

# Carlsbad Caverns

National Park Service  
U.S. Department of the Interior

Carlsbad Caverns National Park  
New Mexico



## Preliminary List of Known Insects of Carlsbad Caverns National Park *Through 2006*



This is a very preliminary list that does not begin to fully reflect the insect diversity at Carlsbad Caverns NP. It has been compiled by park biologists from the park's scant museum collection and various other sources, including researchers and specialists who have generously shared their observations informally or in publications, including Eric Metzler (Lepidoptera, moths), Robert Larsen (Odonata), Shann Stringer (Diptera, Chironomidae), John Abbott (Odonata, misc.), Stephen Cary and Richard Holland (Lepidoptera, butterflies), Gavin Emmons (Lepidoptera, butterflies), Nick Grishin (Lepidoptera and Diptera), Ed Gage (Coleoptera, Cicindelidae), Bruce Walsh (Lepidoptera, moths), and others.

Question marks in the list denote taxonomic questions.

Perusal of this list will reveal many groups that are distinctly understudied.

## Known Insects of Carlsbad Caverns National Park

Order: **THYSANURA** (bristletails, silverfish)

Suborder: **Ectognatha**

Family: Nicoletiidae

no common name

unidentified Nicoletiidae

Suborder: **Entognatha**

Family: Campodeidae

dipluran

unknown

*Campodea folsomi*

*Plusiocampa* sp.

Order: **COLLEMBOLA** (springtails)

springtail

unidentified Collembolan

Order: **ODONATA** (dragonflies, damselflies)

Suborder: **Anisoptera** (dragonflies)

Family: Aeshnidae (darners)

arroyo darner

blue-eyed darner

shadow darner

common green darner

giant darner

*Aeshna dugesi*

*Aeshna multicolor*

*Aeshna umbrosa*

*Anax junius*

*Anax walsinghami*

Family: Gomphidae (clubtails)

white-belted ringtail

yellow-legged ringtail

eastern ringtail

sulphur-tipped clubtail

brimstone clubtail

orange shadowdragon

dot-winged baskettail

*Erpetogomphus compositus*

*Erpetogomphus crotalinus*

*Erpetogomphus designatus*

*Gomphus militaris*

*Stylurus intricatus*

*Neurocordula xanthosoma*

*Epitheca petechialis*

Family: Libellulidae (common skimmers)

four-spotted pennant

pale-faced clubskimmer

checkered setwing

swift setwing

black setwing

eastern pondhawk

*Brachymesia gravida*

*Brechmorhoga mendax*

*Dythemis fugax*

*Dythemis velox*

*Dythemis nigrescens*

*Erythemis simplicicollis*

|                           |                                |
|---------------------------|--------------------------------|
| western pondhawk          | <i>Erythemis collocata</i>     |
| Comanche skimmer          | <i>Libellula comanche</i>      |
| bleached skimmer          | <i>Libellula composita</i>     |
| neon skimmer              | <i>Libellula croceipennis</i>  |
| widow skimmer             | <i>Libellula luctuosa</i>      |
| twelve-spotted skimmer    | <i>Libellula pulchella</i>     |
| flame skimmer             | <i>Libellula saturata</i>      |
| marl pennant              | <i>Macrodiplax balteata</i>    |
| roseate skimmer           | <i>Orthemis ferruginea</i>     |
| blue dasher               | <i>Pachydiplax longipennis</i> |
| red rock skimmer          | <i>Paltorthemis lineatipes</i> |
| wandering glider          | <i>Pantala flavescens</i>      |
| spot-winged glider        | <i>Pantala hymenaea</i>        |
| eastern amberwing         | <i>Perithemis tenera</i>       |
| desert whitetail          | <i>Plathemis subornata</i>     |
| filigree skimmer          | <i>Pseudoleon superbus</i>     |
| variegated meadowhawk     | <i>Sympetrum corruptum</i>     |
| saffron-winged meadowhawk | <i>Sympetrum costiferum</i>    |
| yellow-legged meadowhawk  | <i>Sympetrum vicinum</i>       |
| black saddlebags          | <i>Tramea lacerata</i>         |
| red saddlebags            | <i>Tramea onusta</i>           |

Suborder: **Zygoptera** (damselflies)

Family: Calopterygidae (broad-winged damselflies)

|                   |                            |
|-------------------|----------------------------|
| American rubyspot | <i>Hetaerina americana</i> |
|-------------------|----------------------------|

Family: Lestidae (spread-winged damselflies)

|                    |                            |
|--------------------|----------------------------|
| great spreadwing   | <i>Archilestes grandis</i> |
| plateau spreadwing | <i>Lestes alacer</i>       |

Family: Coenagrionidae (narrow-winged damselflies)

|                      |                                  |
|----------------------|----------------------------------|
| damselfly            | unknown Coenagrionidae           |
| blue-fronted dancer  | <i>Argia apicalis</i>            |
| variable dancer      | <i>Argia fumipennis violacea</i> |
| lavender dancer      | <i>Argia hinei</i>               |
| Kiowa dancer         | <i>Argia immunda</i>             |
| Leonora's dancer     | <i>Argia leonorae</i>            |
| sooty dancer         | <i>Argia lugens</i>              |
| powdered dancer      | <i>Argia moesta</i>              |
| Aztec dancer         | <i>Argia nahuana</i>             |
| springwater dancer   | <i>Argia plana</i>               |
| blue-ringed dancer   | <i>Argia sedula</i>              |
| dusky dancer         | <i>Argia translata</i>           |
| vivid dancer         | <i>Argia vivida</i>              |
| double-striped bluet | <i>Enallagma basidens</i>        |
| boreal bluet         | <i>Enallagma boreale</i>         |
| tule bluet           | <i>Enallagma carunculatum</i>    |
| familiar bluet       | <i>Enallagma civile</i>          |
| painted damselfly    | <i>Hesperagrion heterodoxum</i>  |
| desert forktail      | <i>Ischnura barberi</i>          |
| Plains forktail      | <i>Ischnura damula</i>           |

black-fronted forktail  
desert firetail

*Ischnura denticollis*  
*Telebasis salva*

Order: **ORTHOPTERA** (grasshoppers, crickets, mantids, cockroaches)

Suborder: **Caelifera**

Family: Acrididae (short-horned grasshoppers)

band-winged grasshopper      unidentified Acrididae

Subfamily: Cyrtacanthacridinae

black-males grasshopper      *Boopedon nubilum*

Subfamily: Melanoplinae

grasshopper      *Agroecotettix modestus crypsidomus*

two-striped grasshopper      *Melanoplus bivittatus*

glaucous-legged grasshopper      *Melanoplus glaucipes*

grasshopper      *Melanoplus lakinus*

grasshopper      *Melanoplus* sp.

pictured grasshopper      *Dactylotum pictum*

gray bird locust      *Schistocerca vaga*

white-lined bird grasshopper      *Schistocerca albolineata*

Subfamily: Romaleinae (lubber grasshoppers)

robust toad lubber      *Phrynotettix robustus*

Chihuahua toad lubber      *Phrynotettix tshivavensis*

Subfamily: Acridinae (slant-faced grasshoppers)

slant-faced grasshopper      *Syrbula fuscovittata*

Texas slant-faced grasshopper      *Mermiria texana*

striped slant-faced grasshopper      *Amphitornus coloradus coloradus*

Subfamily: Oedipodinae (band-winged grasshoppers)

band-winged grasshopper      *Arphia aberrans* ?

band-winged grasshopper      *Trimerotropis strenna* ?

pallid-winged grasshopper      *Trimerotropis pallidipennis*

blue-winged grasshopper      *Leprus intermedius*

blue-winged grasshopper      *Leprus wheeleri*

great crested grasshopper      *Tropidolophus formosus*

great crested grasshopper      *Hippopedon capito*

band-winged grasshopper      unidentified Oedipodinae

Suborder: **Ensifera**

Family: Tettigoniidae (long-horned grasshoppers)

giant shield-backed cricket      *Capnobotes fuliginosus*

short-winged katydid      *Dichopetala brevihastata*

katydid      unidentified Tettigoniidae

katydid      unknown Phaneropterinae

Mormon cricket      unidentified Decticinae

Family: Gryllacrididae (camel crickets)

Subfamily: Rhaphidophoridae (cave or camel crickets)

Carlsbad cave cricket      *Ceuthophilus carlsbadensis*

cave cricket      *Ceuthophilus longipes*

cave cricket      *Ceuthophilus conicaudus*

|                                                               |  |                                 |
|---------------------------------------------------------------|--|---------------------------------|
| Family: <u>Gryllidae</u> (crickets)                           |  |                                 |
| Subfamily: Oecanthinae (tree crickets)                        |  |                                 |
| narrow-winged tree cricket                                    |  | <i>Oecanthinus niveus</i>       |
| Subfamily: Gryllinae (field and house crickets)               |  |                                 |
| field cricket                                                 |  | <i>Acheta assimilis</i>         |
| Suborder: <b>Mantodea</b>                                     |  |                                 |
| Family: <u>Mantidae</u> (mantids)                             |  |                                 |
| California mantis                                             |  | <i>Stagmomantis californica</i> |
| bordered mantis                                               |  | <i>Stagmomantis limbata</i>     |
| praying mantis                                                |  | <i>Stagmomantis</i> spp.        |
| Suborder: <b>Phasmatodea</b>                                  |  |                                 |
| Family: <u>Phasmatidae</u> (walkingsticks)                    |  |                                 |
| walkingstick                                                  |  | <i>Diapheromera</i> sp.         |
| Suborder: <b>Blattodea</b>                                    |  |                                 |
| Family: <u>Blattidae</u> (cockroaches)                        |  |                                 |
| desert cockroach                                              |  | <i>Parcoblatta</i> sp.          |
| Oriental cockroach                                            |  | <i>Blatta orientalis</i>        |
| American cockroach                                            |  | <i>Periplaneta americana</i>    |
| brown-banded cockroach                                        |  | <i>Supella longipalpa</i>       |
| cockroach                                                     |  | unknown Blattidae               |
| Order: <b>ISOPTERA</b> (termites)                             |  |                                 |
| Family: <u>Termitidae</u> (desert termites)                   |  |                                 |
| western subterranean termite                                  |  | <i>Reticulitermes hesperus</i>  |
| termite                                                       |  | <i>Amitermes</i> spp.           |
| Order: <b>DERMAPTERA</b> (earwigs)                            |  |                                 |
| Family: <u>Labiduridae</u> (long-horned earwigs)              |  |                                 |
| striped earwig                                                |  | <i>Labidura riparia</i>         |
| Order: <b>PSOCOPTERA</b> (booklice and barklice)              |  |                                 |
| unidentified                                                  |  | unidentified Psocoptera         |
| Order: <b>HOMOPTERA</b> (true bugs, cicadas, hoppers, aphids) |  |                                 |
| Suborder: <b>Gymnocerata</b> (long-horned bugs)               |  |                                 |
| Family: <u>Gerridae</u> (water striders)                      |  |                                 |
| water strider                                                 |  | <i>Gerris</i> sp.               |
| Family: <u>Cimicidae</u> (bed bugs, swallow bugs)             |  |                                 |
| bed bug                                                       |  | unidentified                    |
| Family: <u>Miridae</u> (leaf or plant bugs)                   |  |                                 |
| plant bug                                                     |  | <i>Adelphocoris superbus</i>    |
| plant bug                                                     |  | <i>Lopidae</i> sp.              |
| Family: <u>Phymatidae</u> (ambush bugs)                       |  |                                 |
| jagged ambush bug                                             |  | <i>Phymata erosa</i>            |
| ambush bug                                                    |  | unidentified Phymatidae         |

|                                                        |                                      |
|--------------------------------------------------------|--------------------------------------|
| Family: <u>Reduviidae</u> (assassin bugs)              |                                      |
| bee assassin bug                                       | <i>Spiomerus spissipes</i>           |
| black corsair                                          | <i>Melanolestes picipes</i>          |
| assassin bug                                           | <i>Melanolestes picipes abdomina</i> |
| assassin bug                                           | <i>Castolus subinermis</i>           |
| assassin bug                                           | <i>Arilus cristatus</i>              |
| bloodsucking conenose                                  | <i>Triatoma gerstaeckeri</i>         |
| Family: <u>Lygaeidae</u> (seed bugs)                   |                                      |
| seed bug                                               | <i>Lygaeus lateralis</i>             |
| seed bug                                               | <i>Lygaeus admirabilis</i>           |
| milkweed bug                                           | <i>Oncopeltus fasciatus</i>          |
| Family: <u>Pyrrhocoridae</u> (red bugs)                |                                      |
| red bugs                                               | unknown Pyrrhocoridae                |
| Family: <u>Coreidae</u> (leaf-footed bugs)             |                                      |
| giant mesquite bug                                     | <i>Thasus acutangulus</i>            |
| cactus bug                                             | <i>Chelinidea vittiger aequoris</i>  |
| leaf-footed bug                                        | <i>Leptoglossus chinchae ?</i>       |
| leaf-footed bug                                        | <i>Leptoglossus clypealis</i>        |
| leaf-footed bug                                        | <i>Catorhintha selector</i>          |
| leaf-footed bug                                        | <i>Mozena obtusa</i>                 |
| leaf-footed bug                                        | <i>Narnia pallidicornis</i>          |
| squash bug                                             | <i>Anasa tristis</i>                 |
| Family: <u>Alydidae</u> (broad-headed bugs)            |                                      |
| broad-headed bug                                       | unidentified Alydidae                |
| Superfamily: Scutelleroidea                            |                                      |
| Family: <u>Cydnidae</u> (burrower bugs)                |                                      |
| burrower bug                                           | <i>Cyrtomenus mirabilis</i>          |
| burrower bug                                           | <i>Pangaeus bilinaetus</i>           |
| burrower bug                                           | <i>Pangaeus</i> sp.                  |
| burrower bug                                           | unidentified Cydnidae                |
| Family: <u>Scutelleridae</u> (shield-backed bugs)      |                                      |
| shield-backed bug                                      | <i>Homaemus</i> sp.                  |
| shield-backed bug                                      | unknown Scutelleridae                |
| Family: <u>Pentatomidae</u> (stink bugs)               |                                      |
| stink bug                                              | <i>Chlorochroa ligata</i>            |
| harlequin bug                                          | <i>Murgantia histrionica</i>         |
| unidentified                                           | unidentified Pentatomidae            |
| Suborder: <b>Auchenorrhyncha</b> (cicadas and hoppers) |                                      |
| Superfamily: Cicadoidea (cicadas and leafhoppers)      |                                      |
| Family: <u>Cicadidae</u> (cicadas)                     |                                      |
| cicada                                                 | <i>Beameria venosa</i>               |
| cicada                                                 | <i>Diceroprocta eugraphica</i>       |
| cicada                                                 | <i>Diceroprocta</i> sp.              |
| cicada                                                 | <i>Cacama valvata</i>                |
| cicada                                                 | unknown Cicadidae                    |

|                                                                       |                                                          |
|-----------------------------------------------------------------------|----------------------------------------------------------|
| Family: <u>Cicadellidae</u> (leafhoppers)                             |                                                          |
| yellow-headed leafhopper                                              | <i>Draeculacephala antica</i>                            |
| leafhopper                                                            | <i>Paraphlepsius lascivius</i>                           |
| leafhopper                                                            | <i>Cuerna</i> sp.                                        |
| leafhopper                                                            | <i>Delphacodes</i> sp.                                   |
| leafhopper                                                            | <i>Deltocephalus grex</i>                                |
| leafhopper                                                            | <i>Flexamia</i> sp.                                      |
| Family: <u>Coelidiinae</u>                                            |                                                          |
| leafhopper                                                            | unknown Coelidiinae                                      |
| Superfamily: Fulgoroidea (planthoppers)                               |                                                          |
| Family: <u>Fulgoridae</u>                                             |                                                          |
| fulgorid planthopper                                                  | <i>Poblicia fuliginosa</i>                               |
| Family: <u>Cixiidae</u>                                               |                                                          |
| planthopper                                                           | <i>Oliarus</i> sp.                                       |
| Suborder: <b>Sternorrhyncha</b> (whiteflies, aphids, scale insects)   |                                                          |
| Family: <u>Psyllidae</u> (psyllids)                                   |                                                          |
| hackberry nipplegall maker                                            | <i>Pachypsylla celtidismamma</i>                         |
| nipplegall maker                                                      | <i>Pachypsylla</i> sp.                                   |
| Family: <u>Aphididae</u> (aphids)                                     |                                                          |
| aphid                                                                 | unknown Aphididae                                        |
| Superfamily: Coccoidea (scale insects) – several families             |                                                          |
| soft scale                                                            | <i>Lecanium</i> sp.                                      |
| mealybug                                                              | unknown Pseudococcidae                                   |
| Order: <b>NEUROPTERA</b> (fishflies, snakeflies, lacewings, antlions) |                                                          |
| Suborder: <b>Planipennia</b> (antlions, lacewings)                    |                                                          |
| Superfamily: Hemerobioidea (mantidflies)                              |                                                          |
| Family: <u>Mantispidae</u> (mantidflies)                              |                                                          |
| mantidfly                                                             | <i>Climaciella brunnea</i>                               |
| mantidfly                                                             | <i>Mantispa cincticornis</i>                             |
| Superfamily: Myrmeleontoidea (antlions and owlflies)                  |                                                          |
| Family: <u>Myrmeleontidae</u> (antlions)                              |                                                          |
| antlion                                                               | <i>Paranthaclisis hageni</i>                             |
| antlion                                                               | unknown Myrmeleontidae                                   |
| Order: <b>COLEOPTERA</b> (beetles)                                    |                                                          |
| Suborder: Adephaga                                                    |                                                          |
| Superfamily: Caraboidea                                               |                                                          |
| Family: <u>Cicindelidae</u> (tiger beetles)                           |                                                          |
| Pan-American big-headed                                               |                                                          |
| tiger beetle                                                          | <i>Megacephala carolina</i> ( <i>Tetracha carolina</i> ) |
| punctured tiger beetle                                                | <i>Cicindela punctulata</i>                              |
| Chihuahuan tiger beetle                                               | <i>Cicindela punctulata chihuahuae</i>                   |
| Guadalupe Mountains tiger beetle                                      | <i>Cicindela politula petrophila</i>                     |
| limestone tiger beetle                                                | <i>Cicindela politula viridimonticola</i>                |

|                                                         |                                                |
|---------------------------------------------------------|------------------------------------------------|
| limestone tiger beetle                                  | <i>Cicindela politula calcaricola</i>          |
| ocellated tiger beetle                                  | <i>Cicindela ocellata rectilatera</i>          |
| white-striped tiger beetle                              | <i>Cicindela lemniscata</i>                    |
| white-striped tiger beetle                              | <i>Cicindela lemniscata rebaptisata</i>        |
| tiger beetle                                            | <i>Cicindela lemniscata (rufipes ?)</i>        |
| tiger beetle                                            | <i>Cicindela flavopunctata (rectilatera ?)</i> |
| <u>Family: Carabidae</u> (ground beetles)               |                                                |
| cave beetle                                             | <i>Rhadine longicollis</i>                     |
| ground beetle                                           | <i>Calosoma lecontei</i>                       |
| ground beetle                                           | <i>Calosoma peregrinator</i>                   |
| ground beetle                                           | <i>Calosoma</i> sp.                            |
| ground beetle                                           | <i>Harpalus caliginosus</i>                    |
| ground beetle                                           | <i>Scarites subterraneus</i>                   |
| ground beetle                                           | <i>Discoderus impotens</i>                     |
| ground beetle                                           | <i>Discoderus species</i>                      |
| ground beetle                                           | <i>Pasimachus</i> sp.                          |
| ground beetle                                           | unidentified Carabidae                         |
| <u>Family: Haliplidae</u> (crawling water beetles)      |                                                |
| crawling water beetle                                   | unknown Haliplidae                             |
| <u>Family: Dytiscidae</u> (predaceous diving beetles)   |                                                |
| predaceous diving beetle                                | <i>Dytiscus verticalis</i>                     |
| Superfamily: Hydrophiloidea                             |                                                |
| <u>Family: Histeridae</u> (hister beetles)              |                                                |
| hister beetle                                           | <i>Saprinus lugens</i>                         |
| <u>Family: Hydrophilidae</u> (water scavenger beetles)  |                                                |
| water scavenger beetle                                  | <i>Hydrophilus triangularis</i>                |
| water scavenger beetle                                  | <i>Hydrophilus</i> sp.                         |
| Superfamily: Staphylinoidea                             |                                                |
| <u>Family: Silphidae</u> (carrion beetles)              |                                                |
| carrion beetle                                          | <i>Thanatophilus truncata</i>                  |
| <u>Family: Staphylinidae</u> (rove beetles)             |                                                |
| rove beetle                                             | <i>Creophilus maxillosus</i>                   |
| rove beetle                                             | <i>Bolitobius</i> sp.                          |
| Superfamily: Cantharoidea                               |                                                |
| <u>Family: Cantharidae</u> (soldier beetles)            |                                                |
| soldier beetle                                          | <i>Chauliognathus</i> sp.                      |
| <u>Family: Lampyridae</u> (lightning bugs or fireflies) |                                                |
| firefly                                                 | <i>Photuris</i> sp.                            |
| <u>Family: Lycidae</u> (net-winged beetles)             |                                                |
| net-winged beetle                                       | <i>Calopteron reticulatus</i>                  |
| net-winged beetle                                       | <i>Lycus</i> sp.                               |



|                                                           |  |                                  |
|-----------------------------------------------------------|--|----------------------------------|
| Superfamily: Cleroidea                                    |  |                                  |
| <u>Family: Dermestidae</u> (dermestid beetles)            |  |                                  |
| dermestid beetle                                          |  | <i>Dermestes marmoratus</i>      |
| dermestid beetle                                          |  | <i>Anthrenus verbasci</i>        |
| <u>Family: Dasytidae</u> (soft-winged flower beetles)     |  |                                  |
| soft-winged flower beetle                                 |  | unknown Dasytidae                |
| <u>Family: Cleridae</u> (checkered beetles)               |  |                                  |
| checkered beetle                                          |  | <i>Trichodes</i> sp.             |
| Superfamily: Elateroidea                                  |  |                                  |
| <u>Family: Elateridae</u> (click beetles)                 |  |                                  |
| eyed click beetle                                         |  | <i>Alaus oculatus</i>            |
| click beetle                                              |  | <i>Conoderus vespertinus</i>     |
| click beetle                                              |  | <i>Lacon</i> sp.                 |
| click beetle                                              |  | unidentified Elateridae          |
| <u>Family: Buprestidae</u> (metallic wood-boring beetles) |  |                                  |
| metallic wood-boring beetle                               |  | <i>Psiloptera drummondi</i>      |
| metallic wood-boring beetle                               |  | <i>Chrysobothris</i> sp.         |
| metallic wood boring beetle                               |  | unknown Buprestidae              |
| Superfamily: Cucujoidea                                   |  |                                  |
| <u>Family: Coccinellidae</u> (ladybird beetles)           |  |                                  |
| ladybird beetle                                           |  | <i>Hippodamia convergens</i>     |
| ladybird beetle                                           |  | <i>Anisocalvia</i> sp.           |
| ladybug                                                   |  | unidentified Coccinellidae       |
| <u>Family: Oedemeridae</u> (false blister beetles)        |  |                                  |
| false blister beetle                                      |  | <i>Oxacis cana</i>               |
| false blister beetle                                      |  | <i>Oxacis</i> sp.                |
| false blister beetle                                      |  | unknown Oedemeridae              |
| Superfamily: Melooidea                                    |  |                                  |
| <u>Family: Meloidae</u> (blister beetles)                 |  |                                  |
| blister beetle                                            |  | <i>Epicauta albida</i>           |
| blister beetle                                            |  | <i>Epicauta immaculata</i>       |
| blister beetle                                            |  | <i>Epicauta sericans</i>         |
| blister beetle                                            |  | <i>Epicauta diversipubescens</i> |
| blister beetle                                            |  | <i>Epicauta atrivittata</i>      |
| blister beetle                                            |  | <i>Epicauta</i> spp.             |
| blister beetle                                            |  | <i>Nemognatha</i> spp.           |
| blister beetle                                            |  | <i>Pleuropompha costata</i>      |
| blister beetle                                            |  | <i>Lytta</i> sp.                 |
| blister beetle                                            |  | unidentified Meloidae            |
| Superfamily: Mordelloidea                                 |  |                                  |
| <u>Family: Mordellidae</u> (tumbling flower beetles)      |  |                                  |
| tumbling flower beetle                                    |  | <i>Mordellistena</i> spp.        |

Superfamily: Tenebrionoidea

Family: Tenebrionidae (darkling beetles)

|                 |                                         |
|-----------------|-----------------------------------------|
| darkling beetle | <i>Argoporis</i> spp.                   |
| darkling beetle | <i>Asida</i> sp.                        |
| darkling beetle | <i>Bothrotes</i>                        |
| darkling beetle | <i>Eleodes eschscholtzii</i>            |
| darkling beetle | <i>Eleodes</i> sp.                      |
| darkling beetle | <i>Embaphion</i> ( <i>blaisdelli</i> ?) |
| darkling beetle | <i>Embaphion</i> spp.                   |
| darkling beetle | <i>Stenomorpha</i> sp.                  |
| darkling beetle | unknown Tenebrionidae                   |

Family: Alleculidae (comb-clawed beetles)

|                    |                     |
|--------------------|---------------------|
| comb-clawed beetle | <i>Isomira</i> spp. |
|--------------------|---------------------|

Superfamily: Scarabaeoidea

Family: Scarabaeidae (scarab beetles)

|                    |                             |
|--------------------|-----------------------------|
| scarab beetle      | <i>Cyclocephala hirta</i>   |
| scarab beetle      | <i>Diplotaxis carbonata</i> |
| scarab beetle      | <i>Diplotaxis belfragei</i> |
| scarab beetle      | <i>Diplotaxis</i> sp.       |
| scarab beetle      | <i>Euphoria korni</i>       |
| scarab beetle      | <i>Polyphylla hammondi</i>  |
| scarab beetle      | <i>Anomala luteipennis</i>  |
| scarab beetle      | <i>Ligyris gibbosus</i>     |
| scarab beetle      | <i>Serica</i> sp.           |
| dung roller beetle | <i>Canthon imitator</i>     |
| scarab beetle      | unidentified Scarabaeidae   |

Subfamily: Scarabaeinae (dung beetles and tumblebugs)

|             |                                 |
|-------------|---------------------------------|
| dung beetle | <i>Archophileurus cribrosus</i> |
| dung beetle | <i>Canthon punctaticollis</i>   |
| dung beetle | <i>Canthon imitator</i>         |
| dung beetle | <i>Orizabus</i> spp.            |
| dung beetle | <i>Phanaeus</i> sp.             |
| dung beetle | unidentified Scarabaeinae       |

Subfamily: Aphodiinae (aphodian dung beetles)

|             |                            |
|-------------|----------------------------|
| dung beetle | <i>Aphonides dunnianus</i> |
|-------------|----------------------------|

Subfamily: Troginae (skin beetles)

|                |                       |
|----------------|-----------------------|
| skin beetle    | <i>Trox suberosus</i> |
| skin beetle    | <i>Trox integer</i>   |
| skin beetle    | <i>Trox</i> spp.      |
| carcass beetle | <i>Omorgus</i> sp.    |

Subfamily: Melolonthinae (June beetles, chafers)

|          |                            |
|----------|----------------------------|
| june bug | unidentified Melolonthinae |
|----------|----------------------------|

Subfamily: Rutelinae (shining leaf chafers)

|                     |                           |
|---------------------|---------------------------|
| shining leaf chafer | <i>Plusiotis beyeri</i>   |
| shining leaf chafer | <i>Plusiotis gloriosa</i> |

|                                                   |                                                         |
|---------------------------------------------------|---------------------------------------------------------|
| shining leaf chafer beetle                        | <i>Plusiotis woodii</i><br><i>Rhombonalia cavifrons</i> |
| Subfamily: Cetoniinae (flower beetles)            |                                                         |
| flower beetle                                     | <i>Cotinis (obliqua ?)</i>                              |
| flower beetle                                     | <i>Cotinis (arizonica ?)</i>                            |
| flower beetle                                     | <i>Cotinis texana</i>                                   |
| flower beetle                                     | unidentified Cetoniinae                                 |
| Superfamily: Cerambycidae                         |                                                         |
| Family: <u>Cerambycidae</u> (long-horned beetles) |                                                         |
| long-horned beetle                                | <i>Cyrtinus beckeri</i>                                 |
| long-horned beetle                                | <i>Haplidus laticeps</i>                                |
| long-horned beetle                                | <i>Neoclytus acuminatus hesperus</i>                    |
| long-horned beetle                                | <i>Peranoplium piceum</i>                               |
| long-horned beetle                                | <i>Rhopalophora longipes meeskei</i>                    |
| long-horned beetle                                | <i>Tetraopes femoratus</i>                              |
| long-horned beetle                                | <i>Tylosis jiminezi</i>                                 |
| long-horned beetle                                | <i>Tylosis maculatus</i>                                |
| long-horned beetle                                | <i>Prionus imbricornus</i>                              |
| horned prionus                                    | <i>Prionus</i> sp.                                      |
| cactus beetle                                     | <i>Moneilema armata</i>                                 |
| long-horned beetle                                | <i>Moneilema</i> spp.                                   |
| twig pruner                                       | <i>Hypermallus</i> spp.                                 |
| long-horned beetle                                | <i>Derobrachus geminatus</i>                            |
| long-horned beetle                                | <i>Stenaspis solitaria</i>                              |
| long-horned beetle                                | <i>Batyle suturalis</i>                                 |
| long-horned beetle                                | <i>Anelaphus piceum</i>                                 |
| long-horned beetle                                | <i>Taranomis bivittatus</i>                             |
| long-horned beetle                                | <i>Taranomis bivittata bivittata</i>                    |
| long-horned beetle                                | <i>Crossidius militaris</i>                             |
| long-horned beetle                                | <i>Crossidius pulchellus</i>                            |
| long-horned beetle                                | <i>Crossidius intermedius</i>                           |
| long-horned beetle                                | <i>Oxoplus (jocosus ?)</i>                              |
| long-horned beetle                                | <i>Sapderda concolor</i>                                |
| cottonwood borer                                  | <i>Sapderda</i> sp.                                     |
| unidentified                                      | unidentified Cerambycidae                               |
| long-horned beetle                                | unknown Lamiinae                                        |
| Superfamily: Chrysomeloidea                       |                                                         |
| Family: <u>Chrysomelidae</u> (leaf beetles)       |                                                         |
| Subfamily: Galerucinae                            |                                                         |
| spotted cucumber beetle                           | <i>Diabrotica undecimpunctata howardi</i>               |
| spotted cucumber beetle                           | <i>Diabrotica trilineata</i>                            |
| Subfamily: Eumolpinae                             |                                                         |
| dogbane beetle                                    | <i>Chrysochus auratus</i>                               |
| Subfamily: Alticinae                              |                                                         |
| flea beetle                                       | unknown Alticinae                                       |

|                                                            |                                        |
|------------------------------------------------------------|----------------------------------------|
| Subfamily: Chrysomelinae                                   |                                        |
| leaf beetle                                                | <i>Calligrapha serpentina</i>          |
| leaf beetle                                                | <i>Calligrapha</i> sp.                 |
| <u>Family: Bruchidae</u> (seed beetles)                    |                                        |
| seed beetle                                                | <i>Mimosestes sallaei</i>              |
| seed beetle                                                | unknown Bruchidae                      |
| Superfamily: Curculionoidea                                |                                        |
| <u>Family: Curculionidae</u> (snout beetles)               |                                        |
| snout beetle                                               | <i>Rhynchites eximius</i>              |
| snout beetle                                               | <i>Rhynchites mexicanus</i>            |
| snout beetle                                               | <i>Baris strenua</i>                   |
| snout beetle                                               | <i>Onychobaris mystica</i>             |
| snout beetle                                               | unknown Curculionidae                  |
| broad-nosed weevil                                         | unknown Tanmecinae                     |
| Order: <b>LEPIDOPTERA</b> (butterflies and moths)          |                                        |
| Superfamily: <b>Papilionidae</b> (butterflies)             |                                        |
| <u>Family: Papilioninae</u> (swallowtails)                 |                                        |
| pipevine swallowtail                                       | <i>Battus philenor</i>                 |
| giant swallowtail                                          | <i>Papilio cressphontes</i>            |
| two-tailed swallowtail                                     | <i>Papilio multicaudata</i>            |
| King Ornythion swallowtail                                 | <i>Papilio ornythion</i>               |
| black swallowtail                                          | <i>Papilio polyxenes</i>               |
| <u>Family: Pieridae</u> (whites, sulfurs, and orange-tips) |                                        |
| Subfamily: Pierinae (whites)                               |                                        |
| cabbage white                                              | <i>Pieris rapae</i>                    |
| checkered white                                            | <i>Pontia protodice</i>                |
| Subfamily: Coliadinae (sulfurs)                            |                                        |
| orange sulfur                                              | <i>Colias eurytheme</i>                |
| clouded sulfur                                             | <i>Colias philodice</i>                |
| boisduval's yellow                                         | <i>Eurema boisduvaliana</i>            |
| Mexican yellow                                             | <i>Eurema mexicana</i>                 |
| sleepy orange                                              | <i>Eurema nicippe</i>                  |
| lyside sulfur                                              | <i>Kricogonia lyside</i>               |
| dainty sulfur                                              | <i>Nathalis iole</i>                   |
| large orange sulfur                                        | <i>Phoebis agarithe</i>                |
| cloudless sulfur                                           | <i>Phoebis sennae</i>                  |
| southern dogface                                           | <i>Zerene cesonia</i>                  |
| <u>Family: Lycaenidae</u> (gossamer-winged butterflies)    |                                        |
| Subfamily: Theclinae (hairstreaks)                         |                                        |
| great purple hairstreak                                    | <i>Atlides halesus</i>                 |
| Henry's elfin                                              | <i>Callophrys (Incisalia) henrici</i>  |
| juniper hairstreak                                         | <i>Callophrys (Mitoura) gryneus</i>    |
| thicket hairstreak                                         | <i>Callophrys (Mitoura) spinetorum</i> |
| Sandia hairstreak                                          | <i>Callophrys (Sandia) mcfarlandi</i>  |
| Poling's hairstreak                                        | <i>Fixsenia polingi</i>                |
| leda ministreak                                            | <i>Ministrymon leda</i>                |

gray hairstreak

*Strymon melinus*

Subfamily: Plebeinae (blues)

western pygmy-blue

*Brephidium exile*

spring azure

*Celastrina ladon*

ceraunus blue

*Hemiargus ceraunus*

Reakirt's blue

*Hemiargus isola*

marine blue

*Leptotes marina*

Melissa blue

*Lycaeides melissa*

acmon blue

*Plejebus (Icaricia) acmon*

cyna blue

*Zizula cyna*

Family: Riodinidae (metalmarks)

fatal metalmark

*Calephelis nemesis* (incl. *guadaluope*)

Family: Nymphalidae (brush-footed butterflies)

Subfamily: Libytheinae

American snout

*Libytheana carinenta*

Subfamily: Heliconiinae

gulf fritillary

*Agraulis (Dione) vanillae*

variegated fritillary

*Euptoieta claudia*

zebra

*Heliconius charitonius*

Subfamily: Nymphalinae

white peacock

*Anartia jatrophae*

definite patch

*Chlosyne definita* (incl. *anastasia*)

crimson patch

*Chlosyne janais*

bordered patch

*Chlosyne lacinia*

tiny checkerspot

*Dymasia dymas* (incl. *chara*)

common buckeye

*Junonia coenia*

tropical buckeye

*Junonia genoveva*

dark buckeye

*Junonia nigrosuffusa*

mourning cloak

*Nymphalis antiopa*

Phaon crescent

*Phyciodes phaon*

painted crescent

*Phyciodes pictus*

Texas crescent

*Phyciodes texana*

pearl crescent

*Phyciodes tharos*

vesta crescent

*Phyciodes vesta*

question mark

*Polygonia interrogationis*

malachite

*Siproeta stelenes*

fulvia checkerspot

*Thessalia fulvia*

West Coast lady

*Vanessa annabella*

red admiral

*Vanessa atalanta*

painted lady

*Vanessa cardui*

American lady

*Vanessa virginiensis*

Subfamily: Limentidinae

California sister

*Adelpha bredowii*

viceroy

*Limentis archippus*

desert viceroy

*Limentis archippus obsoleta*

|                                         |                                                                  |
|-----------------------------------------|------------------------------------------------------------------|
| "astyanax" red-spotted purple           | <i>Limentis arthemis astyanas</i><br>(incl. <i>arizonensis</i> ) |
| common mestra                           | <i>Mestra amymone</i>                                            |
| Subfamily: Charaxinae                   |                                                                  |
| goatweed butterfly                      | <i>Anaea andria</i>                                              |
| tropical leafwing                       | <i>Anaea trolodyta</i> (incl. <i>aidea</i> )                     |
| Subfamily: Apaturinae                   |                                                                  |
| hackberry emperor                       | <i>Asterocampa celtis</i>                                        |
| tawny emperor                           | <i>Asterocampa clyton texana</i>                                 |
| Subfamily: Satyrinae                    |                                                                  |
| Mead's wood nymph                       | <i>Cercyonis meadii</i>                                          |
| canyonland satyr                        | <i>Cyllopsis pertepida</i>                                       |
| red satyr                               | <i>Megisto rubricata</i>                                         |
| Subfamily: Danainae                     |                                                                  |
| queen                                   | <i>Danaus gilippus</i>                                           |
| monarch                                 | <i>Danaus plexippus</i>                                          |
| <u>Family: Hesperidae (skippers)</u>    |                                                                  |
| Subfamily: Pyrginae                     |                                                                  |
| common streaky-skipper                  | <i>Celotes nesus</i>                                             |
| sleepy duskywing                        | <i>Erynnis brizo</i>                                             |
| funereal duskywing                      | <i>Erynnis funeralis</i>                                         |
| meridian duskywing                      | <i>Erynnis meridianus</i>                                        |
| Rocky Mountain duskywing                | <i>Erynnis telemachus</i>                                        |
| mournful duskywing                      | <i>Erynnis tristis</i>                                           |
| common sootywing                        | <i>Pholisora catullus</i>                                        |
| white checkered-skipper                 | <i>Pyrgus albescens</i>                                          |
| common checkered-skipper                | <i>Pyrgus communis</i>                                           |
| small checkered-skipper                 | <i>Pyrgus scriptura</i>                                          |
| Texas powdered skipper                  | <i>Systasea pulverulenta</i>                                     |
| northern cloudywing                     | <i>Thorybes pylades</i>                                          |
| unidentified skipper                    | unknown Pyrginae                                                 |
| Subfamily: Hesperinae (common skippers) |                                                                  |
| bronze roadside-skipper                 | <i>Amblyscirtes aenus</i> (incl. <i>erna</i> )                   |
| dotted roadside-skipper                 | <i>Amblyscirtes eos</i>                                          |
| nysa roadside-skipper                   | <i>Amblyscirtes nysa</i>                                         |
| Oslar's roadside-skipper                | <i>Amblyscirtes oslari</i>                                       |
| simius roadside-skipper                 | <i>Amblyscirtes simius</i>                                       |
| Texas roadside-skipper                  | <i>Amblyscirtes texanae</i>                                      |
| Delaware skipper                        | <i>Anatrytone logan</i> (=delaware)                              |
| tropical least skipper                  | <i>Ancyloxypha arene</i>                                         |
| sachem                                  | <i>Atalopedes campestris</i>                                     |
| python skipper                          | <i>Atrytonopsis python</i>                                       |
| Viereck's skipper                       | <i>Atrytonopsis vierecki</i>                                     |
| orange skipperling                      | <i>Copaeodes aurantiacia</i>                                     |
| dun skipper                             | <i>Euphyes vestris</i> (=ruricola)                               |
| green skipper                           | <i>Hesperia viridis</i>                                          |

|                                          |                                                |
|------------------------------------------|------------------------------------------------|
| Apache skipper                           | <i>Hesperia woodgatei</i>                      |
| fiery skipper                            | <i>Hylephila phyleus</i>                       |
| clouded skipper                          | <i>Lerema accius</i>                           |
| eufala skipper                           | <i>Lerodea eupala</i>                          |
| Edwards' skipperling                     | <i>Oarisma edwardsii</i>                       |
| Morrison's skipper                       | <i>Stinga morrisoni</i>                        |
| Subfamily: Megathyminae (giant skippers) |                                                |
| Viola's ursine yucca giant-skipper       | <i>Megathymus ursus</i> (incl. <i>violae</i> ) |
| Mary's lechuguilla giant-skipper         | <i>Agathymus mariae mariae</i>                 |
| Carlsbad agave skipper                   | <i>Agathymus neumogeni carlsbadensis</i>       |

Family: Sphingidae (sphinx or hawk moths)

|                            |                                |
|----------------------------|--------------------------------|
| white-lined sphinx         | <i>Celerio lineata</i>         |
| western lesser vine sphinx | <i>Pholus vitis</i>            |
| achemon sphinx             | <i>Pholus achemon</i>          |
| five-spotted hawk moth     | <i>Manduca quinquemaculata</i> |
| small-eyed sphinx          | <i>Paonias myops</i>           |

Family: Saturniidae (wild silkworm moths)

|                                             |                     |
|---------------------------------------------|---------------------|
| Subfamily: Hemileucinae (buck and io moths) |                     |
| io moth                                     | <i>Automeris io</i> |

|                                        |                       |
|----------------------------------------|-----------------------|
| Subfamily: Citheroniinae (royal moths) |                       |
| Oslar's oakworm moth                   | <i>Anisota oslari</i> |

|                                               |                            |
|-----------------------------------------------|----------------------------|
| Subfamily: Saturniinae (giant silkworm moths) |                            |
| Dyar's Agapema moth                           | <i>Agapema anona dyari</i> |
| New Mexico range caterpillar                  | <i>Agapema galbina</i>     |

Family: Notodontidae (prominents)

|                    |                           |
|--------------------|---------------------------|
| walnut caterpillar | <i>Datana integerrima</i> |
|--------------------|---------------------------|

Family: Arctiidae (tiger moths)

|                        |                                            |
|------------------------|--------------------------------------------|
| wasp moth              | <i>Ctenucha venosa</i>                     |
| tiger moth             | <i>Dysschema howardi</i>                   |
| tiger moth             | <i>Daritis thetis</i>                      |
| tiger moth             | <i>Apantes proxima</i>                     |
| tiger moth             | <i>Arachnis zuni</i>                       |
| salt-marsh caterpillar | <i>Estigmene acraea</i>                    |
| fall webworm           | <i>Hyphantria cunea</i>                    |
| fall webworm           | <i>Hyphantria</i> sp.                      |
| fall webworm           | <i>Pygarctia spraguei</i>                  |
| tiger moth             | <i>Halysidota (Halysidota) davisii</i>     |
| tiger moth             | <i>Halysidota (Halysidota) tessellaris</i> |
| tiger moth             | unknown Arctiidae                          |

Family: Noctuidae (owlet moths)

|                  |                                   |
|------------------|-----------------------------------|
| black witch moth | <i>Erebus (Ascalapha) odorata</i> |
| black witch moth | <i>Erebus</i> sp.                 |
| noctuid moth     | <i>Catocala</i> spp.              |
| noctuid moth     | <i>Xerociris wilsonii</i>         |
| noctuid moth     | unknown Noctuidae                 |

|                                                                                                                           |                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subfamily: Stiriinae<br>moth                                                                                              | <i>Stiria blanchardi</i>                                                                                                                                                    |
| Family: <u>Lymantriidae</u> (tussock moths)<br>tussock moth<br>tussock moth                                               | <i>Hemerocampa</i> spp.<br>unknown Lymantriidae                                                                                                                             |
| Family: <u>Sesiidae</u> (clear-winged moths)<br>clear-winged moth<br>wasp moth<br>clear-winged moth                       | <i>Aegeria</i> sp.<br>unknown Sesiidae<br>unknown Sesiidae                                                                                                                  |
| Family: <u>Acrolophidae</u> (clothes moths)<br>cloths moth                                                                | <i>Acrolophus</i> sp.                                                                                                                                                       |
| Family: <u>Prodoxidae</u> (yucca moths)<br>yucca moth                                                                     | <i>Mesepiola specca</i>                                                                                                                                                     |
| Order: <b>DIPTERA</b> (flies)                                                                                             |                                                                                                                                                                             |
| Suborder: <b>Nematocera</b>                                                                                               |                                                                                                                                                                             |
| Family: <u>Tipulidae</u> (crane flies)<br>crane fly                                                                       | <i>Holorusia grandis</i>                                                                                                                                                    |
| Family: <u>Culicidae</u> (mosquitoes)<br>mosquito<br>mosquito<br>mosquito<br>mosquito<br>mosquito<br>mosquito<br>mosquito | <i>Culex stigmatosoma</i><br><i>Culex</i> sp.<br><i>Aedes vexans</i><br><i>Aedes</i> sp.<br><i>Psorophora ciliata</i><br><i>Psorophora signipennis</i><br>unknown Culicidae |
| Family: <u>Chironomidae</u> (true midges)<br>midge                                                                        | <i>Chrionomus decorus</i>                                                                                                                                                   |
| Subfamily: Tanypodinae (Procladiini)<br>no common name                                                                    | <i>Procladius</i> sp.                                                                                                                                                       |
| Subfamily: Tanypodinae (Pentaneurini)<br>no common name<br>no common name<br>no common name                               | <i>Ablabesmyia</i> sp.<br><i>Labrundinia</i> sp.<br><i>Paramerina</i> sp.                                                                                                   |
| Subfamily: Orthocladiinae (Corynoneurini)<br>no common name<br>no common name                                             | <i>Corynoneura</i> sp.<br><i>Thienemanniella</i> sp.                                                                                                                        |
| Subfamily: Orthocladiinae (Orthocladiini/Metrioctenini)<br>no common name<br>no common name                               | <i>Cricotopus</i> sp.<br><i>Limnophyes</i> sp.                                                                                                                              |
| Subfamily: Chironominae (Chrionomini)<br>no common name<br>no common name                                                 | <i>Dicrotendipes</i> sp.<br><i>Lauterborniella</i> sp.                                                                                                                      |



|                                                   |                               |
|---------------------------------------------------|-------------------------------|
| no common name                                    | <i>Paratendipes</i> sp.       |
| no common name                                    | <i>Phaenopsectra</i> sp.      |
| no common name                                    | <i>Polypedilum</i> sp.        |
| Subfamily: Orthocladiinae (Tanytarsini)           |                               |
| no common name                                    | <i>Micropsectra</i> sp.       |
| no common name                                    | <i>Nimbocera</i> sp.          |
| no common name                                    | <i>Paratanytarsus</i> sp.     |
| no common name                                    | <i>Rheotanytarsus</i> sp.     |
| no common name                                    | <i>Stempellinella</i> sp.     |
| no common name                                    | <i>Tanytarsus</i> A           |
| no common name                                    | <i>Tanytarsus</i> B           |
| no common name                                    | <i>Tanytarsus</i> C           |
| <u>Family: Simuliidae</u> (black flies)           |                               |
| black fly                                         | <i>Simulium vittatum</i>      |
| <u>Family: Mycetophilidae</u> (fungus gnats)      |                               |
| fungus gnat                                       | <i>Rhymosia</i> spp.          |
| <u>Family: Cecidomyiidae</u> (gall gnats)         |                               |
| gall gnat                                         | unknown Cecidomyiidae         |
| Suborder: <b>Brachycera</b>                       |                               |
| <u>Family: Stratiomyidae</u> (soldier flies)      |                               |
| soldier fly                                       | <i>Hoplitimyia constans</i>   |
| soldier fly                                       | <i>Hedriodiscus truquii</i>   |
| <u>Family: Scenopinidae</u> (window flies)        |                               |
| window fly                                        | <i>Scenopinus fenestralis</i> |
| <u>Family: Asilidae</u> (robber flies)            |                               |
| robber fly                                        | <i>Diogmites</i> spp.         |
| robber fly                                        | <i>Promachus magnus</i>       |
| robber fly                                        | <i>Promachus</i> sp.          |
| robber fly                                        | <i>Asilus</i> sp.             |
| robber fly                                        | <i>Erax</i> spp.              |
| robber fly                                        | unknown species               |
| <u>Family: Bombyliidae</u> (bee flies)            |                               |
| bee fly                                           | <i>Exoprosopa capucina</i>    |
| bee fly                                           | <i>Paravilla</i> sp.          |
| bee fly                                           | <i>Lepidanthrax</i> sp.       |
| bee fly                                           | <i>Anastoechus nitidulus</i>  |
| bee fly                                           | <i>Anastoechus</i> sp.        |
| bee fly                                           | unknown Bombyliidae           |
| <u>Family: Dolichopodidae</u> (long-legged flies) |                               |
| long-legged fly                                   | <i>Sympycans hastatus</i>     |
| long-legged fly                                   | <i>Paraclius</i> spp.         |
| long-legged fly                                   | <i>Plagioneurus</i> sp.       |
| long-legged fly                                   | unknown Dolichopodidae        |

Suborder: **Cyclorrhapha**

Family: Phoridae (humpbacked flies)  
humpbacked fly

*Diplonevra* sp.

Family: Syrphidae (syrphid flies)

syrphid fly  
syrphid fly  
syrphid fly  
syrphid fly  
syrphid fly  
syrphid fly  
syrphid fly  
syrphid fly  
syrphid fly  
syrphid fly

*Volucella avida*  
*Volucella haagii*  
*Volucella caudate*  
*Volucella satur*  
*Volucella marginata*  
*Volucella* sp.  
*Allograpta obliqua*  
*Tubifera latifrons*  
*Mesogramma polita*  
(*Esuriens* sp. ?)

Family: Otitidae (picture-winged flies)  
picture-winged fly

*Paroedopa punctigera*

Family: Tephritidae (fruit flies)  
fruit fly

unknown Tephritidae

Family: Sepsidae (black scavenger flies)  
black scavenger fly

*Sepsis* spp.

Family: Heleomyzidae (heleomyzid flies)  
no common name

*Suillia barberi*

Family: Ephydriidae (shore flies)  
shore fly  
shore fly

*Parydra appendiculata*  
(*Paracatela trisetata* ?)

Family: Anthomyiidae (anthomyiid flies)  
anthomyiid fly

*Pegomya longimana*

Family: Muscidae (muscid flies)  
little house fly  
muscid fly  
dump fly  
muscid fly  
muscid fly  
seedcorn maggot

*Fannia canicularis*  
*Phaonia* sp.  
*Ophyra leucostoma*  
*Helina* sp.  
*Coenosia* sp.  
*Hylemya cilicrura*

Family: Tachinidae (tachinid flies)

tachinid fly  
tachinid fly  
tachinid fly  
tachinid fly  
tachinid fly  
tachinid fly  
tachinid fly  
tachinid fly

*Acantholespesia comstocki*  
*Ptilodexia* spp.  
*Paradidyma singularis*  
*Nemorilla floralis*  
*Euphorocera tachinomoides*  
*Peleteria* sp.  
*Microphthalma disjuncta*  
*Belvosia bifasciata*

|                                                          |                                         |
|----------------------------------------------------------|-----------------------------------------|
| Family: <u>Calliphoridae</u> (blow flies)                |                                         |
| blow fly                                                 | <i>Calliphora vicina</i>                |
| blow fly                                                 | <i>Phormia regina</i>                   |
| blow fly                                                 | <i>Aldrichina grahami</i>               |
| screwworm fly                                            | <i>Callitroga macellaria</i>            |
| Family: <u>Sarcophagidae</u> (flesh flies)               |                                         |
| flesh fly (grasshopper maggot)                           | <i>Sarcophaga kellyi</i>                |
| flesh fly                                                | <i>Sarcophaga plinthopyga</i>           |
| Family: <u>Sphaeroceridae</u> (small dung flies)         |                                         |
| small dung fly                                           | <i>Leptocera fontinalis</i>             |
| small dung fly                                           | <i>Leptocera</i> sp.                    |
| Order: <b>SIPHONAPTERA</b> (fleas)                       |                                         |
| flea                                                     | unknown Siphonaptera                    |
| flea                                                     | ( <i>Sternopsyllus texanus</i> ?)       |
| Family: <u>Pulicidae</u> (common fleas)                  |                                         |
| human flea                                               | <i>Pulex irritans</i>                   |
| flea                                                     | unknown Pulicidae                       |
| Order: <b>HYMENOPTERA</b> (ants, wasps, bees)            |                                         |
| Suborder: <b>Apocrita</b> (parasites, ants, wasps, bees) |                                         |
| Superfamily: Ichneumonoidea                              |                                         |
| Family: <u>Brachonidae</u> (braconids)                   |                                         |
| braconid wasp                                            | <i>Vipio</i> sp.                        |
| Superfamily: Bethyloidea                                 |                                         |
| Family: <u>Chrysididae</u> (cuckoo wasps)                |                                         |
| cuckoo wasp                                              | <i>Chrysis inflata</i>                  |
| Superfamily: Scoliioidea (ants and parasitic wasps)      |                                         |
| Family: <u>Scoliidae</u> (scoliid wasps)                 |                                         |
| scoliid wasp                                             | <i>Scolia</i> sp.                       |
| Family: <u>Mutillidae</u> (velvet ants)                  |                                         |
| velvet ant                                               | <i>Dasymutilla klugii</i>               |
| velvet ant                                               | <i>Dasymutilla creusa</i>               |
| velvet ant                                               | <i>Photopsis</i> sp.                    |
| velvet ant                                               | unknown Mutillidae                      |
| Family: <u>Formicidae</u> (ants)                         |                                         |
| army ant                                                 | <i>Neivamyrmex fuscipennis</i>          |
| army ant                                                 | <i>Neivamyrmex arizonense</i>           |
| army ant                                                 | <i>Neivamyrmex minor</i>                |
| western harvester ant                                    | <i>Pogonomyrmex occidentalis</i>        |
| red harvester ant                                        | <i>Pogonomyrmex barbatus</i>            |
| Subfamily: Dolichoderinae                                |                                         |
| velvety tree ant                                         | <i>Liometopum occidentale luctuosum</i> |

|                                                             |                                    |
|-------------------------------------------------------------|------------------------------------|
| Superfamily: Vespoidea (vespoid wasps)                      |                                    |
| <u>Family: Pompilidae</u> (spider wasps)                    |                                    |
| spider wasp                                                 | <i>Hemipepsis ustulata</i>         |
| spider wasp                                                 | <i>Hemipepsis</i> sp.              |
| spider wasp                                                 | <i>Pepsis angustimarginata</i>     |
| spider wasp                                                 | <i>Pepsis thisbe</i>               |
| tarantula wasp                                              | <i>Pepsis formosus</i>             |
| spider wasp                                                 | <i>Pepsis</i> sp.                  |
| <u>Family: Vespidae</u> (vespid wasps)                      |                                    |
| vespid wasp                                                 | <i>Stenodynerus toltecus</i>       |
| vespid wasp                                                 | <i>Stenodynerus superpendentis</i> |
| Subfamily: Eumeninae (potter wasps)                         |                                    |
| potter wasp                                                 | unknown Eumeninae                  |
| Subfamily: Polistinae (paper wasps)                         |                                    |
| paper wasp                                                  | <i>Polistes fuscatus texanus</i>   |
| paper wasp                                                  | <i>Polistes exclamans</i>          |
| paper wasp                                                  | <i>Polistes hunteri</i>            |
| paper wasp                                                  | <i>Polistes rubiginosus</i>        |
| Superfamily: Sphecoidea (sphecoid wasps)                    |                                    |
| <u>Family: Sphecidae</u> (sphecid wasps)                    |                                    |
| sphecid wasp                                                | unknown Sphecidae                  |
| Subfamily: Larrinae (sand-loving wasps)                     |                                    |
| sand-loving wasp                                            | <i>Tachytes sayi</i>               |
| Subfamily: Trypoxyloninae (organ-pipe mud-daubers)          |                                    |
| mud-daubers                                                 | unknown Trypoxyloninae             |
| Subfamily: Sphecinae (thread-waisted wasps)                 |                                    |
| thread-waisted wasp                                         | <i>Sphex aberti</i>                |
| thread-waisted wasp                                         | <i>Sphex breviceps</i>             |
| thread-waisted wasp                                         | <i>Sphex breviceps pruinosus</i>   |
| thread-waisted wasp                                         | <i>Sphex placidus</i>              |
| thread-waisted wasp                                         | <i>Sphex procerus</i>              |
| thread-waisted wasp                                         | <i>Chlorion elegans</i>            |
| thread-waisted wasp                                         | <i>Chlorion pubidorsum</i>         |
| thread-waisted wasp                                         | <i>Chlorion</i> sp.                |
| thread-waisted wasp                                         | <i>Sceliphron caementaria</i>      |
| thread-waisted wasp                                         | <i>Sceliphron</i> sp.              |
| thread-waisted wasp                                         | <i>Chalybion zimmermanni</i>       |
| thread-waisted wasp                                         | <i>Chalybion californicus</i>      |
| Subfamily: Nyssoninae                                       |                                    |
| cicada killer                                               | <i>Sphecius speciosus</i>          |
| Superfamily: Apoidea (bees)                                 |                                    |
| <u>Family: Colletidae</u> (yellow-faced and plasterer bees) |                                    |
| plasterer bee                                               | <i>Colletes</i> sp.                |

Family: Andredidae (andrenid bees)

andrenid bee

*Andrena mellea*

andrenid bee

*Andrena* spp.

andrenid bee

*Perdita megacephala*

Family: Halictidae (halictid bees)

halictid bee

*Agapostemon radiatus*

halictid bee

*Halictus (Lasioglossum) bardus*

halictid bee

*Halictus* spp.

Family: Megachilidae (leafcutting bees)

leafcutting bee

*Anthidium maculosum*

leafcutting bee

*Hemisia (morsei ?)*

leafcutting bee

*Megachile polcaris*

leafcutting bee

*Megachile texana*

leafcutting bee

*Lithurge apicalis*

leafcutting bee

unknown Megachilidae

Family: Apidae (bumble, honey bees)

honey bee

*Apis mellifera*

bumble bee

*Bombus* sp.

bee

*Centris caesalpinae*

Family: Anthophoridae (digger, cactus, carpenter bees)

bee

*Martinapis luteicornis*

cactus bee

*Diadasia australis*

cactus bee

*Diadasia rinconis*

digger bee

*Melissodes tristis*

digger bee

*Melissodes suffusa*

digger bee

*Exomalopsis solidaginis*

carpenter bee

*Xylocopa arizonensis*

digger bee

*Tetralonia* sp.

Carpenter bee on buckwheat flowers photo, NPS Photo by Kristin Dorman-Johnson.