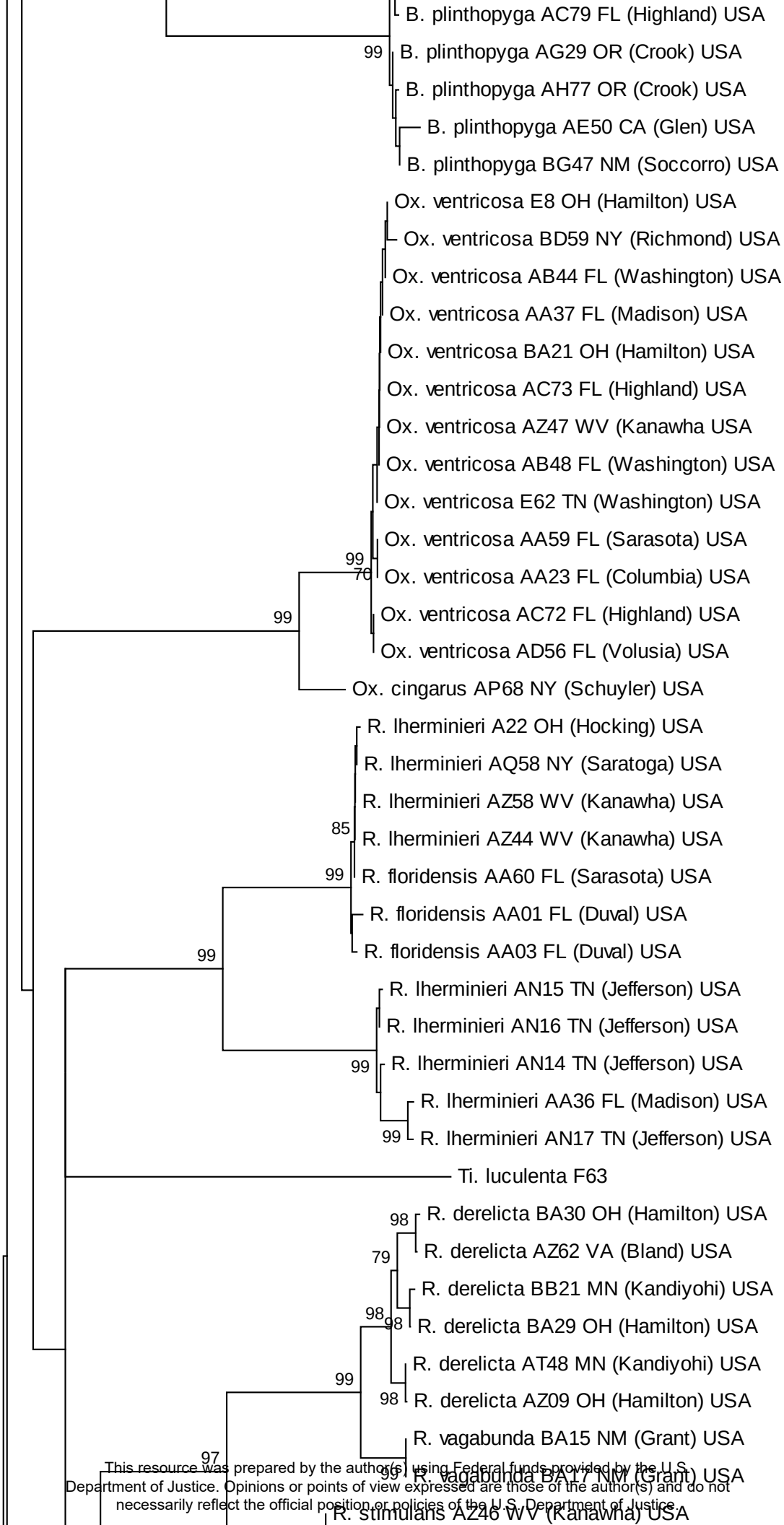

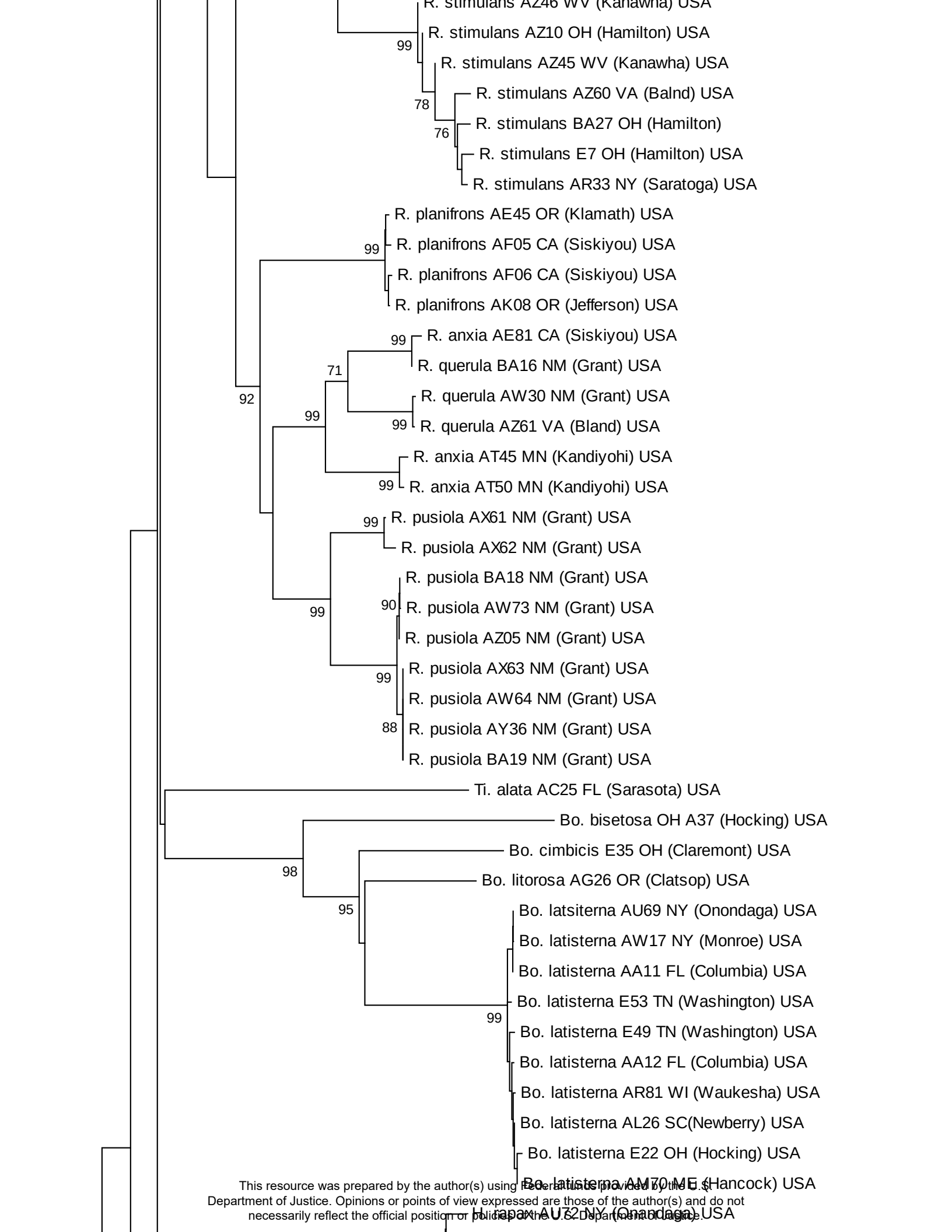

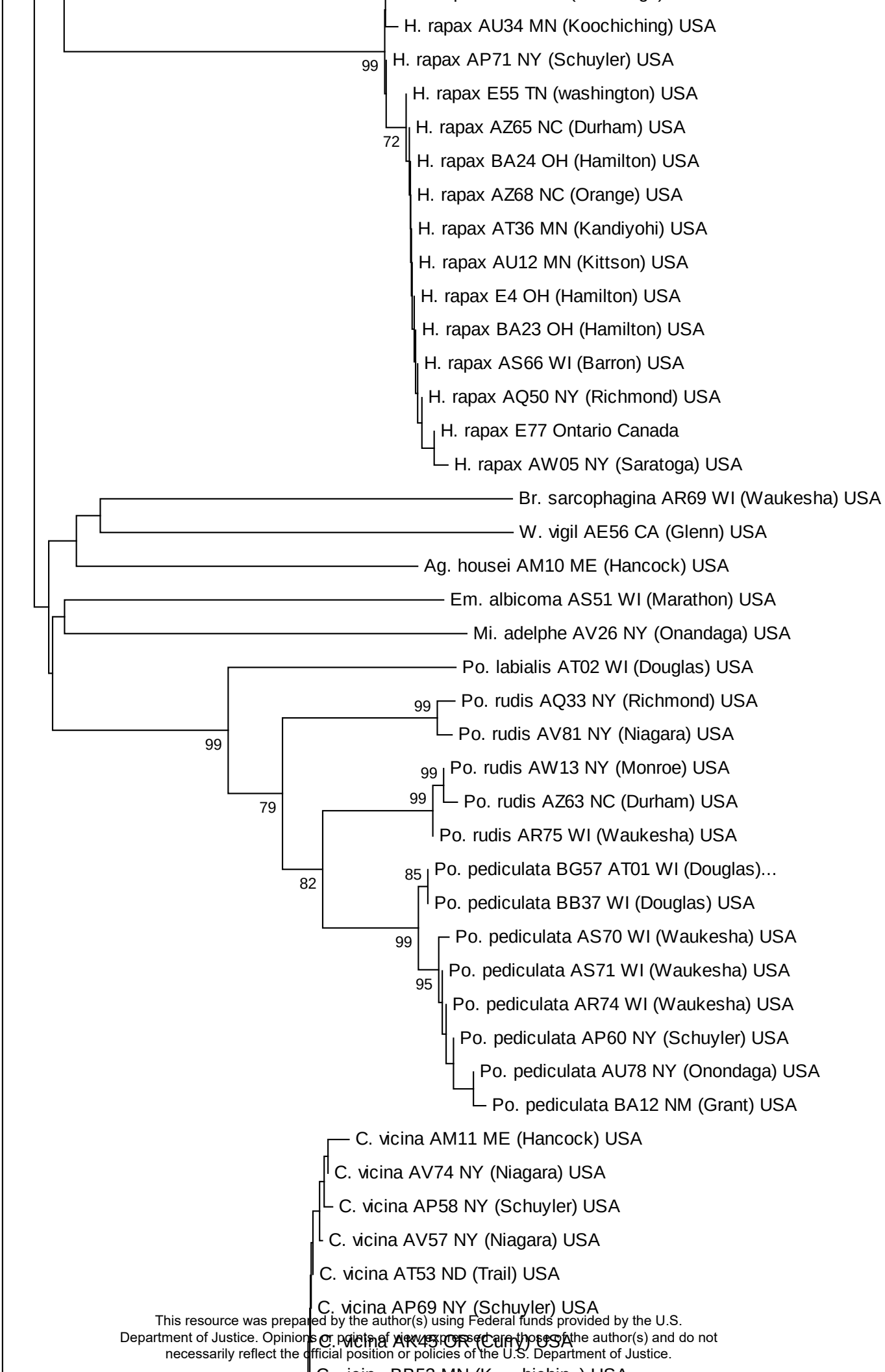

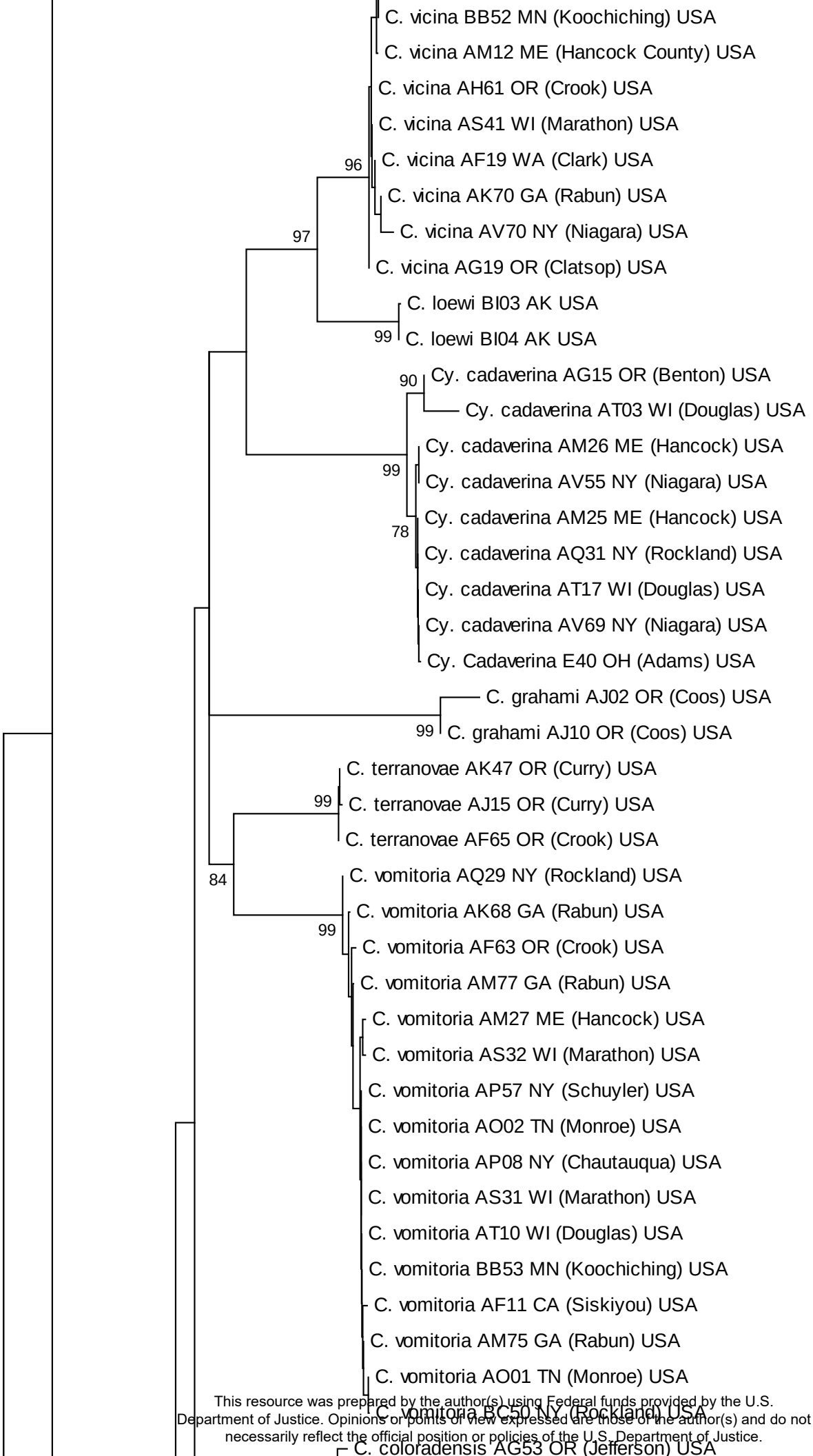

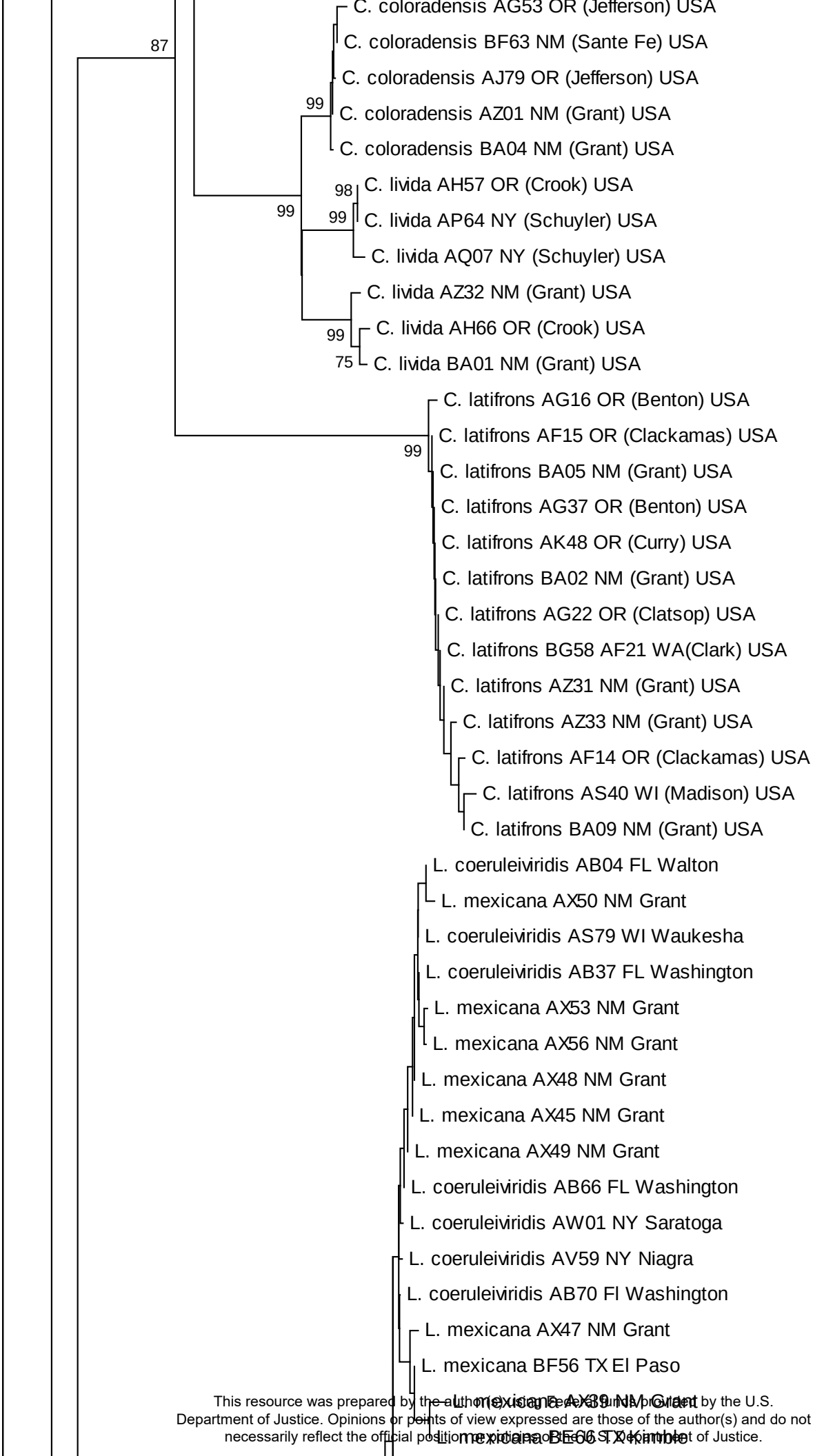

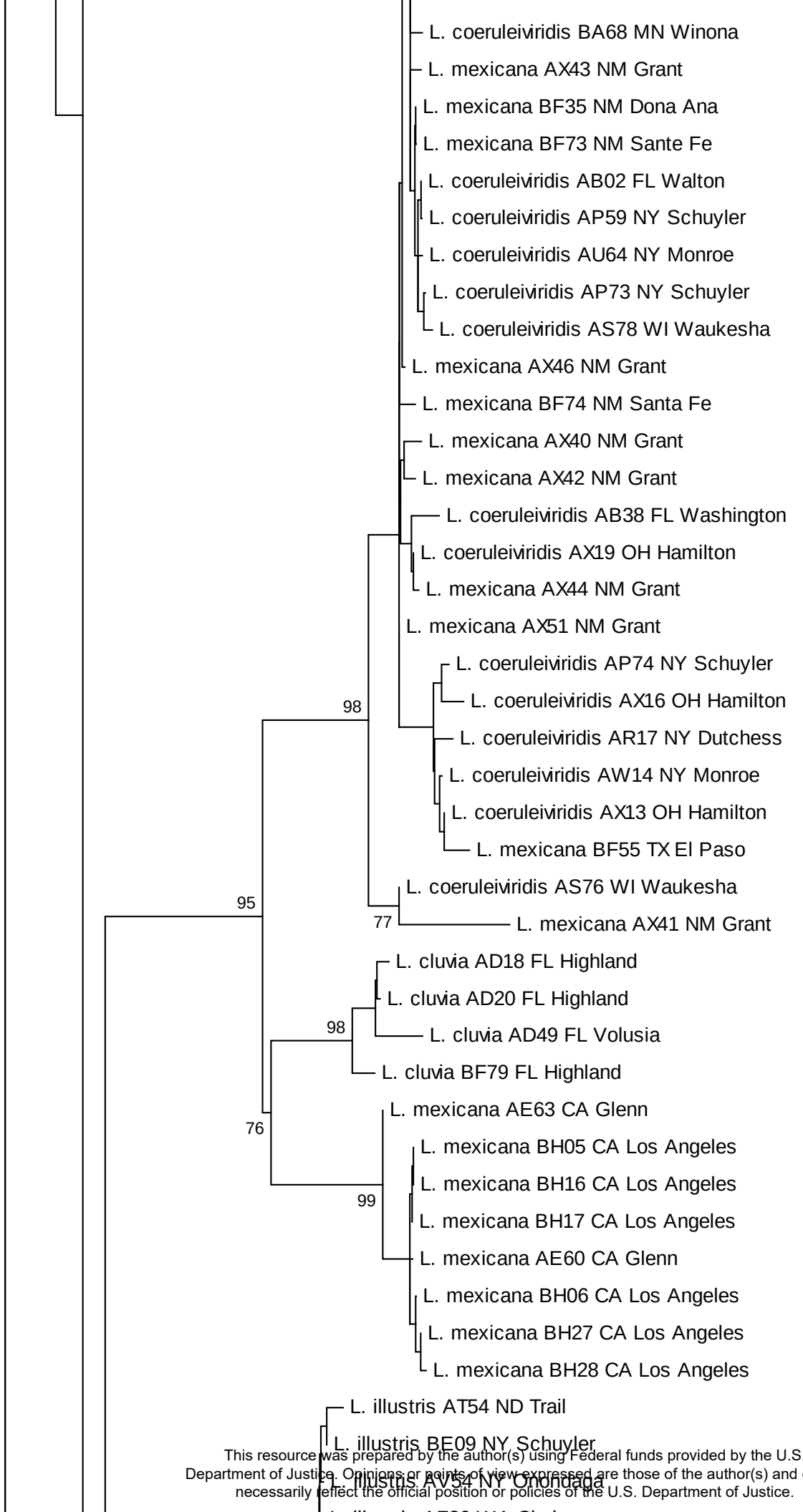

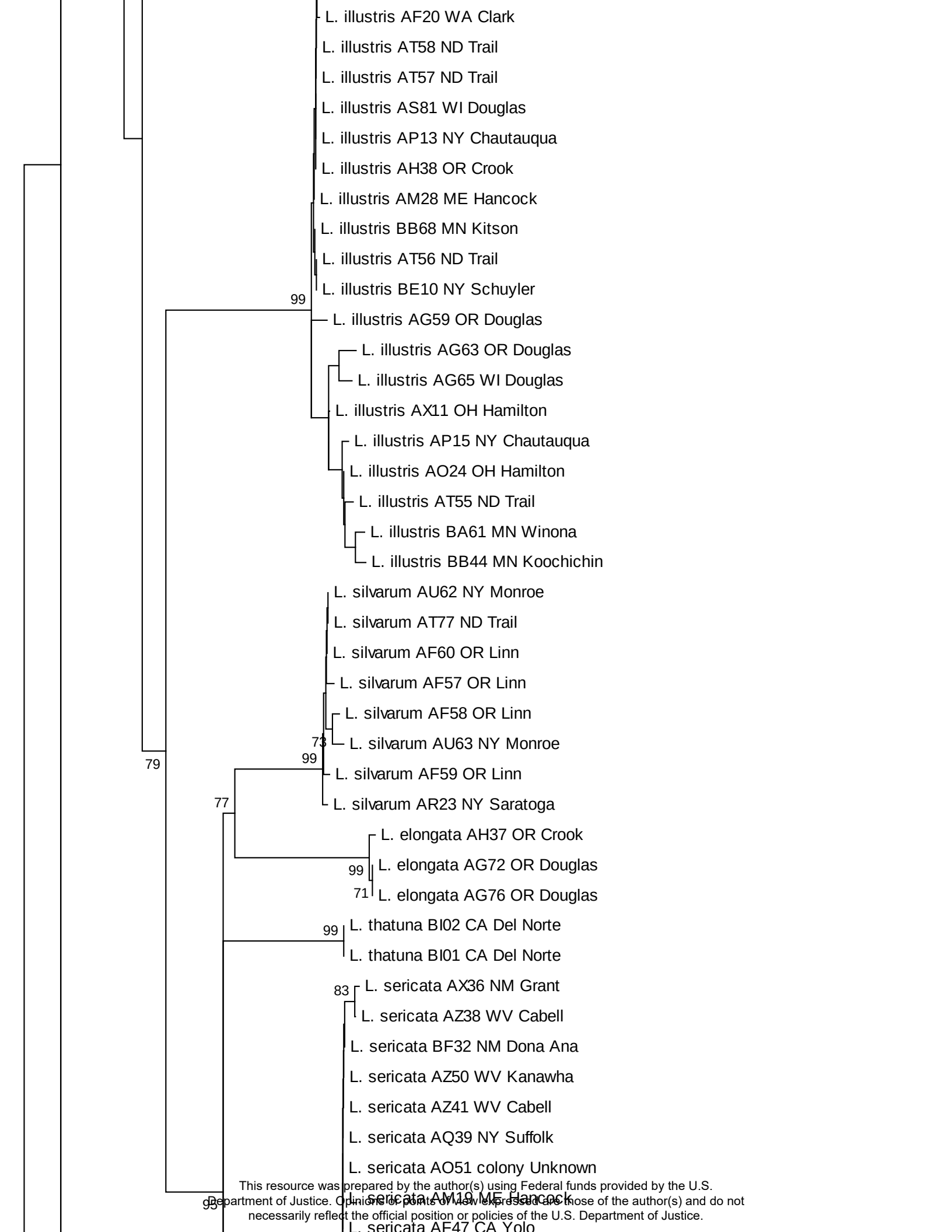

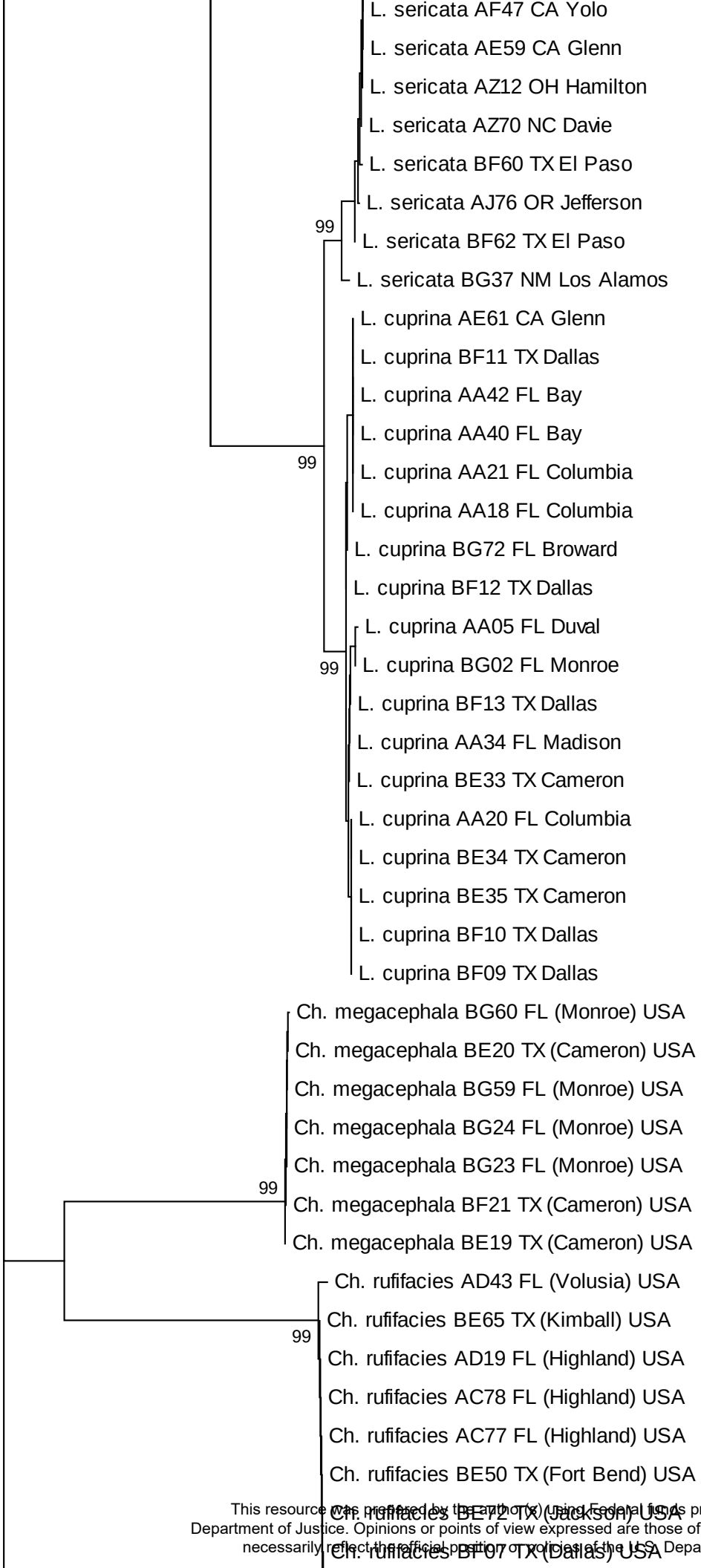

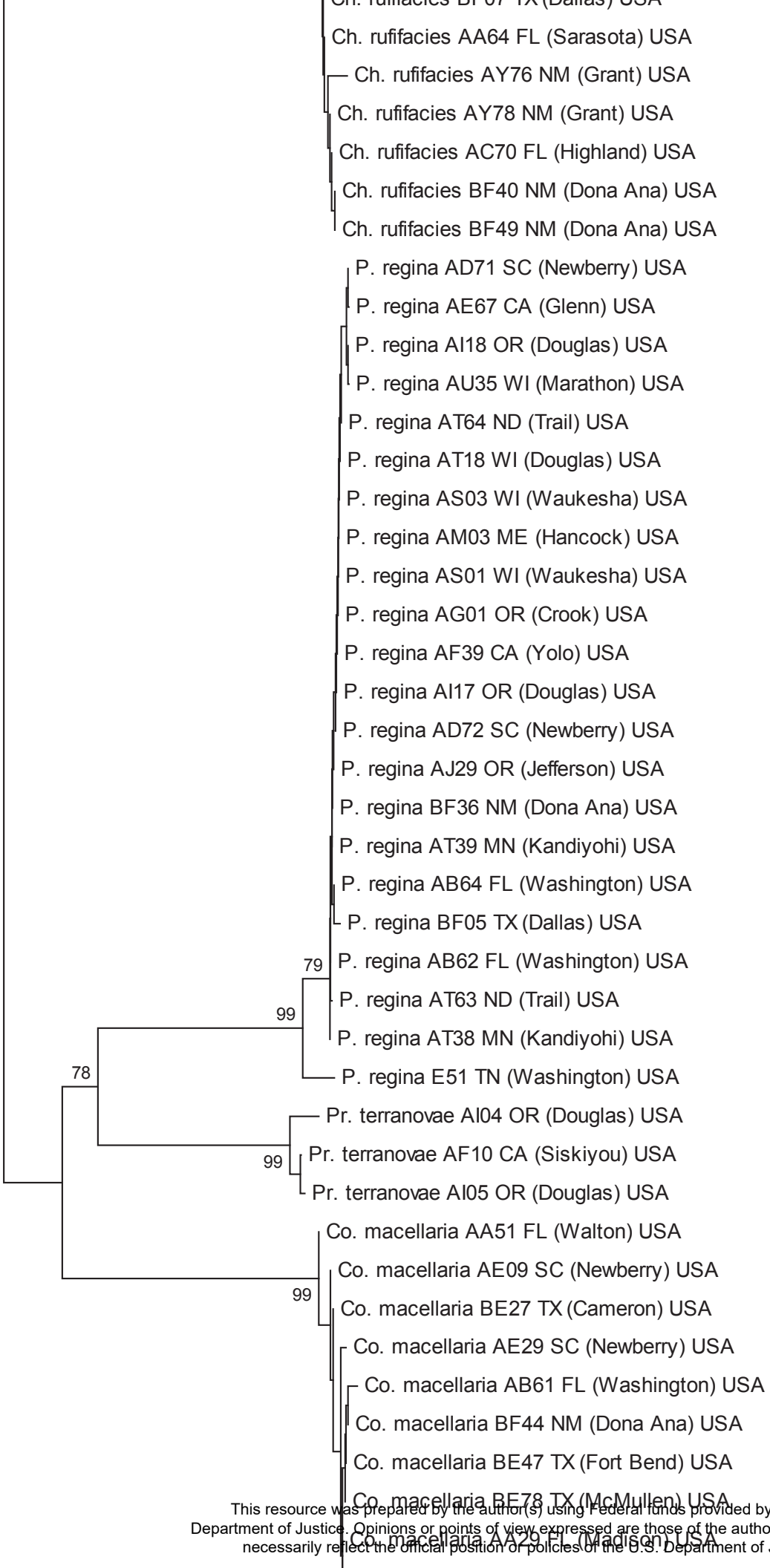

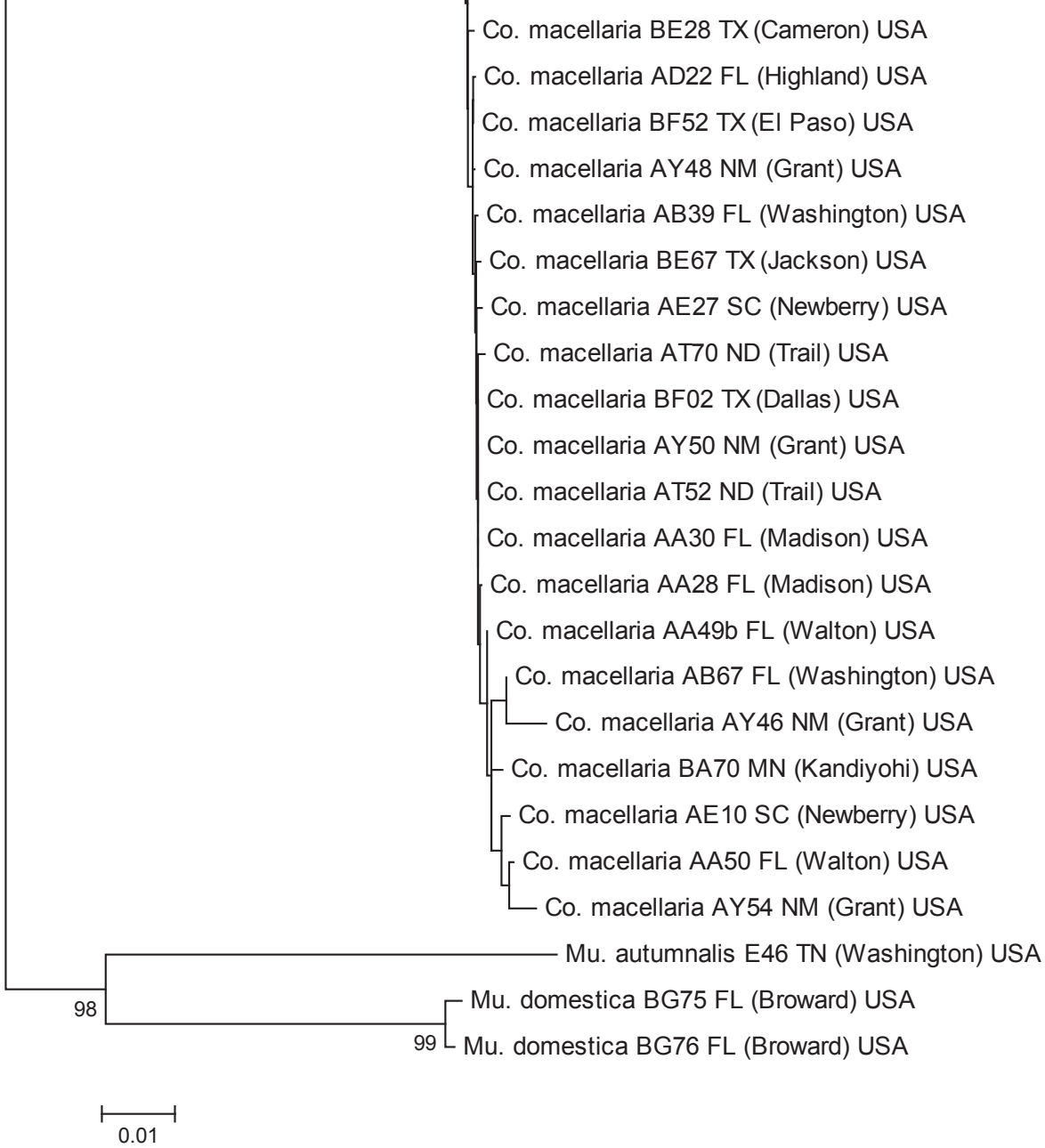

IV. Conclusions

1. **Discussion of findings**:

The specific goals of this project were:

1. Identify a locus within the mitochondrial genome (mtDNA) that is maximally informative for species identification using phylogenetic analysis.

We identified a locus within the mitochondrial genome that is highly informative with respect to DNA-based species identification of forensically important Diptera. The region we selected for Phase II (part of the 3' region of COI) is highly efficient for discriminating among the vast majority of forensically important Diptera found in the contiguous United States. It is able, for example, to discriminate between the particularly difficult species pair *Lucilia cuprina* and *L. sericata*.

2. Produce a comprehensive database for this locus for all carrion fly species in the families Calliphoridae and Sarcophagidae that are found in the contiguous U.S. and that have literature reports of association with large-animal carrion or human remains.

We produced a database comprising approximately 1,200 bp from the 3' end of the mitochondrially encoded gene COI. The database includes data for 36 of the 39 species of calliphorid and sarcophagid flies, plus two species of muscid flies, that were identified earlier as being of probable forensic importance. The database also includes data for 68 additional species of Sarcophagidae and Calliphoridae that, while not likely to deposit larvae on human remains, were collected at chicken meat bait traps and, therefore, may well be encountered as adults at a human death scene.

For the species of greatest forensic importance, one very closely related species pair (*L. mexicana* and *L. coeruleiviridis*) cannot be distinguished. This reflects the fact that no single short segment of DNA is likely to be 100% successful at discriminating among all species. In the particular case of *L. mexicana* and *L. coeruleiviridis*, we examined additional regions of the mitochondrial genome without finding a region (or, indeed, any combination of regions) that was capable of discriminating between that pair. It is apparent that discrimination between those two species by DNA data will require use of a nuclear locus (or loci). Even then, the prospects for success will depend on the (unknown) nature of the biological process that has led the two species to share a single mitochondrial lineage. It is possible, for example, the different nuclear loci will show different patterns of genealogical relationships among individuals.

For the remaining 16 species of primary forensic importance and 16 of the 20 species of limited forensic importance in the database, however, the level of discrimination is excellent. We see no reason to believe that it will be necessary to develop additional mitochondrially encoded loci for species identification of forensically important Diptera in the contiguous United States.

The reference database produced by this project is far more comprehensive than any similar database, in terms of species coverage, geographic diversity within the 48 contiguous United States, and depth of sampling within forensically important species.

2. **Implications for policy and practice:**

The project can safely be described as a success. The database can be used for DNA-based identification of forensically important Diptera in the contiguous United States. Nearly all of the calliphorid and sarcophagid species of the greatest forensic importance and a very large majority of species with marginal forensic relevance are included in the database. In addition, nearly all of these species (with the exceptions noted in detail above) have COI haplotype sequences that are sufficiently distinct from other forensically relevant species so as to allow robust species determination.

Availability of this database will, hopefully, lead to an expansion in the use of entomological evidence in death-scene investigations. The use of DNA instead of adult morphology to identify dipteran

larvae recovered at a death scene can allow for such identifications to be performed by crime lab personnel, without the need to send crucial evidence to a specially trained outside consulting entomologist. The expertise of a forensic entomologist will always be necessary, but if species identity is established within the crime lab, the forensic entomologist can concentrate on determining the developmental age of the larvae recovered and on converting those ages into a best estimate for PMI.

The ability to use DNA sequence data to identify these important forensic indicator species will also, hopefully, spur additional research into species-specific developmental trajectories. Such data are required for PMI estimation, regardless of the species recovered from the death scene, and regardless of the method used to obtain species identification.

The remaining problems will be expanded upon in the next section, as implications for further research. Briefly, they include: 1) one particular pair of species with high forensic importance (*Lucilia coeruleiviridis* and *L. mexicana*) cannot be distinguished using COI sequence data (and indications from additional mtDNA data suggest that no mitochondrial locus is likely to be successful in that case); 2) one additional pair of species, also in the genus *Lucilia* (*L. cuprina* and *L. sericata*) are genetically distinct, yet sufficiently similar in DNA sequence so that it would be wise to expand the reference collection for both species; 3) despite the inclusion of approximately 500 individual reference specimens, the utility and reliability of the database can still be increased by a further expansion of the reference collection; 4) the utility of the database for identification of unknown larvae needs to be validated.

3. **Implications for further research:** Recommendations for further research in this area should be described.

a. **The reference database is never "complete"** Forensic entomology must deal with natural, evolving species composed of multiple populations distributed across large geographic ranges. Consequently, a reference database for species identification can never really be considered "complete". The database is always subject to expansion in terms of geographic coverage and depth of coverage (the total number of individuals of any particular species included). The variability inherent in natural populations was the original rationale for taking a phylogenetic approach to DNA-based species identification. Approaches that rely on a singular "signature" – including such technologies as microarrays of SNPs, or DNA fingerprinting based on length-variable-length microsatellite alleles – cannot as easily account for the high likelihood that an individual sampled from nature will be genetically unique and, therefore, not directly represented in the database. We have endeavored to sample each species in our reference database over a wide geographic area, but there will always remain some as-yet-un-discovered haplotypes. Therefore the reference database should, properly, be continually growing, with new reference specimens from new locations added.

Examination of the results presented in Fig. 10 leads to speculation that not every species carries the same need for additional specimens. For example, within the genus *Lucilia*, one species (*L. illustris*) is both well separated from any other species in the phylogenetic analysis and highly homogeneous, with very low levels of intra-species diversity and no hint of any geographic pattern to the intra-species diversity that is present. It is extremely unlikely that a member of any other species will, by chance, have a COI haplotype that could group with those of *L. illustris* or that, conversely, that there exists a yet-unsampled *L. illustris* haplotype that would group with a different species in the phylogenetic analysis (note, however, that this inference is not based on an explicit probabilistic model). Contrast that situation to the one presented by the closely related pair of species *L. cuprina* and *L. sericata*. Although levels of intra-species diversity are rather low, COI haplotypes from the two species are very similar to each other. This similarity means that there will always be a much higher possibility that there exists somewhere within one of those species a genotype that is more similar to the "wrong" species, compared to the situation with *L. illustris*. There might be no such genotype, of course, but it would still be prudent to

continue sampling additional *L. cuprina* and *L. sericata* to obtain an even more detailed picture of the scope of variation within each species.

b. Additional theory needs to be developed to justify conclusions of positive identification based on reciprocal monophyly in phylogenetic analysis. As alluded to in **a.**, there is currently no probabilistic framework to directly answer the question "What is the probability that a newly sampled individual of species X will, by chance, fall within the clade defining species Y in the reference database?" The answer, while undoubtedly related to sample size, is not likely to be a simple function of only sample size – the degree of observed genetic differentiation in the reference database will, no doubt, also be a critical factor. Such theory would be useful beyond the realm of forensic entomology in human death cases, as similar data and methods are applied to many forms of DNA-based species identification systems.

c. Two kinds of validation studies will be required

i. *The ability to correctly identify unknown samples must be documented*. This critical step had been included in the original proposal submitted to NIJ. However, the reviewers of the original proposal suggested that we would develop a much better database if we postponed any validation studies and focused instead on increasing the number and geographic scope of field collecting activities and the total number of individual specimens incorporated into the database. We agreed with the review commentary, and implemented those changes via a change-of-scope GAN. That change in focus proved to be quite valuable, as the addition of several extra collecting trips enabled the reference database to have a much greater depth and breadth of coverage. This form of validation study should be accomplished in at least two phases. The first phase would be to challenge the database in a blind study with reared, known-species larvae. The second phase would be to test the reference database on non-probative casework samples. Ideally, these samples would be processed in parallel with specimens (larvae) that were collected live and reared to adulthood for traditional morphological identification.

ii. *The laboratory protocols will need to be validated*. There is a need to establish the range around the standard PCR conditions for which our primers will give adequate data. The laboratory procedures needed to obtain DNA sequence for an unknown sample are routine but will still require validation. The specific primer pair developed in this project to amplify the region of interest should be tested on a wide range of templates, including damaged or degraded template DNA. The database should be tested using query sequences that are shorter than the full length. In addition, the primers should be tested under conditions in which multiple potential targets of amplification are present. For example, the primers should be tested when the target is present in a mixture with other (e.g., human) genomic DNA.

V. References: Citations are in a format similar to that used by professional journals, and are appropriate for the study performed.

Amendt, J, CP Campobasso, E Gaudry, C Reiter, HN LeBlanc, MJR Hall. 2007. Best practice in forensic entomology - standards and guidelines. Int J Legal Med 121:90-104.

Ames, C, B Turner, B Daniel. 2006. The use of mitochondrial cytochrome oxidase I gene (COI) to differentiate two UK blowfly species - Calliphora vicina and Calliphora vomitoria. Forensic Sci Int 164:179-182.

Ash, N, B Greenberg. 1975. Developmental temperature responses of the sibling species Phaenicia sericata and Phaenicia pallescens. Annals of the Entomological Society of America 68:197-200.

Azeredo-Espin, AM, AC Lessinger, AC Lessinger. 2006. Genetic approaches for studying myiasis-causing flies: molecular markers and mitochondrial genomics. Genetica 126:111-131.

Benecke, M. 1998. Random amplified polymorphic DNA (RAPD) typing of necrophageous insects (Diptera, Coleoptera) in criminal forensic studies: validation and use in practice. Forensic Sci Int 98:157-168.

Berger, SA, D Krompass, A Stamatakis. 2011. Performance, Accuracy, and Web Server for Evolutionary Placement of Short Sequence Reads under Maximum Likelihood. Syst Biol 60:291-302.
Boehme, P, J Amendt, RHL Disney, R Zehner. 2010. Molecular identification of carrion-breeding scuttle flies (Diptera: Phoridae) using COI barcodes. Int J Legal Med 124:577-581.
Burns, JM, DH Janzen, M Hajibabaei, W Hallwachs, PDN Hebert. 2008. DNA barcodes and cryptic species of skipper butterflies in the genus Perichares in Area de Conservacion Guanacaste, Costa Rica. Proc Natl Acad Sci U S A 105:6350-6355.
Byrd, JH, JL Castner. 2001. Forensic entomology : the utility of arthropods in legal investigations. Boca Raton: CRC Press.
Caine, LM, FC Real, MI Salona-Bordas, MM de Pancorbo, G Lima, T Magalhaes, F Pinheiro. 2009. DNA typing of Diptera collected from human corpses in Portugal. Forensic Sci Int 184:E21-E23.
Campobasso, CP, JG Linville, JD Wells, F Introna. 2005. Forensic genetic analysis of insect gut contents. American Journal of Forensic Medicine and Pathology 26:161-165.
Chen, WY, TH Hung, SF Shiao. 2004. Molecular identification of forensically important blow fly species (Diptera : Calliphoridae) in Taiwan. Journal of Medical Entomology 41:47-57.
Costa, FO, JR deWaard, J Boutillier, S Ratnasingham, RT Dooh, M Hajibabaei, PDN Hebert. 2007. Biological identifications through DNA barcodes: the case of the Crustacea. Canadian Journal of Fisheries and Aquatic Sciences 64:272-295.
Cywinska, A, FF Hunter, PDN Hebert. 2006. Identifying Canadian mosquito species through DNA barcodes. Medical and Veterinary Entomology 20:413-424.
DeBry, RW, AE Timm, GA Dahlem, T Stamper. 2010. mtDNA-based identification of Lucilia cuprina (Wiedemann) and Lucilia sericata (Meigen) (Diptera: Calliphoridae) in the continental United States. Forensic Sci Int 202:102-109.
Dewaard, JR, PDN Hebert, LM Humble. 2011. A Comprehensive DNA Barcode Library for the Looper Moths (Lepidoptera: Geometridae) of British Columbia, Canada. PLoS One 6:-.
Efron, B. 1979. Bootstrap methods: Another look at the jackknife. Annals of Statistics 7:1-26.
Ekrem, T, E Stur, PDN Hebert. 2010. Females do count: Documenting Chironomidae (Diptera) species diversity using DNA barcoding. Organisms Diversity & Evolution 10:397-408.
Elsasser, SC, R Floyd, PDN Hebert, AI Schulte-Hostedde. 2009. Species identification of North American guinea worms (Nematoda: Dracunculus) with DNA barcoding. Molecular Ecology Resources 9:707-712.
Fatteh, A. 1973. Handbook of Forensic Pathology. Philadelphia: J.B. Lippincott Company.
Felsenstein, J. 1985. Confidence-Limits on Phylogenies - an Approach Using the Bootstrap. Evolution 39:783-791.
Felsenstein, J. 2002. Inferring Phylogenies From Protein Sequences by Parsimony, Distance, and Likelihood Methods.
Felsenstein, J. 2004. Inferring Phylogenies. Sunderland, MA: Sinauer Associates.
Felsenstein, J, H Kishino. 1993. Is There Something Wrong with the Bootstrap on Phylogenies - a Reply. Syst Biol 42:193-200.
Foottit, RG, HEL Maw, CD Von Dohlen, PDN Hebert. 2008. Species identification of aphids (Insecta: Hemiptera: Aphididae) through DNA barcodes. Molecular Ecology Resources 8:1189-1201.
Greenberg, B. 1985. Forensic entomology: Case studies. Bulletin of the Entomological Society of America 31:25-28.
Greenberg, BaK, John Charles. 2002. Entomology and the Law: Flies as Forensic Indicators. Cambridge: Cambridge University Press.
Hall, RD. 1990. Medicocriminal Entomology. In: EP Catts, NH Haskell, editors. Entomology and Death: A procedural Guide. Clemson, South Carolina: Joyce's Print Shop, Inc. p. 1-6.
Harvey, M, RI Dadour, S Gaudieri, MW Mansell, MH Villet. 2003a. MtDNA-based identification of blowflies in forensic entomology: More accurate postmortem interval estimation and beyond. Forensic Sci Int 136:389-389.
Harvey, ML. 2005. An alternative for the extraction and storage of DNA from insects in forensic entomology. J Forensic Sci 50:627-629.

Harvey, ML, IR Dadour, S Gaudieri. 2003. Mitochondrial DNA cytochrome oxidase I gene: potential for distinction between immature stages of some forensically important fly species (Diptera) in western Australia. Forensic Sci Int 131:134-139.
Harvey, ML, S Gaudieri, MH Villet, IR Dadour. 2008. A global study of forensically significant calliphorids: Implications for identification. Forensic Sci Int 177:66-76.
Harvey, ML, MW Mansell, MH Villet, IR Dadour. 2003b. Molecular identification of some forensically important blowflies of southern Africa and Australia. Medical and Veterinary Entomology 17:363-369.
Hebert, PDN, A Cywinska, SL Ball, JR Dewaard. 2003. Biological Identifications Through Dna Barcodes. Proceedings of the Royal Society of London Series B-Biological Sciences 270:313-321.
Hebert, PDN, TR Gregory. 2005. The promise of DNA barcoding for taxonomy. Syst Biol 54:852-859.
Hebert, PDN, EH Penton, JM Burns, DH Janzen, W Hallwachs. 2004a. Ten species in one: DNA barcoding reveals cryptic species in the neotropical skipper butterfly Astraptes fulgerator. Proc Natl Acad Sci U S A 101:14812-14817.
Hebert, PDN, S Ratnasingham, JR Dewaard. 2003. Barcoding Animal Life: Cytochrome C Oxidase Subunit 1 Divergences Among Closely Related Species. Proceedings of the Royal Society of London Series B-Biological Sciences 270:S96-S99.
Hebert, PDN, MY Stoeckle, TS Zemlak, CM Francis. 2004b. Identification of birds through DNA barcodes. Plos Biology 2:1657-1663.
Hillis, DM, JJ Bull. 1993. An Empirical-Test of Bootstrapping as a Method for Assessing Confidence in Phylogenetic Analysis. Syst Biol 42:182-192.
Hogg, ID, PDN Hebert. 2004. Biological identification of springtails (Hexapoda : Collembola) from the Canadian Arctic, using mitochondrial DNA barcodes. Canadian Journal of Zoology-Revue Canadienne De Zoologie 82:749-754.
Janzen, DH, W Hallwachs, P Blandin, et al. 2009. Integration of DNA barcoding into an ongoing inventory of complex tropical biodiversity. Molecular Ecology Resources 9:1-26.
Kamal, AS. 1958. Comparative study of thirteen species of sarcosaprophagous Calliphoridae and Sarcophagidae (Diptera) I. Bionomics. Annals of the Entomological Society of America 51.
Kumar, S, SR Gadagkar. 2000. Efficiency of the Neighbor-Joining Method in Reconstructing Deep and Shallow Evolutionary Relationships in Large Phylogenies. Journal of Molecular Evolution 51:544-553.
Malgorn, Y, R Coquoz. 1999. DNA typing for identification of some species of Calliphoridae - An interest in forensic entomology. Forensic Sci Int 102:111-119.
Mazzanti, M, F Alessandrini, A Tagliabracci, JD Wells, CP Campobasso. 2010. DNA degradation and genetic analysis of empty puparia: genetic identification limits in forensic entomology. Forensic Sci Int 195:99-102.
McDonagh, L, C Thornton, JF Wallman, JR Stevens. 2009. Development of an antigen-based rapid diagnostic test for the identification of blowfly (Calliphoridae) species of forensic significance. Forensic Science International-Genetics 3:162-165.
Meier, R, K Shiyang, G Vaidya, PKL Ng. 2006. DNA barcoding and taxonomy in diptera: A tale of high intraspecific variability and low identification success. Syst Biol 55:715-728.
Meiklejohn, KA, JF Wallman, M Dowton. 2011a. DNA-based identification of forensically important Australian Sarcophagidae (Diptera). Int J Legal Med 125:27-32.
Meiklejohn, KA, JF Wallman, M Dowton. 2011b. DNA-based identification of forensically important Australian Sarcophagidae (Diptera). Int J Legal Med 125:27-32.
Morando, M, LJ Avila, JW Sites. 2003. Sampling strategies for delimiting species: Genes, individuals, and populations in the Liolaemus elongatus-kriegi complex (Squamata : Liolaemidae) in Andean-Patagonian South America. Syst Biol 52:159-185.
Nei, M. 1991. Relative efficiencies of different tree-making methods for molecular data. In: MM Miyamoto, J Cracraft, editors. Phylogenetic analysis of DNA sequences. New York: Oxford University Press. p. 90-128.
Nelson, LA, JF Wallman, M Dowton. 2007. Using COI barcodes to identify forensically and medically important blowflies. Medical and Veterinary Entomology 21:44-52.

Nelson, LA, JF Wallman, M Dowton. 2008. Identification of forensically important Chrysomya (Diptera: Calliphoridae) species using the second ribosomal internal transcribed spacer (ITS2). Forensic Sci Int 177:238-247.
Park, DS, SJ Suh, HW Oh, PDN Hebert. 2010. Recovery of the mitochondrial COI barcode region in diverse Hexapoda through tRNA-based primers. Bmc Genomics 11:-.
Park, SH, Y Zhang, H Piao, DH Yu, HJ Jeong, GY Yoo, U Chung, TH Jo, JJ Hwang. 2009. Use of Cytochrome c Oxidase Subunit I (COI) Nucleotide Sequences for Identification of the Korean Luciliinae Fly Species (Diptera: Calliphoridae) in Forensic Investigations. Journal of Korean Medical Science 24:1058-1063.
Picard, CJ, JD Wells. 2009. Survey of the Genetic Diversity of Phormia regina (Diptera: Calliphoridae) Using Amplified Fragment Length Polymorphisms. Journal of Medical Entomology 46:664-670.
Picard, CJ, JD Wells. 2010. The population genetic structure of North American Lucilia sericata (Diptera: Calliphoridae), and the utility of genetic assignment methods for reconstruction of postmortem corpse relocation. Forensic Sci Int 195:63-67.
Robinson, EA, GA Blagoev, PDN Hebert, SJ Adamowicz. 2009. Prospects for using DNA barcoding to identify spiders in species-rich genera. Zookeys:27-46.
Roe, AD, FAH Sperling. 2007. Patterns of evolution of mitochondrial cytochrome c oxidase I and II DNA and implications for DNA barcoding Mol Phylogenet Evol 44:325-345.
Ross, HA, S Murugan, WLS Li. 2008. Testing the reliability of genetic methods of species identification via simulation. Syst Biol 57:216-230.
Ross, KG, D Gotzek, MS Ascunce, DD Shoemaker. 2010. Species delimitation: a case study in a problematic ant taxon. Syst Biol 59:162-184.
Rougerie, R, T Decaens, L Deharveng, D Porco, SW James, CH Chang, B Richard, M Potapov, Y Suhardjono, PDN Hebert. 2009. DNA barcodes for soil animal taxonomy. Pesquisa Agropecuaria Brasileira 44:789-802.
Simon, C, F Frati, A Beckenbach, B Crespi, H Liu, P Flook. 1994. Evolution, Weighting, and Phylogenetic Utility of Mitochondrial Gene-Sequences and a Compilation of Conserved Polymerase Chain- Reaction Primers. Annals of the Entomological Society of America 87:651-701.
Singh, B, H Kurahashi, JD Wells. 2011. Molecular phylogeny of the blowfly genus Chrysomya. Medical and Veterinary Entomology 25:126-134.
Smith, KGV. 1986. A manual of forensic entomology. Oxford: British Museum (Natural History).
Smith, MA, DM Wood, DH Janzen, W Hallwachs, PDN Hebert. 2007. DNA barcodes affirm that 16 species of apparently generalist tropical parasitoid flies (Diptera, Tachinidae) are not all generalists. Proc Natl Acad Sci U S A 104:4967-4972.
Smith, MA, NE Woodley, DH Janzen, W Hallwachs, PDN Hebert. 2006. DNA barcodes reveal cryptic host-specificity within the presumed polyphagous members of a genus of parasitoid flies (Diptera : Tachinidae). Proc Natl Acad Sci U S A 103:3657-3662.
Sperling, FAH, GS Anderson, DA Hickey. 1994. A DNA-Based Approach to the Identification of Insect Species Used for Postmortem Interval Estimation. J Forensic Sci 39:418-427.
Stevens, J, R Wall. 2001. Genetic relationships between blowflies (Calliphoridae) of forensic importance. Forensic Sci Int 120:116-123.
Stevens, J, Wall, R. 2001. Genetic relationships between blowflies (Calliphoridae) of forensic importance. Forensic Sci. Int. 120:116-123.
Stevens, JR. 2003. The Evolution of Myiasis in Blowflies (Calliphoridae). International Journal for Parasitology 33:1105-1113.
Stevens, JR, R Wall, JD Wells. 2002. Paraphyly in Hawaiian hybrid blowfly populations and the evolutionary history of anthropophilic species. Insect Molecular Biology 11:141-148.
Stevens, JR, JF Wallman, D Otranto, R Wall, T Pape. 2006. The evolution of myiasis in humans and other animals in the Old and New Worlds (part II): biological and life-history studies. Trends in Parasitology 22:181-188.
Tamura, K, J Dudley, M Nei, S Kumar. 2007. MEGA4: Molecular evolutionary genetics analysis (MEGA) software version 4.0. Mol Biol Evol 24:1596-1599.

Tamura, K, M Nei. 1993. Estimation of the Number of Nucleotide Substitutions in the Control Region of Mitochondrial-DNA in Humans and Chimpanzees. Mol Biol Evol 10:512-526.
Tan, SH, M Rizman-Idid, E Mohd-Aris, H Kurahashi, Z Mohamed. 2010. DNA-based characterisation and classification of forensically important flesh flies (Diptera: Sarcophagidae) in Malaysia. Forensic Sci Int 199:43-49.
Tourle, R, DA Downie, MH Villet. 2009. Flies in the ointment: a morphological and molecular comparison of Lucilia cuprina and Lucilia sericata (Diptera: Calliphoridae) in South Africa. Medical and Veterinary Entomology 23:6-14.
Vincent, S, JM Vian, MP Carlotti. 2000. Partial sequencing of the cytochrome oxydase b subunit gene I: A tool for the identification of European species of blow flies for postmortem interval estimation. J Forensic Sci 45:820-823.
Wallman, JF, M Adams. 2001. The forensic application of allozyme electrophoresis to the identification of blowfly larvae (Diptera : Calliphoridae) in southern Australia. J Forensic Sci 46:681-684.
Wallman, JF, SC Donnellan. 2001. The utility of mitochondrial DNA sequences for the identification of forensically important blowflies (Diptera : Calliphoridae) in southeastern Australia. Forensic Sci Int 120:60-67.
Wallman, JF, R Leys, K Hogendoorn. 2005. Molecular systematics of Australian carrion-breeding blowflies (Diptera : Calliphoridae) based on mitochondrial DNA. Invertebrate Systematics 19:1-15.
Ward, RD, TS Zemlak, BH Innes, PR Last, PDN Hebert. 2005. DNA barcoding Australia's fish species. Philosophical Transactions of the Royal Society B-Biological Sciences 360:1847-1857.
Wells, JD, F Introna, G Di Vella, CP Campobasso, J Hayes, FAH Sperling. 2001. Human and insect mitochondrial DNA analysis from maggots. J Forensic Sci 46:685-687.
Wells, JD, N Lunt, MH Villet. 2004. Recent African derivation of Chrysomya putoria from C-chloropyga and mitochondrial DNA paraphyly of cytochrome oxidase subunit one in blowflies of forensic importance. Medical and Veterinary Entomology 18:445-448.
Wells, JD, T Pape, FAH Sperling. 2001. DNA-based identification and molecular systematics of forensically important sarcophagidae (diptera). J Forensic Sci 46:1098-1102.
Wells, JD, FAH Sperling. 2001. DNA-based identification of forensically important Chrysomyinae (Diptera : Calliphoridae). Forensic Sci Int 120:110-115.
Wells, JD, JR Stevens. 2008. Application of DNA-based methods in forensic entomology. Annu Rev Entomol 53:103-120.
Wells, JD, R Wall, JR Stevens. 2007. Phylogenetic analysis of forensically important Lucilia flies based on cytochrome oxidase I sequence: a cautionary tale for forensic species determination. Int J Legal Med 121:229-233.
Wells, JD, DW Williams. 2007. Validation of a DNA-based method for identifying Chrysomyinae (Diptera: Calliphoridae) used in a death investigation. Int J Legal Med 121:1-8.
Whitworth, T. 2006. Keys to the genera and species of blow flies (Diptera: Calliphoridae) of America north of Mexico. Proceedings of the Entomological Society of Washington 108:689-725.
Wiens, JJ, TA Penkrot. 2002. Delimiting species using DNA and morphological variation and discordant species limits in spiny lizards (Sceloporus). Syst Biol 51:69-91.
Yu, H, W Wang, S Fang, Y-P Zhang, F-J Lin, Z-C Geng. 1999. Phylogeny and evolution of the Drosophila nasuta subgroup based on mitochondrial ND4 and ND4L gene sequences. 13:556-565.
Zaidi, F, SJ Wei, M Shi, XX Chen. 2011. Utility of multi-gene loci for forensic species diagnosis of blowflies. Journal of Insect Science 11:-.
Zehner, R, J Amendt, S Schutt, J Sauer, R Krettek, D Povolny. 2004. Genetic identification of forensically important flesh flies (Diptera: Sarcophagidae). Int J Legal Med 118:245-247.
Zhou, X, SJ Adamowicz, LM Jacobus, RE DeWalt, PDN Hebert. 2009. Towards a comprehensive barcode library for arctic life - Ephemeroptera, Plecoptera, and Trichoptera of Churchill, Manitoba, Canada. Frontiers in Zoology 6:-.

VI. Dissemination of Research Findings: Publications and presentations resulting from this award should be listed, including the full journal citation, scientific conference and location, etc.

Presentations based on this project have been given at:
NIJ DNA Grantees Workshop / NIJ Conference, Arlington, VA: 2005-2011
Entomological Society of America, Indianapolis, IN, 2009
Entomological Society of America, San Diego, CA, 2010
North American Forensic Entomology Association
American Association for Forensic Sciences

Publications:

DeBry, RW, AE Timm, GA Dahlem, T Stamper. 2010. mtDNA-based identification of Lucilia cuprina (Wiedemann) and Lucilia sericata (Meigen) (Diptera: Calliphoridae) in the continental United States. Forensic Sci Int 202:102-109.

In Press:

DeBry, RW, AE Timm, ES Wong, T Stamper, C. Cookman, GA Dahlem. 2012. DNA-based identification of forensically important *Lucilia* (Diptera: Calliphoridae) in the continental United States. *Forensic Science International.*

At least 3 additional journal submissions are in preparation based on this work.