

Raccoon River Watershed Arthropod List

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NOTE: Resources for identification include:

<http://bugguide.net/>

<http://magicicada.org/> for periodical cicadas

<http://insects.ummz.lsa.umich.edu/~ethanbr/aim/>

<http://www.iowaodes.com/> for dragonflies & damselflies

http://www.dnr.state.wi.us/org/es/science/publications/ss1008_2005.htm

<http://www.ipm.iastate.edu/ipm/iin/>

NOTE: The classification of arthropods is an ongoing matter of research. You will find that current entomologists do not always agree, and so several different taxonomies exist. The one in use here follows the system in use at the BugGuide web site for sake of simplicity & ease of access. The compiler of this list is not an arthropod taxonomist and claims no expertise in the arguments, methods, or merits regarding one system or another. The abbreviation "cf." indicates that the identification is tentative or that the individual observed resembles this taxon but is otherwise not certain.

Centipedes, class Chilopoda

Geophilus oweni

Millipedes, class Diplopoda

Amphipods

Scuds, Gammaridae (genus & species not identified), L LMS, various locations

Isopods

Woodlice (Pillbugs), Armadillidiidae (genus & species not identified) (widespread)

Mites & Ticks

Hard Ticks

American Dog Tick, *Dermacentor variabilis* (various locations, LMS)

Red Velvet Mite, *Eutrombidium* sp. (LMS, Clive)

Spiders

Nursery Web Spiders, Pisauridae

Dolomedes tenebrosus (Lower Raccoon, Des Moines, LMS)

Jumping Spiders, Salticidae

Maevia inclemens (Lower Raccoon, Des Moines, LMS)

Phidippus sp. (Lower Raccoon, Des Moines, LMS)

Phidippus audax (Lower Raccoon, Des Moines, LMS)

Phidippus cf. *clarus* (Whiterock Heater Farm, LMS)

Crab Spiders, Thomisidae

Goldenrod Crab Spider, *Misumena vatia* (Lower Raccoon, Des Moines, LMS)
Swift Crab Spider, *Mecaphesa celer* (Lower Raccoon, Des Moines; Dunbar Slough; LMS)
Ground Crab Spider, *Xysticus* sp. (Lower Raccoon, Des Moines, LMS)
Hentzia mitrata (Lower Raccoon, Des Moines, LMS)

Funnel-Web Spiders, Agelenidae

Agelenopsis sp. (Pleasant Valley WMA, LMS)

Orb Weavers, Araneidae

Yellow Garden Spider, *Argiope aurantia* (various locations, LMS)
Banded Garden Spider, *Argiope trifasciata*
Lined Orbweaver, *Mangora gibberosa*

Wolf Spiders, Lycosidae

Thin-Legged Wolf Spider, *Pardosa* sp. (Lower Raccoon, Des Moines, LMS)
Tigrosa helluo (Clive, LMS)

Cobweb Spiders, Theridiidae

Steatoda triangulosa (Lower Raccoon, Des Moines, LMS)

Harvestmen

Sclerosomatidae (Lower Raccoon, Des Moines, LMS)

Cockroaches & Termites (Blattodea)

Wood Cockroaches, Ectobiidae

Parcoblatta sp. (Lower Raccoon, Des Moines, LMS)

Subterranean Termites, Rhinotermitidae

Rhinotermites sp. (Lower Raccoon, Des Moines, LMS)

Stoneflies (Plecoptera)

Spring Stoneflies, Nemouridae

Paranemoura sp. (Lower Raccoon, Des Moines, LMS)

Common Stoneflies, Perlidae

Perlesta sp. (Lower Raccoon, Des Moines, LMS)

Mayflies (Ephemeroptera)

Burrowing Mayflies, Hexagenidae

Hexagenia sp. (Lower Raccoon, Des Moines, LMS)

Flat-Headed or Stream Mayflies, Heptageniidae

Heptagenia sp. (Lower Raccoon, Des Moines, LMS)
Maccaffertium sp. (Lower Raccoon, Des Moines, LMS)

Prong-Gilled Mayflies, Leptophlebiidae

Paraleptophlebia sp. (South Raccoon, LMS)

Crickets & Grasshoppers (Orthoptera)

Short-Horned Grasshoppers, Acrididae

Short-Horned Green Grasshopper, *Dichromorpha viridis*
Differential Grasshopper, *Melanoplus differentialis* (various locations, LMS)
Migratory Grasshopper, *Melanoplus sanguinipes* (Des Moines, LMS)
Carolina Grasshopper, *Dissosteira Carolina* (various locations, LMS)

Katydids, Tettigoniidae

Common Meadow Katydid, *Orchelimum vulgare* (Des Moines, LMS)
Ceuthophilus sp. (Clive, LMS)

Mantises (Mantodea)

Chinese Mantis, *Tenodera aridifolia* (exotic) (Grimes, LMS)

Walkingsticks (Phasmida)

Diapheromeridae

Northern Walkingstick, *Diapheromera femorata*

Earwigs (Dermaptera)

European Earwig, *Forficula auricularia* (exotic) (Des Moines, LMS)

True Bugs, Cicadas, Hoppers (Hemiptera)

Phylloxerans, Phylloxeridae

Grape Leaf Gall, caused by Grape Phylloxera, *Daktulosphaira vitifoliae*

Jumping Plant Lice, Psyllidae

Hackberry Nipplegall Maker, *Pachypsylla celtidismamma* (Lower Raccoon, Des Moines, LMS)

Hackberry Blister Gall, *Pachypsylla celtidisvesicula* (Lower Raccoon, Des Moines, LMS)

Spittlebugs, Cercopidae (genus & species not identified), various locations, L LMS

Lepyronia sp. (Lower Raccoon, Des Moines, LMS)

Leafhoppers, Cicadellidae

Gyponana geminata (Lower Raccoon, Des Moines, LMS)

Paraphlepsius sp. (Lower Raccoon, Des Moines, LMS)

Ponana pectoralis (Lower Raccoon, Des Moines, LMS)

Ponana puncticollis (Lower Raccoon, Des Moines, LMS)

Red-Banded Leafhopper, *Graphicephala coccinea* (Lower Raccoon, Des Moines, LMS)

Draeculacephala zae (Lower Raccoon, Des Moines, LMS)

Grape Leafhopper, *Erythroneura comes* (Lower Raccoon, Des Moines, LMS)

Treehoppers, Membracidae

Cf. *Ceresa* sp. (Lower Raccoon, Des Moines, LMS)

Cyrtolobus discoidalis (Whiterock, LMS)

Echenopa sp. (Lower Raccoon, Des Moines, LMS)

Planthoppers, Acanaloniidae

Acanalonia servillei

Cicadas

Thirteen-Year Cicada, *Magicicada* cf. *tredecassini* (Lower Raccoon, Des Moines, LMS)

Seventeen-Year Cicada, *Magicicada septendecim* (Lower Raccoon, Des Moines, & Pleasant Valley, LMS)

Seventeen-Year Cicada, *Magicicada cassini* (Lower Raccoon, Des Moines, & Pleasant Valley, LMS)

Annual Cicada, *Tibicen pruinosus* (Lower Raccoon, Des Moines, LMS)

Shore Bugs, Saldidae (Lower Raccoon, Des Moines, LMS)

Broad-Headed Bugs

Alydus sp. (Lower Raccoon, Des Moines, LMS)

Water Striders

Water Strider, *Gerris* sp. (Des Moines, LMS)

Water Strider, *Aquarius* sp. (Des Moines, LMS)

Minute Pirate Bugs

Orius insidiosus

Leaf-Footed Bugs, Coreidae

Helmeted Squash Bug, *Euthochtha galeator* (Des Moines, LMS)

Seed Bugs, Lygaeidae

Large Milkweed Bug, *Oncopeltus fasciatus* (Des Moines, LMS)

Long-Necked Seed Bug, *Myodocha serripes*

False Chinch Bug, *Nysius* sp. (Lower Raccoon, Des Moines, LMS)

Dirt-Colored Seed Bugs, Rhyparochromidae

Long-Necked Seed Bug, *Myodocha serripes* (Lower Raccoon, Des Moines, LMS)

Stinkless Plant Bugs

Eastern Boxelder Bug, *Boisea trivittata* (various locations, LMS)

Plant Bugs, Miridae

Tarnished Plant Bug, *Lygus lineolaris* (Lower Raccoon, Des Moines, LMS)

Metriorrhynchomiris dislocatus (Pleasant Valley, LMS)

Two-spotted Grass Bug, *Stenotus binotatus* (Lower Raccoon, Des Moines, LMS)

Four-Lined Plant Bug, *Poecilocapsus lineatus* (Lower Raccoon, Des Moines, LMS)

Damselbugs, Nabidae

Nabis sp. (Lower Raccoon, Des Moines, LMS)

Stilt Bugs, Berytidae

Jalysus sp. (Lower Raccoon, Des Moines, LMS)

Burrower Bugs, Cydnidae

White-Margined Burrower Bug, *Sehirus cinctus*

Stink Bugs, Pentatomidae

Apoecilus cynicus

Green Stink Bug, *Chinavia hilaris* (Whiterock, LMS)

Dusky Stink Bug, *Euschistus tristigmus* (Des Moines, LMS)

Negro Bugs, Thyreocoridae

Galgupha sp. (Lower Raccoon, Des Moines, LMS)

Assassin Bugs, Reduviidae

Zelus tetracanthus (Des Moines, LMS)

Water Boatmen (Corixidae) (genus & species not identified) (Des Moines, LMS)

Aphids (Aphididae)

Oleander Aphid, *Aphis neri* (invasive)

Sunflower Aphid, *Uroleucon* sp. (on *Silphium perfoliatum*)

Damselflies & Dragonflies (Odonota)

Damselflies, Zygoptera

Ebony Jewelwing, *Calopteryx maculata* (various locations, LMS)

Familiar Bluet, *Enallagma civile* (various locations, LMS)

Blue-Fronted Dancer, *Argia apicalis*

American Rubyspot, *Hetairina Americana*

Eastern Forktail, *Ischnura verticalis* (Whiterock, LMS)

Dragonflies, Anisoptera

Common Green Darner, *Anax junius* (various locations, LMS)
Canada Darner, *Aeshna constricta*
Shadow Darner, *Aeshna umbrosa*
Fawn Darner, *Boyeria vinosa*
Horned Clubtail, *Arigomphus cornutus*
Plains Clubtail, *Gomphus externus* (Coon Rapids, LMS)
Common Sanddragon, *Progomphus obscurus*
Riverine Clubtail, *Stylurus ampicola*
Elusive Clubtail, *Stylurus notatus*
Russet-Tipped Clubtail, *Stylurus plagiatus*
Common Baskettail, *Epitheca cynosura*
Prince Baskettail, *Epitheca princeps* (Greenwood Pond, Des Moines, LMS; Delaney Cabin, Dallas, Miller)
Plains Emerald, *Somatochlora ensigera*
Halloween Pennant, *Celithemis eponina*
Widow Skimmer, *Libellula luctuosa* (various locations, LMS)
Twelve-Spotted Skimmer, *Libellula pulchella* (various locations, LMS)
Wandering Glider, *Pantala flavescens*
Black Saddlebags, *Tramea lacerate* (Voas NC, LMS)
Red Saddlebags, *Tramea onusta*
Variegated Meadowhawk, *Sympetrum corruptum*
Saffron-Winged Meadowhawk, *Sympetrum costiferum*
Cherry-Faced Meadowhawk, *Sympetrum internum*
White-Faced Meadowhawk, *Sympetrum obtrusum*
Band-Winged Meadowhawk, *Sympetrum semicinatum*
Ruby Meadowhawk, *Sympetrum rubicundulum*
Autumn Meadowhawk, *Sympetrum vicinum*
Eastern Pondhawk, *Erythemis simplicicollis* (Whiterock, LMS)
Dot-Tailed Whiteface, *Leucorrhinia intacta* (Whiterock, LMS)
Blue Dasher, *Pachydiplax longipennis*
Eastern Amberwing, *Perithemis tenera*
Common Whitetail, *Plathemis lydia* (widespread)

Dobsonflies & Lacewings (Neuroptera)

Lacewings, Chrysopidae and Hemerobiidae

Golden-Eyed Lacewing, *Chrysopa oculata* (various locations, LMS)
Chrysoperla rufilabris (Lower Raccoon, Des Moines, LMS)
Brown Lacewing, *Hemerobius* sp. (Lower Raccoon, Des Moines, LMS)
Brown Lacewing, *Micromus posticus* (Lower Raccoon, Des Moines, LMS)

Dobsonflies, Corydalidae

Spring Fishfly, *Chauliodes rastricornis* (Whiterock, LMS)
Dobsonfly, *Corydalis* sp. (Lower Raccoon, Des Moines, LMS)

Beetles (Coleoptera)

Ground Beetles, Carabidae

Seedcorn Beetle, *Stenolophus comma*

Stenolophus ochropezus (Lower Raccoon, Des Moines, LMS)

Six-Spotted Tiger Beetle, *Cicindela* cf. *sexguttata* (widespread)

Sand Tiger Beetle, *Cicindela formosa generosa* (Lower Walnut Creek, Des Moines; Long Creek/Whiterock; LMS)

Paraclivina bipustulata (Lower Raccoon, Des Moines, LMS)

Pterostichus sp. (Lower Raccoon, Des Moines, LMS)

Scarites vicinus (Lower Raccoon, Des Moines, LMS)

Bembidion sp. (N. Walnut Creek, Clive, LMS)

Flat-Horned Ground Beetle, *Helluomorphoides nigripennis* (Lower Raccoon, Des Moines, LMS)

Predaceous Diving Beetles, Dytiscidae

Cybister fibriolatus

Dytiscus sp.

Lady Beetles, Coccinellidae

Asian Lady Beetle, *Harmonia axiridis* (exotic) (various locations, LMS)

Convergent Lady Beetle, *Hippodamia convergens* (Lower Raccoon, Des Moines, LMS)

Sap-Feeding Beetles, Nitidulidae

Carpophilus sp. (Lower Raccoon, Des Moines, LMS)

Cryptarcha ampla (Lower Raccoon, Des Moines, LMS)

Picnic Beetle, *Glischrochilus fasciatus* (Lower Raccoon, Des Moines, LMS)

Pleasing Fungus Beetles, Erotylidae

Four-Spotted Fungus Beetle, *Ischyryus quadripunctatus* (Lower Raccoon, Des Moines, LMS)

Carrion Beetles, Silphidae

Margined Carrion Beetle, *Oiceoptoma noveboracensis* (Pleasant Valley, LMS)

Carpet Beetles, Dermestidae

Varied Carpet Beetle, *Anthrenus verbasci* (Lower Raccoon, Des Moines, LMS)

Long-Horned Beetles, Cerambycidae

Twig Pruner, *Anelaphus* cf. *villosus* (Lower Raccoon, Des Moines, LMS)

Elytrimitatrix undata (Lower Raccoon, Des Moines, LMS)

Astyleiopus variegatus

Orthosoma brunneum (Lower Raccoon, Des Moines, LMS)

Leptostylus sp. (Lower Raccoon, Des Moines, LMS)

Batyle sp. (Lower Raccoon, Des Moines, LMS)

Elm Borer, *Saperda tridentata*

Leaf Beetles, Chrysomelidae

Dogbane Beetle, *Chrysochus auratus* (Angus Prairie Remnant, Delaney; Water Works, Des Moines, LMS)

Striped Cucumber Beetle, *Acalymma vittatum* (widespread)

Spotted Cucumber Beetle, *Diabrotica undecimpunctata* (widespread)

Redbud Weevil, *Gibbobruchus mimus* (Lower Raccoon, Des Moines, LMS)

Amblycerus robiniae (Lower Raccoon, Des Moines, LMS)

Sunflower Beetle, *Zypogramma exclamationis* (Whiterock, LMS)

Soldier Beetles, Chauliognathidae

Margined Soldier Beetle, *Chauliognathus marginatus*

Goldenrod Soldier Beetle, *Chauliognathus pennsylvanicus* (widespread)

Podabrus appendiculatus (Lower Raccoon, Des Moines, LMS)

Podabrus flavicollis (Lower Raccoon, Des Moines, LMS)

Lightning Beetles, Lampyridae

Eastern Firefly, *Photinus pyralis* (Lower Raccoon, Des Moines, LMS)

Photuris sp. (Lower Raccoon, Des Moines, LMS)

Pyropyga sp. (Lower Raccoon, Des Moines, LMS)

Click Beetles, Elateridae

Melanotus sp. (Lower Raccoon, Des Moines, LMS)

Hemicrepidius sp.

Stag Beetles, Lucanidae

Dorcus parallelus (Lower Raccoon, Des Moines, LMS)

Lucanus capreolus (Van Meter, Freese; Lower Raccoon, Des Moines, LMS)

Platycerus virescens (Lower Raccoon, Des Moines, LMS)

Hide Beetles, Trogidae

Trox spinulosus (Van Meter, Freese)

Trox tuberculatus, (Van Meter, Freese)

Omorgus suberosus (Van Meter, Freese)

Scarab Beetles, Scarabaeidae

Aphodiine Dung Beetles, Aphodiinae

Aphodius sp. (Whiterock, LMS)

Aphodius (Stenotothorax) badipes, coll. Mar. 15, 2012, at lights, 2.5 mi. NE of Van Meter (E Freese)

Rhinoceros & Chafer Beetles, Dynastinae

Masked Chafer, *Cyclocephala* sp. (Van Meter, Freese; Lower Raccoon, Des Moines, LMS)

Sugarcane Beetle, *Eutheola humilis rugiceps* (Van Meter, Freese)

Fruit & Flower Chafers, Cetoniinae

Osmoderma subplanata (Van Meter, Freese)

May & June Beetles, Melolonthinae

Phyllophaga sp. (widespread)

Phyllophaga balia (Van Meter, Freese)

Phyllophaga crassissima, (Van Meter, Freese)

Phyllophaga drakei (Van Meter, Freese)

Phyllophaga fusca (Van Meter, Freese)

Phyllophaga hornii (Van Meter, Freese)

Phyllophaga rugosa (Van Meter, Freese)

Phyllophaga vehemens (Van Meter, Freese)

Diplotaxis blanchardi (Van Meter, Freese)

Diplotaxis harperi, coll. June 25, 2007, at light, 2.5 mi. NE of Van Meter (E Freese)

Serica campestris, coll. April 27, 2007, at lights, 2.5 mi. NE of Van Meter (E Freese)

Serica sericea, coll. June 25, 2007, 2.5 mi. NE of Van Meter (E Freese)

Dichelonyx linearis, coll. May 27, 2012, at lights, 2.5 mi. NE of Van Meter (E Freese)

Dichelonyx subvittata, coll. June 17, 2010, at lights, 2.5 mi. NE of Van Meter (E Freese)

Shining Leaf Chafers, Rutelinae

Japanese Beetle, *Popillia japonica* (widespread)

Strigoderma sp. (Tipton Prairie, Greene, LMS)

Dung & Tumble Beetles, Aphodiinae & Scarabaeinae

Phanaeus sp. (Lower Raccoon, Des Moines, LMS)

Ataenius texanus, coll. May 24, 2008, at lights, 2.5 mi. NE of Van Meter (E Freese)

Scavenger Scarab Beetles, Hybosoridae

Pill Scarab Beetle, *Germarostes* sp. (Lower Raccoon, Des Moines, LMS)

Darkling Beetles, Tenebrionidae

Strongylium sp. (Lower Raccoon, Des Moines, LMS)

Diaperis maculata (Whiterock, LMS)

False Mealworm Beetle, *Alobates pensylvanica* (Lower Raccoon, Des Moines, LMS)

Neatus sp. (Lower Raccoon, Des Moines, LMS)

Platydema sp. (Lower Raccoon, Des Moines, LMS)

Tumbling Flower Beetles, Mordellidae

Mordella marginata (Lower Raccoon, Des Moines, LMS)

Wedge-Shaped Beetles, Rhipiphoridae

Macrosiagon limbata (Lower Raccoon, Des Moines, LMS)

Metallic Wood-Boring Beetles, Buprestidae

Agrilus sp. (similar to female *A. juglandis*) (Lower Raccoon, Des Moines, LMS)

Blister Beetles

Black Blister Beetle, *Epicauta pensylvanica*

False Blister Beetles, Oedemeridae

Oxaxis sp. (Grant Park, Sac, Miller)

Primitive Weevils, Brentidae

Oak Timberworm, *Arrhenodes minutus*

Weevils, Cucurlionidae

Cocklebur Weevil, *Rhodobaenus quinquepunctatus* (Lower Raccoon, Des Moines, LMS)

Glocianus punctiger (Lower Raccoon, Des Moines, LMS)

Anthonomus sp. (Whiterock, LMS)

Baris sp. (Lower Raccoon, Des Moines, & Pleasant Valley; LMS)

Lignyodes sp.

Caddisflies (Trichoptera)

Net-Spinning Caddisflies, Hydropsychidae

Potamyia flava (tentative ID, Lower Raccoon, Des Moines, LMS)

Hydropsyche sp.

Long-Horned Caddisflies, Leptoceridae

White Miller, *Nectopsyche* sp.

Snail-Case Caddisfly, Helicopsychidae (species not IDed)

Northern Caddisfly, Limnephilidae (species not IDed; Lower Raccoon, Des Moines, LMS)

Flies & Midges (Diptera)

Mosquitoes

Aedes sp.

Ochlerotatus sp.

Midges, Chironomidae

Axarus sp. (Des Moines, LMS)

Chironomus sp. (Des Moines, LMS)

Subfamily *Orthoclaadiinae* (Des Moines, LMS)

Crane Flies, Tipulidae

Band-Winged Crane Fly, *Epiphragma fasciapenne* (Lower Raccoon, Des Moines, LMS)

Tiger Crane Fly, *Nephrotoma* sp. (Lower Raccoon, Des Moines, LMS)

Tipula sp. (Lower Raccoon, Des Moines, LMS)

Filter, Moth, & Sand Flies, Psychodidae

Filter or Moth Fly, *Clogmia* sp. (Lower Raccoon, Des Moines, LMS)

Leaf Miner Flies, Agromyzidae

Calycomyza malvae (Lower Raccoon, Des Moines, LMS)

Gall Midges, Cecidomyiidae

Asphondylia rudbeckiaeconspicua (Des Moines, LMS)

Fruit Flies, Tephritidae

Goldenrod Gall Fly, *Eurosta solidaginis*

Vinegar Flies, Drosophilidae

Amiota sp. (Lower Raccoon, Des Moines, LMS)

Frit Flies, Chloropidae

Chlorops sp. (Lower Raccoon, Des Moines, LMS)

Thaumatomyia rubida (Lower Raccoon, Des Moines, LMS)

Freeloader Flies, Milichiidae

Desmometopa sp. (Lower Raccoon, Des Moines, LMS)

Black Scavenger Flies, Sepsidae

Sepsis punctum (Lower Raccoon, Des Moines, LMS)

Bee Flies, Bombyliidae

Anthrax irroratus

Systoechus vulgaris (Whiterock, LMS)

Villa lateralis (Des Moines, LMS)

Long-Legged Flies, Dolichopodidae

Condylostylus sp. (Des Moines, LMS)

Dolichopus group *eudactylus* (Pleasant Valley, LMS)

Soldier Flies, Stratiomyidae

Sargus elegans (Des Moines, LMS)

Picture-Winged Flies, Ulidiidae

Delphinia picta (Middle Raccoon, Coon Rapids & Lower Raccoon, Des Moines; LMS)

Euxesta notata (Lower Raccoon, Des Moines; LMS)

Mydas Flies, Mydidae

Mydas clavatus (Lower Raccoon, Des Moines; LMS)

Syrphid (Flower & Hover) Flies, Syrphidae

Common Oblique Syrphid, *Allograpta obliqua*

Transverse Flower Fly, *Eristalis transversa* (Lower Raccoon, Des Moines, LMS)

Eristalis arbustorum (exotic) (Lower Raccoon, Des Moines, LMS)

Eristalis dimidiata (Lower Raccoon, Des Moines, LMS)

Drone Fly, *Eristalis tenax* (Lower Raccoon, Des Moines, LMS)

Bird Hover Fly, *Eupeodes volucris* (Lower Raccoon, Des Moines, LMS)

Heliophilus fasciatus (Lower Raccoon, Des Moines, LMS)

Toxomerus geminatus (Lower Raccoon, Des Moines, LMS)

Toxomerus marginatus (Lower Raccoon, Des Moines, LMS)

Palpada sp. (Lower Raccoon, Des Moines, LMS)

Platycheirus sp. (Lower Raccoon, Des Moines, LMS)

Syrirta pipiens (Lower Raccoon, Des Moines, LMS)

Thick-Headed Flies

Physocephala tibialis (Lower Raccoon, Des Moines, LMS)

Root-Maggot Flies, Anthomyiidae

Anthomya cf. *illocata* (exotic) (Lower Raccoon, Des Moines, LMS)

Eutrichota sp. (Lower Raccoon, Des Moines, LMS)

Blow Flies, Calliphoridae

Greenbottle Fly, *Lucilia* sp., various locations, L LMS

Cynomya cadaverina

Blue Blowfly, *Calliphora vicina* (Lower Raccoon, Des Moines, LMS)

Flesh Flies, (Sarcophagidae)

Sarcophaga sp. (Lower Raccoon, Des Moines, LMS)

Ravinia sp. (Lower Raccoon, Des Moines, LMS)

Muscid Flies, Muscidae

House Fly, *Musca domestica* (exotic) (Lower Raccoon, Des Moines, LMS)

Phaonia sp. (Lower Raccoon, Des Moines, LMS)

Tachinid Flies, Tachinidae

Archytas apicifer (Lower Raccoon, Des Moines, LMS)

Cylindromyia sp. (Tipton Prairie, LMS)

Xanthomelanodes sp. (Lower Raccoon, Des Moines, LMS)

Trichopoda sp. (Lower Raccoon, Des Moines, LMS)

Cf. *Zelia* sp. (Lower Raccoon, Des Moines, LMS)

Snipe Flies, Rhagionidae

Ornate Snipe Fly, *Chrysopilus ornatus* (Lower Raccoon, Des Moines, LMS)

Butterflies, Skippers, & Moths (Lepidoptera)

Butterflies, Papilionoidea

Swallowtails, Papilionidae

Eastern Tiger Swallowtail, *Papilio glaucus* (Lower Raccoon, Des Moines, LMS)

Black Swallowtail, *Papilio polyxenes* (Des Moines, Whiterock; LMS)

Giant Swallowtail, *Papilio cresphontes* (Whiterock, LMS)

Whites & Sulphurs, Pieridae

Clouded Sulfur, *Colias philodice* (widespread)

Orange Sulfur, *Colias eurytheme* (widespread)

Dainty Sulfur, *Nathalis iole*

Little Sulfur, *Eurema lisa*

Checkered White, *Pontia protodice* (Whiterock, LMS)

Cabbage Butterfly, *Pieris rapae* (exotic) (widespread)

Gossamer-Winged Butterflies, Lycaenidae

Eastern Tailed Blue, *Everes comyntas* (*Cupido comyntas*) (widespread)

Summer Azure, *Celastrina ladon neglecta*

Gray Hairstreak, *Strymon melinus*

Brush-Footed Butterflies, Nymphalidae

Meadow Fritillary, *Boloria bellona* (Whiterock, LMS)

Great Spangled Fritillary, *Speyeria cybele* (Whiterock, Pleasant Valley; LMS)

Pearl Crescent, *Phycioides tharos* (widespread)

Gorgone Checkerspot, *Chlosyne gorgone* (Whiterock, LMS)

Question Mark, *Polygonia interrogationis* (Des Moines, LMS)

Eastern Comma, *Polygonia comma* (Lower Raccoon, Des Moines; Pleasant Valley; LMS)

Mourning Cloak, *Nymphalis antiopa* (widespread)
Painted Lady, *Vanessa cardui* (Lower Raccoon, Des Moines, LMS)
American Lady, *Vanessa virginiensis* (Lower Raccoon, Des Moines; Pleasant Valley; LMS)
Red Admiral, *Vanessa atalanta* (widespread)
Common Buckeye, *Junonia coenia* (widespread)
Hackberry Emperor, *Asterocampa celtis* (Squirrel Hollow & Pleasant Valley, LMS)
Viceroy, *Limenitis archippus*
American Snout, *Libytheana carinenta* (Des Moines, Whiterock; LMS)
Monarch, *Danaus plexippus* (various locations, LMS)

Skippers (Hesperiodea/Hesperiidae)

Spread-Wing Skippers, Pyrginae

Wild Indigo Duskywing, *Erynnis baptisiae*
Juvenal's Duskywing, *Erynnis juvenalis*
Common Sootywing, *Pholisora catullus* (Lower Raccoon, Des Moines, LMS)

Grass Skippers, Hesperinae

Least Skipper, *Ancyloxypha numitor* (Lower Raccoon, Des Moines, LMS)
Fiery Skipper, *Hylephila phyleus* (Lower Raccoon, Des Moines, LMS)
Dun Skipper, *Euphyes vestries* (Whiterock, Durbin)
Sachem, *Atalopedes campestris* (Lower Raccoon, Des Moines, LMS)
Leonard's Skipper, *Hesperia leonardus*
Crossline Skipper, *Polites origenes*
Tawny-Edged Skipper, *Polites themistocles*

Dicot Skippers, Eudaminae

Silver-Spotted Skipper, *Epargyreus clarus* (various locations, LMS)

MOTHS

Zygaenoidea

Slug Moths, Limacodidae

Yellow-Collared Slug Moth, *Apoda y-inversum*
Yellow-Shouldered Slug Moth, *Lithacodes fasciola*

Gelechioidea

Scavenger Moths, Blastobasidae (genus not confirmed; Lower Raccoon, Des Moines, LMS)

Tortricodea

Tortricid Moths, Tortricidae

Acleris schalleriana (Lower Raccoon, Des Moines, LMS)
Triangle-Backed Eucosma, *Eucosma dorsisignatana* (Whiterock, LMS)
Eucosma similiana (Lower Raccoon, Des Moines, LMS)
Biden's Borer, *Epiblema otiosana* (Whiterock, LMS)
Shattered Ancylys, *Ancylys diminutana* (Lower Raccoon, Des Moines, LMS)
Shining Olethreutes, *Olethreutes nitidana* (Pleasant Valley, LMS)

Pyralid Moths (Pyraloidea)

Crambidae

Biden's Grass-Veneer, *Crambus bidens* (Lower Raccoon, Des Moines, LMS)
Common Grass-Veneer, *Crambus praefectellus* (Lower Raccoon, Des Moines, LMS)
Double-Banded Grass-Veneer, *Crambus agitatellus* (Whiterock, LMS)
Eastern Grass-Veneer, *Crambus laqueatellus* (Lower Raccoon, Des Moines, LMS)
Topiary Grass-Veneer, *Chrysoteuchia topiaries* (Tipton Prairie, LMS)

Mottled Grass-Veneer, *Neodactria luteolellus* (Lower Raccoon, Des Moines, LMS)
Sod Webworm, *Pediasia trisecta* (Lower Raccoon, Des Moines, LMS)
Changeable Grass-Veneer, *Fissicrambus mutabilis* (Lower Raccoon, Des Moines, LMS)
Belted Grass-Veneer, *Euchromius ocellus* (Lower Raccoon, Des Moines, LMS)
Clover Hayworm, *Hypsopygia costalis*
European Corn Borer, *Ostrinia nubilalis* (Lower Raccoon, Des Moines, LMS)
Orange Mint Moth, *Pyrausta orphisalis*
Celery Leaf-tier, *Udea rubigalis* (Lower Raccoon, Des Moines, LMS)
Dimorphic Tosale, *Tosale oviplagalis* (Lower Raccoon, Des Moines, LMS)
Genista Broom Moth, *Uresiphita reversalis*
Lucerne Moth, *Nomophila nearctica* (Lower Raccoon, Des Moines, LMS)
Bold-Feathered Grass Moth, *Herpetogramma pertextalis*

Pyralidae

Meal Moth, *Pyralis farinalis* (exotic) (Lower Raccoon, Des Moines, LMS)
Indian Meal Moth, *Plodia interpunctella* (exotic) (Lower Raccoon, Des Moines, LMS)

Geometer Moths, Geometroidea

Carpets, Pugs, Waves, Emeralds, Angles, Grays, *Geometridae*

Lesser Grapevine Looper, *Eulithis diversilineata*
Greater Grapevine Looper, *Eulithis gracilineata*
Red Twin-Spot, *Xanthorhoe ferrugata*
The Gem, *Orthonama obstipata* (Lower Raccoon, Des Moines, LMS)
Bent-Line Carpet, *Costaconvexa centrostrigaria*
The Beggar, *Eubaphe mendica* (Whiterock, LMS)
Common Pug, *Eupithecia miserulata* (Lower Raccoon, Des Moines, LMS)
White-Spotted Pug, *Eupithecia tripuntaria*
Three-Patched Bigwing, *Heterophleps refusaria*
Chickweed Geometer, *Haematopsis grataria* (Lower Raccoon, Des Moines, LMS)
Large Lace-Border, *Scopula limboundata*
Wavy-Lined Emerald, *Synchlora aerata* (Lower Raccoon, Des Moines, LMS)
Orange Wing, *Mellilla xanthometata* (Lower Raccoon, Des Moines, LMS)
Common Angle, *Macaria aemulataria*
Four-Barred Gray, *Aethalura intertexta*
Common Gray, *Anavitrinella pumpinaria* (Lower Raccoon, Des Moines, LMS)
Double-Lined Gray, *Cleora sublunaria*
Small Engrailed, *Ectropis crespuscularia*
Melanolophia canadaria
False Crocus Geometer, *Xanthotype urticaria*
Crocus Geometer, *Xanthotype sospeta*
Curve-Toothed Geometer, *Eutrapela clemataria*
Straw Besma, *Besma endropiaria*
Snowy Geometer, *Eugonobapta nivosaria*
Large Maple Spanworm, *Prochoerodes lineola*
Horned Spanworm, *Nematocampa resistaria* (Lower Raccoon, Des Moines, LMS)
Pale-Veined Isturgia, *Isturgia dislocaria*

Bombycoidea

Sphinx Moths, Sphingidae

Waved Sphinx, *Ceratomia undulosa*
Hermit Sphinx, *Lintneria eremitis*
White-Lined Sphinx, *Hyles lineata* (various locations, LMS)
Lettered Sphinx, *Deidamia inscripta*
Snowberry Clearwing, *Hemaris diffinis* (Lower Raccoon, Des Moines, LMS)

Noctuoidea

Tussock, Lichen, Tiger, Litter, Underwing, & Zale Moths, Erebidae

Harnessed Tiger Moth, *Apantesis phalerata* (Lower Raccoon, Des Moines, LMS)
Painted Lichen Moth, *Hypoprepia fucosa* (Whiterock, LMS)
Virginia Tiger Moth, *Spilosoma virginica*
Yellow-Collared Scape Moth, *Ciseps fulvicollis* (various locations, LMS)
Banded Tussock Moth, *Halysidota tessellaris*
LeConte's Haploa, *Haploa lecontei* (Whiterock, Durbin; Pleasant Valley, LMS)
Delicate Cynia, *Cynia tenera*
Giant Leopard Moth, *Hypercompe scribonia* (Whiterock, LMS)
Common Idia, *Idia aemula* (Lower Raccoon, Des Moines, LMS)
Glossy Black Idia, *Idia lubricalis* (Lower Raccoon, Des Moines, LMS)
Early Fan-Foot, *Zanclognatha cruralis*
Dark-Spotted Palthis, *Palthis angulalis*
Gray-Edged Snout, *Hypena madefactalis*
Black-Patched Graylet, *Hyperstrotia secta*
Green Cloverworm, *Hypena scabra* (Lower Raccoon, Des Moines, LMS)
Common Oak Moth, *Phoberia atomaris*
Black-Dotted Brown, *Cissusa spadix*
Forage Looper, *Caenurgina erechtea* (various locations, LMS)
Black Bit Moth, *Celiptera frustulum*
Common Looper Moth, *Autographa precationis*

Nola Moths, Nolidae

Confused Meganola, *Meganola minuscule* (Whiterock, LMS)

Prominents, Notodontidae

Walnut Caterpillar Moth, *Datana integerrima*
White-Dotted Prominent, *Nadata gibbosa*
Common Gluphisia, *Gluphisia septentrionis* (Lower Raccoon, Des Moines, LMS)

Looper, Dagger, Sallow, Groundling, Miget, Army- & Cutworm, & Dart Moths, Noctuidae

Celery Looper, *Anagrapha falcifera* (various locations, LMS)
Black-Dotted Glyph, *Maliattha synochitis*
Olive-Shaded Bird-Dropping Moth, *Ponometia candefacta* (Tipton Prairie, Miller)
Small Bird-Dropping Moth, *Ponometia erastrioides* (Whiterock, Durbin)
Common Spragueia, *Spragueia leo* (Whiterock, Durbin)
Ochre Dagger, *Acrionicta morula*
Small Oak Dagger, *Acrionicta increta*
Green Leuconycta, *Leuconycta diptheroides*
Marbled-Green Leuconycta, *Leuconycta lepidula*
Hydraecia sp.
Dusky Groundling, *Platysenta vecors*
Corn Earworm Moth, *Helicoverpa zea*

Pink-Barred Pseudeustrotia, *Pseudeustrotia carneola* (Whiterock, Durbin)
Grateful Midget, *Elaphria grata* (Lower Raccoon, Des Moines, LMS)
The Wedgling, *Galgula partita* (Lower Raccoon, Des Moines, LMS)
Dock Rustic, *Resapamea passer*
The Whitespeck, *Mythimna unipunctata* (Lower Raccoon, Des Moines, LMS)
Phragmites Wainscot, *Leucania phragmitidicola* (tentative ID)
Reed Canary-Grass Borer, *Xylomoia chagnoni* (Lower Raccoon, Des Moines, LMS)
The Thinker, *Lacinipolia meditata*
Bristly Cutworm, *Lacinipolia renigera* (Lower Raccoon, Des Moines, LMS)
Cynical Quaker, *Orthodes cynica*
Bronzed Cutworm, *Nephelodes minians*
Dingy Cutworm, *Feltia jaculifera*

Tortricid Moths (*Tortricoidea*)

Omnivorous Leafroller, *Archips purpurana*
Bidens Borer, *Epiblema otiosana* (Whiterock, LMS)
Triangle-Backed Eucosma, *Eucosma dorsisignatana*
Spring Dead-Leaf Roller, *Sparganothis diluticostana*

Yponomeutid Moths (*Yponomeutoidea*)

Ailanthus Webworm Moth, *Atteva puntella* (exotic) (Lower Raccoon, Des Moines, LMS)

Clear-Wings & Other Sesioid Moths (*Sesioidea*)

Squash Vine Borer, *Melittia cucurbitae*

Webworm & Other Tineoid Moths (*Tineoidea*)

Tubeworm Moth, *Acrolophus* sp.

Plume Moths (*Pterophoroidea*)

Grape Plume Moth, *Geina perscelidactylus* (Lower Raccoon, Des Moines, LMS)
Platyptilia carduidactylus
Yarrow Plume Moth, *Gillmeria pallidactyla* (Lower Raccoon, Des Moines, LMS)
Morning-Glory Plume Moth, *Emmelina monodactyla* (Lower Raccoon, Des Moines, LMS)
Hellinsia homodactylis (Lower Raccoon, Des Moines, LMS)

Ants, Bees, & Wasps (*Hymenoptera*)

Gall Wasps, *Cynipidae*

Oak Leaf Saucer Gall, caused by Saucer Gall Wasp, *Andricus gigas* (Lower Raccoon, Des Moines, LMS)

Andricus quercusflocci (Lower Raccoon, Des Moines, LMS)

Diplolepis sp. (Frog Creek, Perry, LMS)

Proctotrupidae

Proctotrupes sp. (Lower Raccoon, Des Moines, LMS)

Ichneumon Wasps, *Ichneumonidae*

Ophion sp. (Lower Raccoon, Des Moines, LMS)

Cryptus albitarsis (Lower Raccoon, Des Moines, LMS)

Ants, *Formicidae*

Black Ant, *Formica* sp. (Lower Raccoon, Des Moines, LMS)

Thief or Grease Ant, *Solenopsis* sp. (Lower Raccoon, Des Moines, LMS)

Pavement Ant, *Tetramorium* species-E (exotic) (Lower Raccoon, Des Moines, LMS)

Odorous House Ant, *Tapinoma sessile* (Lower Raccoon, Des Moines, LMS)

Eastern Black Carpenter Ant, *Camponotus pennsylvanicus* (Lower Raccoon, Des Moines, LMS)

Spider Wasps, Pompilidae (species not identified)

Mason & Potter Wasps, Eumenidae

Ancistrocerus adiabatus (Lower Raccoon, Des Moines, LMS)

Ancistrocerus unifasciatus (Lower Raccoon, Des Moines, LMS)

Eumenes fraternus (Lower Raccoon, Des Moines, LMS)

Paper Wasps

European Paper Wasp, *Polistes dominula* (exotic) (Lower Raccoon, Des Moines, LMS)

Northern Paper Wasp, *Polistes fuscatus* (Lower Raccoon, Des Moines, LMS)

Hornets & Yellowjackets, Vespidae

Bald-Faced Hornet, *Dolichovespula maculata* (Lower Raccoon, Des Moines, LMS)

Eastern Yellowjacket, *Vespula maculifrons* (Lower Raccoon, Des Moines, LMS)

Scoliid Wasps

Double-Banded Scoliid, *Scolia bicincta* (Lower Raccoon, Des Moines, LMS)

Cicada Killers

Cicada Killer, *Sphecius speciosus* (Whiterock, LMS)

Crabronidae

Cerceris sp. (Lower Raccoon, Des Moines, LMS)

Bee Wolf, *Philanthus gibbosus* (Lower Raccoon, Des Moines, LMS)

Thread-Waisted Wasps, Sphecidae

Blue Mud Dauber, *Chalybion* sp. (Lower Raccoon, Des Moines, LMS)

Eremnophila aureonotata (Lower Raccoon, Des Moines, LMS)

Grass-Carrying Wasp, *Isodontia* sp. (Lower Raccoon, Des Moines, LMS)

Golden Digger Wasp, *Sphex ichneumonius*, nectaring on *Asclepias syriaca* (Lower Raccoon, Des Moines, LMS)

Great Black Wasp, *Sphex pennsylvanicum*, nectaring on Mountain-Mint (Lower Raccoon, Des Moines, LMS)

Thynnidae

Myzinium sp. (Lower Raccoon, Des Moines, LMS)

Plasterer & Masked Bees, Colletidae

Cellophane Bee, *Colletes* sp.

Leafcutter & Mason Bees, Megachilidae

European Wool Carder Bee, *Anthidium manicatum* (exotic) (Lower Raccoon, Des Moines, LMS)

Leafcutter Bee, *Megachile* sp. (Lower Raccoon, Des Moines, LMS)

Mason Bee, *Osmia* sp. (Lower Raccoon, Des Moines, LMS)

Mining Bees, Andrenidae

Andrena sp. (Lower Raccoon, Des Moines, LMS)

Sweat Bees, Halictidae

Metallic Green Bee, *Agapostemon* sp. (Lower Raccoon, Des Moines, LMS)

Augochlora pura (Lower Raccoon, Des Moines, LMS)

Sweat Bee, *Halictus* sp. (Lower Raccoon, Des Moines, LMS)

Lasioglossum sp. (Lower Raccoon, Des Moines, LMS)

Bumble Bees, Apidae/Apinae/Bombini

Two-Spotted Bumble Bee, *Bombus bimaculatus* (Lower Raccoon, Des Moines, LMS)

Citrine Bumble Bee, *Bombus citrinus* (Lower Raccoon, Des Moines, LMS)

American Bumble Bee, *Bombus pennsylvanicus* (Lower Raccoon, Des Moines, LMS)

Eastern Bumble Bee, *Bombus impatiens* (Lower Raccoon, Des Moines, LMS)

Confusing Bumble Bee, *Bombus perplexus* (Lower Raccoon, Des Moines, LMS)

Brown-Belted Bumble Bee, *Bombus griseocollis* (Lower Raccoon, Des Moines, LMS)

Honey Bees, Apidae/Apinae/Apini

European Honey Bee, *Apis mellifera* (exotic) (widespread)

Long-Horned Bees, Apidae/Apinae/Eucerini

Melissodes sp. (Lower Raccoon, Des Moines, LMS; Whiterock, LMS)

Carpenter Bees, Apidae/Xylocopinae

Eastern Carpenter Bee, *Xylocopa virginica* (Lower Raccoon, Des Moines, LMS)

Small Carpenter Bee, *Ceratina* sp. (Lower Raccoon, Des Moines, LMS)

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