

**AN ANNOTATED CHECKLIST OF THE INSECTS
OF MONTGOMERY COUNTY, TENNESSEE**

BY

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AN ANNOTATED CHECKLIST OF THE INSECTS
OF MONTGOMERY COUNTY, TENNESSEE

A Research Paper
Presented to
the Graduate Council of
Austin Peay State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
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To the Graduate Council:

I am submitting herewith a Research Paper written by Joan Wallace Crowder entitled "An Annotated Checklist of the Insects of Montgomery County, Tennessee." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Biology.

Floyd M. Ford

Major Professor

Wm. R. King

Dean of the Graduate School

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INTRODUCTION

A study was undertaken to do an annotated checklist of the insects of Montgomery County, Tennessee. This study, to date, will include those specimens left behind through the years by former students, from the spring quarter Entomology students, Dr. Floyd Ford's personal collection, and those contributed by the author. The insects will be separated into order, family, genus, species, and the common name will be given where applicable.

Because of the limited time for the study, not all of the orders and families of the insects will be represented in this research paper. Had time permitted, every effort would have been made to find representative species of each order and family.

LITERATURE REVIEW

The orders of the Class Insecta are arranged according to Jacques, 1947. How to Know the Beetles.

The families of the order Odonata are arranged according to Needham and Westfall, 1955. A Manual of the Dragonflies of North America (Anisoptera); the families of order Orthoptera according to Helfer, 1963. How to Know the Grasshoppers, Cockroaches, and their Allies; the families of order Coleoptera according to Dillon and Dillon, 1961. A Manual of Common Beetles of Eastern North America; the families of order Lepidoptera (Butterflies) according to Ehrlich and Ehrlich, 1961. How to Know the Butterflies; (Moths) by Holland, 1968. The Moth Book; and the family Hesperidae (Skippers) according to Klotts, 1951. A Field Guide to the Butterflies.

The following literature also aided in the identification of the insects. Arnett, 1963. The Beetles of the United States; Borror and Delong, 1964. An Introduction to the Study of Insects; Comstock, 1950. An Introduction to Entomology; Essig, 1958. College Entomology; Holland, 1930. The Butterfly Book; Jacques, 1951. How to Know the Beetles; Lutz, 1935. Field Book of Insects; Needham and Claassen, 1925. Plecoptera of North America; Ross, 1967. A Textbook of Entomology; and Swan and Papp, 1972. The Common Insects of North America.

DESCRIPTION OF THE AREA

Montgomery County is located in the northwest section of Middle Tennessee on the Highland Rim of the Interior Low Plateau Province (Fenneman, 1938). It is bordered on the east by Cheatham and Robertson Counties, on the south by Houston and Dickson Counties, and on the west by Stewart County. To the north lies Christian and Todd Counties, Kentucky.

Montgomery County is comprised of 345,502 acres (Scott, 1967). It has a humid mesothermal climate with little or no water deficiency in any season (Thorntwaite, 1948). The mean annual rainfall is 48.9 inches. The temperature ranges with the January average of 39.3°F. to 79.7°F. in July. A maximum of 112°F. and a minimum of -14°F. have been recorded.

The topography of the area is relatively flat being interspersed with rolling hills. The average elevation of the county is 500 feet above sea level (Killebrew, 1874), while the highest elevation is about 660 feet. The county is extensively underlain with St. Louis limestone formation of the Mississippian Age (Smith, 1962).

MATERIALS USED DURING THE STUDY

The materials used consisted of a wireloop with a diameter of 10 inches, covered with nylon netting and a handle of 60 inches in length; a kill jar made from a fruit jar containing a layer of sawdust, topped with a layer of Plaster of Paris and ethyl acetate; a syringe and needle with 10 per cent formalin for injecting the larger specimens; insect pins; a styrafoam board for spreading the collected insects; a pinning block; and a dissecting microscope and hand lens to aid in identification.

METHODS OF COLLECTING

The usual methods of collecting were used. A butterfly net was used for catching butterflies, moths, wasps, bees, those insects flying through the air; a fish dip net for the water insects; overturned stones, logs; inside crevices; under decaying organic matter; on trees, under bark; and under porch or street lights.

AN ANNOTATED CHECKLIST OF THE CLASS INSECTA

ORDER PROTURA
The Proturans

Family Eosentomidae

Eosentomen sp.

Family Protentomidae

Protentomidea sp.ORDER THYSANURA
Fishmoths, Bristletails, Firebrats

Family Machilidae

Machilis variabilis Say - Machilid

Family Lepismatidae

Lepisma saccharina Linnaeus - SilverfishThermobia domestica Packard - FirebratORDER COLLEMBOLA
Springtails, Snow Fleas

SUBORDER ARTHROPLEONA

Family Isotomidae

Tetracanthella ethelae WrayBoernerella octogenaria MillsFolsomides parvus FolsomFolsomia fimetaria Linnaeus

Folsomia nivalis Packard
Folsomia elongata MacGillivray
Folsomia prima Mills
Proisotoma schotti Dalla Torre
Proisotoma minuta Tullberg
Hydrosotoma schafferi Krausbauer
Isotomina aquae Bacon
Isotomina thermophila Linnaniemi
Isotomina tenelloides Folsom
Isotomina cognata Folsom
Isotomina constricta Folsom
Pseudisotoma sensibilis Tullberg
Pseudisotoma monachaeta Stach
Vertagopus cinerea Nicolet
Isotoma viridis Bourlet
Isotoma viridis var. delta MacGillivray
Isotoma viridis var. riparia Nicolet
Isotoma viridis var. cincta Tullberg
Isotoma viridis var. catena Guthrie
Isotoma viridis var. annulata Nicolet
Isotoma viridis var. violacea Lic-Petersen
Isotoma subviridis Folsom
Isotoma trispinata MacGillivray
Isotoma gelida Folsom
Isotoma intermedia Schött
Isotoma olivacea Tullberg

Isotoma olivacea var. neglecta Schäffer

Isotoma nigrifrons Solsom

Isotoma violacea Tullberg

Isotoma violacea var. caeruleatra Guthrie

Isotoma eunotabilis Folsom

Isotomurus palustroides subciliatus Stach

Isotomurus tricuspus Börner

Isotomurus alticolus Carl

Isotomurus palustris Müller

Isotomurus palustris var. prasina Axelson

Isotomurus palustris var. aquatilis Müller

Isotomurus palustris var. maculata Schäffer

Isotomurus palustris var. fuscicola Reuter

Isotomurus palustris var. balteata Reuter

Architomocerura crassicauda Denis

ORDER PLECOPTERA The Stoneflies

Family Perlidae- Stoneflies

Acroneuria sp.

Perla immarginata

Perlesta sp.

ORDER EPHEMEROPTERA Mayflies and Willowflies

Family Ephemeridae - Burrowing Mayflies

Hexagenis limbata Guerin

Family Heptageniidae - Stream Mayflies

Heptagenia sp.

Family Baetidae

Baetis sp.

ORDER ODONATA
Dragonflies and Damselflies

SUBORDER ANISOPTERA
Dragonflies

Family Gomphidae- Clubtails

Gomphus lividus Selys

Family Aeschnidae - Darner

Basiaeschna janata Say - Janata Darner

Boyeria vinosa Say - Yellow-spotted Streamer Darner

Anax amazele Burmeister - Green Darner

Anax sp.

Oplonaeschna armata Hagen - Clearwing Dragonfly

Epiaeschna heros Fabricius - Hero Darner

Gynacantha sp.

Triacanthagyna trifida Rambur

Family Libellulidae- Skimmers

Macromia sp.

Tetragoneuria cynosura Say- Dog-tailed Skimmer

Perithemis domita Drury- Amberwinged Skimmer

Perithemis tenera Say- Common Amberwing

Planiplax sp.

Celithemis elisa Hagen- Elisa Spotted Skimmer

Celithemis eponina Drury

Celithemis fasciata Kirby- Banded Skimmer

Libellula cyanea Fabricius- Blue Skimmer

Libellula luctuosa Burmeister- Widow Skimmer

Libellula pulchella Drury- Ten-Spot Skimmer

Libellula vibrans Fabricius - Sparkling Skimmer

Libellula (Plathemis) lydia Drury- White-tail Skimmer

Sympetrum semicinctum Say- Brown-Winged Red Skimmer

Erythemis simplicicollis Say- Green-Jacket Skimmer

Lepthemis sp.

Pachydiplax longipennis Burmeister- Blue Pirate

Tramea carolina Linnaeus- Carolina Raggedy Skimmer

Tramea lacerata Hagen- Common Raggedy Skimmer

Pantala hymenea Say- Brown-Spotted Globe Skimmer

Two species taken to family only.

SUBORDER ZYGOPTERA Damselflies

Family Agrionidae (Calopterygidae)- Damselflies

Agrion maculatum Beauvais- Blackwinged Damselfly

Hetaerina americana Fabricius- American Ruby-Spot

Family Coenagrionidae

Argia violacea Hagen- Violet Dancer

Nehalennia sp.

Enallagma civile- Civil Bluet

Enallagma sp.

Lestes rectangulous- Narrow-winged Damselfly

Five species taken to family only.

ORDER ORTHOPTERA

Grasshoppers, Katydid, Crickets, Cockroaches, Mantids
and Walkingsticks

Family Blattidae- The Cockroaches

Parcoblatta pennsylvanica DeGeer- The Pennsylvania Wood
Cockroach

Blatella germanica Linnaeus- German Cockroach

Eurycotis floridana Walker- Stinking Cockroach

Blatta orientalis Linnaeus- Oriental Cockroach

Periplaneta fuliginosa Serville- Smoky Brown Cockroach

Periplaneta americana Linnaeus- American Cockroach

Pycnoscelus surinamensis- Surinam Cockroach

Family Mantidae- The Praying Mantis

Thesprotia graminis Scudder- Grass-like Mantis

Mantis religiosa Linnaeus- European Mantis

Tenodera aridifolia sinensis Saussure- Chinese Mantis

Stagmomantis carolina Johannsen- Carolina Mantis

Family Phasmidae- The Walkingsticks

Pseudosermyle straminea Scudder- Gray Walkingstick

Diapheromera femorata Say

Family Acrididae (Locustidae)- Grasshoppers

Arphis xanthoptera Burmeister- Autumn Yellow-wing

Dissoteira carolina Linnaeus- Carolina Grasshopper

Syrbula fuscovittata Thomas- Brown-winged Slant-faced Grasshopper

Schistocera americana Drury- American Grasshopper

Seven species taken to family only.

Family Tettigoniidae- Long-horned Grasshoppers and Katyids

Pterophylla camellifolia Fabricius- True Katydid

Conocephalus fasciatus DeGeer- Slender Meadow Katydid

Conocephalus sp.

Neoconocephalus ensiger Harris- Coneheaded Grasshopper

Microcentrum rhombifolium Saussure- Broad-winged Katydid

Scudderia furcata Brunner von Wattenwyl- Fork-tailed Bush Katydid

Two species taken to family only.

Family Gryllacrididae- Cave and Camel Crickets

Hadenoeus subterraneus Scudder- Common Cave Cricket

Ceuthophilus maculatus Harris- Spotted Camel Cricket

Family Gryllidae - The Crickets

Acheta domestica Linnaeus- House Cricket

Acheta assimilis Fabricius- Common Field Cricket

Orocharis saltator Uhler- Jumping Bush Cricket

Oecanthus niveus DeGeer- Snowy Tree Cricket

Neoxabea bipunctata DeGeer- Two-Spotted Tree Cricket

Family Gryllotalpidae- Mole Cricket

Gryllotalpa hexadactyla Perty- Northern Mole Cricket

ORDER ISOPTERA
Termites and White Ants

Family Rhinotermitidae- Termites

Prorhinotermes simplex Hagen- Damp Wood Termite

Reticulitermes flavipes Kollar- Eastern Subterranean

ORDER DERMAPTERA
The Earwigs

Family Forticulidae- European Earwig

Forticula auricularia Linnaeus

ORDER COLEOPTERA

SUBORDER COLEOPTERA
The Beetles

Family Cicindelidae- Tiger Beetles

Tetracha virginica Linne

Cicindela repanda Dejean

Cicindela sexguttata Fabricius- Six-Spotted Tiger Beetle

Cicindela punctulata Olivier

Cicindela dorsalis Say- White Tiger Beetle

Family Carabidae- Ground Beetles

Scaphinotus elevatus Fabricius

Scaphinotus sp.

Calosoma scrutator Fabricius- Large Caterpillar Hunter

Calosoma wilcoxi LeConte- Small Caterpillar Hunter

Calosoma frigidum Kirby

Calosoma calidum Fabricius- The Fiery Hunter

Calosoma externum Say

Elaphrus ruscarius Say

Pasimachus punctulatus

Pasimachus sablaevis

Scarites subterraneus Fabricius

Scarites substriatus Haldeman

Patrobus longicornis Say

Gastrellarius honestus Say

Eumolops sodalis LeConte

Poecilus chalcites Say

Dysidius mutus cf. Say

Amara impuncticollis Say

Amara sp.

Rembus laticollis LeConte

Dicaelus dilatatus Say

Dicaelus purpruatus Bonelli

Dicaelus elongatus Bonelli

Dicaelus mutus cf. Say

Calathus gregarius Dejean

Calathus opaculus LeConte

Platynus decens Say

Platynus placidus Say

Platynus picipennis Kirby

Platynus sp.

Galerita janus Fabricius

Galerita bicolor Drury

Lebia atriventris Say

Brachinus fumans Fabricius

Chlaenius impunctifrons Say

Chlaenius tricolor Dejean

Chlaenius nemoralis cf. Say

Chlaenius cordicollis Kirby

Chlaenius sericeus Forster

Chlaenius erythropus Germar

Chlaenius tomentosus

Chlaenius sp.

Anomoglossus emarginatus Say

Harpalus caliginosus Fabricius

Harpalus erraticus Say

Harpalus compar LeConte

Harpalus pennsylvanicus DeGeer

Harpalus pleuriticus Kirby

Harpalus herbivagus Say

Tripectrus rusticus Say

Tripectrus sp.

Anisodactylus harrisii LeConte

Anisodactylus nigerrimus Dejean

Anisodactylus interpunctatus cf. Kirby

Anisodactylus sp.

Anadaptus baltimorensis Say

Stenoellus rupestris Say

Agonoderus pauperculus

Agonoderus sp.

Cratacanthus dubius Beauvois

Leptotrachelus dorsalis Fabricius

Panagaeus fasciatus

Family Omophronidae- Round Sand Beetle

Omophron americanum Dejean

Family Haliplidae- The Crawling Water Beetles

Haliphus sp.

Family Dytiscidae- The Predaceous Diving Beetle

Laccophilus fasciatus Aube

Hydroporus undulatus cf. Say

Agabus disintegratus Crotch

Acilius semisulcatus Aube

Acilius fraternus Harris

Thermonectus basillaris Harris

Cybister fimbriolatus Say

Family Gyrinidae- The Whirligig Beetles

Dineutes ciliatus Forsberg

Dineutes americanus Fabricius

Dineutes hornii Roberts

Dineutes sp.

Family Hydrophilidae- The Water Scavenger Beetles

Hydrophilus triangularis Say

Dibolocelus ovatus cf. Gemminger and Harold

Hydrochara obtusata Say

Tropisternus glaber Herbst

Tropisternus lateralis Fabricius

Family Silphidae- Carrion Beetles

Nicrophorus pustulatus

Silpha surinamensis Fabricius

Silpha noveboracensis Forster

Family Staphylinidae- The Rove Beetles

Homoetarsus bicolor Gravenhorst

Paederus littoratus Gravenhorst

Staphylinus maculosus Gravenhorst

Staphylinus violaceus Gravenhorst

Phlocopera sublaevis

Pinophilus laticeps

Family Histeridae- The Hister Beetles

Hister merdarius Hoffmann

Phelister subrotundus Say

Family Lycidae- The Net-winged Beetles

Calopteron reticulatum Fabricius

Family Lampyridae- The Firefly Beetles

Lucidota atra Fabricius

Ellychnia corrusca Linne

Photinus pyralis Linne

Photuris pennsylvanica DeGeer

Family Cantharidae- The Soldier Beetles

Chaulinognathus pennsylvanicus DeGeer

Chaulinognathus marginatus Fabricius

Podabrus rugosulus LeConte

Podabrus sp.

Cantharis excavatus LeConte

Cantharis carolinus Fabricius

Cantharis bilineatus Say

Cantharis sp.

Family Melyridae (Malachiidae)- The Soft-winged Flower Beetles

Collops tricolor Say

Collops Quadrimaculatus Fabricius

Attalus circumscriptus

Family Cleridae- The Checkered Beetles

Thanasimus dubius Fabricius

Enoclerus nigripes Say

Family Corynetidae- Checkered Beetles

Chariessa pilosa

Chariessa sp. cf.

Family Mordellidae- The Tumbling Flower Beetles

One species taken to family only.

Family Meloidae- The Blister Beetles

Epicauta vittata Fabricius- Soybean Blister Beetle

Epicauta pertifera Werner- Potato Blister Beetle

Epicauta pensylvanica DeGeer

Epicauta fabricii LeConte

Epicauta astrata

Epicauta murina

Meloe americanus

Meloe impressus

Family Pyrochoridae- The Fire-colored Beetles

Neopyrochroa sp. cf.Dendroides concolor NewmanDendroides canadensisEurophthalmus sp.

Family Anthicidae- The Ant-like Flower Beetles

Notoxus murinipennis LeConte

Family Elateridae- The Click Beetles

Alaus oculatus Linne- The Eyed ElaterConoderus lividus DeGeerConoderus vespertinus FabriciusAeolus dorsalis SayLimonius griseus BeauvoisLimonius quercinus SayLimonius sp.Athous cucullatus SayHemicrepidius memnonius HerbstHemicrepidius sp.Melanotus communis GyllenhalMelanotus fissilis SayMelanotus castanipes PaykullMelanotus piceusZimonius basillavisNothodes dubitans

Family Buprestidae- The Metallic Wood Borers

Chalcophora virginensis Drury- The Larger Flat-headed Pine Borer

Dicera divaricata Say

Buprestis rufipes

Chrysobothris femorata Olivier- Flat-headed Apple Tree Borer

Agrilus vittaticollis

Family Helodidae- Small Beetles

Ptilodactyla serricollis

Family Nitidulidae- The Sap-feeding Beetles

Glischrochilus sanguinolentus Olivier- Red Sap Beetle

Family Cucujidae- The Cucujids

Brontes gubius- Flat Bark Beetle

Family Erotylidae- The Pleasing Fungus Beetles

Triplax flavicollis Lacordaire

Megalodacne fasciata Fabricius

Megalodacne heros Say

Family Languriidae- The Lagriid Bark Beetles

Languria mozardi Latrielle

Family Phalacridae- The Shining Flower Beetles

Stilbus apicalis Melsheimer

Family Coccinellidae- The Lady Beetles

Brachyacantha ursina Fabricius

Coleomegilla fuscilabris Mulsant

Hippodamia convergens Gurtin- Convergent Lady Beetle

Coccinella novemnotata Herbst

Cycloneda sanguinea Linne- Red Lady Beetle

Cycloneda munda Say- Red Lady Beetle

Adalia bipunctata Linne- Two-spotted Lady Beetle

Anatis quindecimpunctata Olivier- Fifteen-spotted Lady Beetle

Chilocorus stigma Say- Twice-stabbed Lady Beetle

Chilocorus similar Rossi- Asiatic Ladybird

Epilachna borealis Fabricius

Epilachna varivestis Mulsant- Mexican Bean Beetle

Ceratomegilla maculata- Spotted Lady Beetle

Anisacalvia quatuordecimguttata

Family Alleculidae- The Comb-clawed Bark Beetles

Hymenorus pilosus cf. Melsheimer

Family Tenebrionidae- The Darkling Beetles

Diaperis maculata Olivier

Hoplocephala bicornis Fabricius

Platydemia ellipticum Fabricius

Uloma impressa Melsheimer

Uloma imberbis LeConte

Scotobates calcaratus Fabricius

Xylopinus saperdioides cf. Olivier

Iphthimus opacus LeConte

Alobates pennsylvanica DeGeer

Upis sp.

Tenebrio obscurus Fabricius- Dark Mealworm

Tenebrio molitor Linne

Tarpela micans Fabricius- Yellow Mealworm

Mercantha sp.

Four species taken to family only.

Family Melandryidae- The Melandryid Bark Beetles

Penthe obliquata Fabricius

Penthe pimelio Fabricius

Synchroa punctata Newman

Dircaea quadrimaculata Say

Osphea varrens

Family Anobiidae- The Deathwatch Beetles

Lasioderma serricorne Fabricius

Family Lyctidae- Powder Post Beetles

Lyctus planicollis LeConte

Family Scarabaeidae- The Scarab Beetles

Pinotus carolinus Linne- Dung Beetle

Canthon laevis Drury- Common Tumble Beetle

Copris sp. cf.

Phanaeus vindex MacLeay

Aphodius fimetarius Linne- Lamellicorn Beetle

Geotrupes semiopacus Jekel- Lamellicorn Beetle

Serica vespertina Gyllenhal

Serica sericea Illiger

Serica sp.

Diplotaxis liberta Germar

Phyllophaga futilis LeConte- May or June Beetle

Phyllophaga mican cf. Knoch- May or June Beetle

Phyllophaga fervida Fabricius- May or June Beetle

Phyllophaga anxia- May or June Beetle

Phyllophaga fraterna Harris- May or June Beetle

Phyllophaga rugosa Melsheimer- May or June Beetle

Phyllophaga hirsuta Knoch- May or June Beetle

Phyllophaga implicita Horn- May or June Beetle

Phyllophaga balia Say- May or June Beetle

Phyllophaga hirticula Knoch- May or June Beetle

Phyllophaga ilicis Knoch- May or June Beetle

Phyllophaga sp.- May or June Beetle

Dichelonyx elongata Fabricius

Macroductylus subspinosus Fabricius- Rose Chafer

Anomala innuba Fabricius

Pelidnota punctata Linne- Grape-vine Beetle

Ligyris relictus Say

Ligyris gibbosus DeGeer- Carrot Beetle

Strategus antaeus Drury- Ox Beetle

Xyloryctes jamaicensis Drury- Rhinoceros Beetle

Dynastes titus Linne- Unicorn Beetle

Cotinus nitida Linne- Figeater (Green June Bug)

Euphoria sepulchralis Fabricius

Osmoderma eremicola Knoch- Hermit-flower Beetle

Cotalpa lanigera- Goldsmith Beetle

Bolbocersoma farctum

Family Trogidae- The Skin Beetles

Trox variolatus Melsheimer

Trox suberosus Fabricius

Trox monachus Herbst

Family Lucanidae- The Stag Beetles

Pseudolucanus capreolus Linne- False Stag Beetle

Lucanus elaphus Fabricius- Stag Beetle

Dorcus parallelus Say- Antelope Beetle

Dorcus sp.- Antelope Beetle

Family Passalidae- Bess Bug Beetle

Popilius disjunctus Illiger

Family Cerambycidae- The Long-horned Beetles

Parandra brunnea Fabricius

Stenodontes dasystomus Say

Orthosoma brunneum Forster

Prionus laticollis Drury- Broad-necked Root Borer

Prionus imbricornis Linne- Tile-horned Prionus

Smodicum cucujiforme Say- Flat Oak Borer

Tylonotus bimaculatus Haldeman- Ash and Privet Borer

Cerasphorus cinctus Drury

Eburia quadrigeminata Say- Ivory Marked Beetle

Romaleum atomarium Drury

Romaleum rugulum Haldeman

Elaphidion mucronatum Say Spined Bark Borer

Elaphidion villosum Fabricius- Twig pruner

Psyrassa unicolor Randall

Heterachthes ebenus Newman

Megacyllene robiniae Forster- The Locust Borer

Megacyllene caryae Gahan- The Painted Hickory Borer

Xylotrechus colonus Fabricius- Rustic Borer

Neoclytus scutellaris Olivier

Neoclytus sp.

Batyleoma suturate Say

Typocerus velutinus Olivier

Strangalina famelica Newman

Strangalina luteicornis Fabricius

Desmocerus auripennis

Monochamus carolinensis Olivier- Pine Sawyer

Monochamus notatus Drury- Northeastern Sawyer

Monochamus titillator- Southern Pine Sawyer

Dorcaschema alternatum Say

Hetoemis cinerea Olivier

Ecyrus dasycerus cf. Say

Hippopsis lemniscata Fabricius

Aegoschema modesta Gyllenhal

Amniscus maculus Say

Graphisurus fasciatus DeGeer

Sternidius alpha Say

Dectes sayi cf. Dillon and Dillon

Saperda calcarata Say- Poplar Borer

Saperda tridentata Olivier- Elm Borer

Saperda lateralis Fabricius

Oberea tripunctata Swederus

Oberea ocellata Haldeman

Oberea ruficollis Fabricius

Tetraopes melanurus Schonherr

Tetraopes tetraophthalmus Forster- Milkweed Beetle

Oncideres cingulata- Hickory Girdler

Chion cinctus- Banded Hickory Borer

Eight species taken to family only.

Family Chrysomelidae- The Leaf Beetles

Donacia cincticornis Newman

Anomoea laticlavata Forster

Anomoea sp.

Cryptocephalus mutabilis Melsheimer

Chrysochus auratus Fabricius- The Goldsmith Beetle

Labidomera clivicollis Kirby

Leptinotarsa decimlineata Say- Colorado Potato Beetle

Calligrapha bidenticola Brown

Calligrapha praecelsis

Gastrophysa cyanea Melsheimer- Green Dock Beetle

Lina scripta Fabricius

Lina lapponica

Diabrotica undecimpunctata howardi Barber- Spotted
Cucumber Beetle

Acalymma vittata Fabricius- Striped Cucumber Beetle

Galerucella xanthomelaena Shrank- Elm-leaf Beetle

Trirhabda canadensis Kirby

Cerotoma trifurcata Forster- The Bean Leaf Beetle

Oedionychis peturista

Altica chalybea Illiger- Altica Beetle

Altica marevagans Horn

Epitrix fuscula- Egg Plant Fleas Beetle

Chalepus dorsalis Thunberg

Chelymorpha cassidea Fabricius- The Milkweed Tortoise Beetle

Deloyala guttata Olivier- The Mottled Tortoise Beetle

Metriona bivittata Say

Metriona bicolor Fabricius- Goldbug

Seven species taken to family only.

Family Bruchidae (Mylabridae)- The Bean Weevils

Acanthoscelides obtectus Say

Spermophagus hoffmannseggi Gyll

SUBORDER RHYNCHOPHORA

Weevils, Snout Beetles, and Billbugs

Family Brentidae- The Primitive Weevils

Arrhenodes minutus Drury

Family Curculionidae- The Snout Beetles

Brachyrhinus rugifrons

Hyper punctata Fabricius- Cloverleaf Weevil

Hyper postica Gyllenhal- Alfalfa Weevil

Anthonomus grandis Boheman- Cotton Boll Weevil

Gymnetron tetrum Fabricius- Snout Weevil

Lixus concavus Say- Rhubarb Beetle

Lixus sp.

Conotrachelus elegans Say

Chalcodermus aeneus

Nine species taken to family only.

Family Rhynchophoridae- Billbugs

Rhodobaenus tredecimpunctatus Illiger

ORDER THYSANOPTERA
The Thrips

Family Thripidae- Common Thrips

Taeniothrips inconsequens Uzel- Pear Thrips

Taeniothrips simplex Morison- Gladiolus Thrip

Heliothrips haemorrhoidalis Bouche- Greenhouse Thrip

Thrips tabaci Lindeman- Onion Thrip

ORDER CORRODENTIA
Book Lice, Bark Lice, and Psocids

Family Liposcelidae- Book Lice

Liposcelis divanatorius Mull- Book Louse

ORDER MALLOPHAGA
The Biting Lice

Family Menoponidae- Bird Lice

Eomenacanthus stramineus Nitz- Chicken Body Louse

ORDER ANOPLURA
The True Lice

Family Pediculidae - Human Lice

Pediculus humanus Linnaeus

Family Haematopinidae- Animal Lice

Haematopinus adventicius Neum- Hog Louse

ORDER HEMIPTERA
The True Bugs

Family Cydnidae- Neco Bugs and Burrowing Bugs

Pangaeus bilineatus Say

Two species taken to family only.

Family Pentatomidae- The Stink Bugs

Acrosternum sp.

Brochymena arborea Say

Euschistus variolarius Beauvois

Euschistus sp. cf.

Murgantia histrionica Hahn- Harlequin Bug

Solubea pugnax Fabricius

Thyanta custator Fabricius

Family Coreidae- Squash Bugs and Leaf-footed Bugs

Anasa tristis DeGeer- Squash Bug

Leptoglossus clypealis cf. Heidemann- Leaf-footed Bug

Leptoglossus sp. cf.

Family Neididae- The Stilt Bugs

One species taken to family only.

Family Lygaeidae- the Lygaeid Bug

Lygaeus kalmii Stal- Small Milkweed Bug

Oncopeltis fasciatus Dallas- Large Milkweed Bug

Myodocha serripes Olivier

Family Pyrrhocoridae- The Cotton Stainer Bugs

Euryophthalmus succinctus Linnaeus - Red Bug

Family Phymatidae- The Ambush Bugs

Phymata sp.

Family Reduviidae- The Assassin Bugs

Arilus cristatus Linnaeus- Wheel Bug

Melanolestes picipes Herrich-Schaeffer

Melanolestes sp.

Narvesus carolinensis Stah

Pselliopus barberi cf.

Triatoma sanguisuga LeConte- Greater Bedbug

Nine species taken to family only.

Family Nabidae- Damsel Bugs

Nabis ferus Linnaeus

Nabis sp. cf.

Family Miridae- The Plant Bugs

Adelophocoris rapidus Say - Rapid Plant Bug

Leptopterna dolobrata Linnaeus- Meadow Plant Bug

Lygidea mendax Reuter- Apple Red Bug

Lygus lineolaris Say- Tarnished Plant Bug

Lygus oblineatus Say- Tarnished Plant Bug

Poecillocapsus lineatus Fabricius- Four-lined Plant Bug

Six species taken to family only.

Family Gerridae- The Water Striders

Gerris conformis

Gerris remigis Say

Gerris sp.

Family Saldidae- The Shore Bugs

Saldula confluenta Say

Family Notonectidae- The Back Swimmers

Notonecta undulata Say

Notonecta sp.

Family Naucoridae- The Creeping Water-bugs

Pelocoris femoratus Beauvois

Family Nepidae- The Water Scorpions

Ranatra fusca Beauvois

Ranatra americana

Family Belostomidae- The Giant Water Bugs

Belostoma fluminea

Benacus griseus Say

Leptocerus sp.

Family Gelastocoridae- The Toad-shaped Bugs

Gelastocoris oculatus Fabricius

Family Corixidae - The Water Boatman

Arctocorixa interrupta Say

Family Corizidae- The Grass Bugs

Leptocoris trivittatus Say- The Box Elder Bug

ORDER HOMOPTERA

Cicadas, Hoppers, Whiteflies, Aphids, and Scale Insects

Family Cicadidae- The Cicadas

Magicalicada septemdecim Linnaeus- 17 Year Cicada

Tibicen sayi- Dog Day Cicada

Family Cercopidae- The Froghoppers

Philaenus leucophthalmus Linnaeus- Spittlebug

Family Membracidae- The Treehoppers

Stictocephala bubalus Fabricius

Telamona ampelopsidis

Six species taken to family only.

Family Cicadellidae- The Leafhoppers

Graphocephala coccinea Forster- Redbanded Leafhopper

Oncompetopia sp.

Xerophloea major Baker

Family Fulgoridae (Acanaloniidae)- The Planthoppers

Acanalonia sp.

Five species taken to family only.

Family Aphididae - The Aphids

Three species taken to family only.

Family Coccidae- Scale Insects, Bark Lice

Icerya purchasi cf. Maskell- Cottony Cushion Scale

Family Pseudococcidae- Mealybug

Pseudococcus sp.

ORDER NEUROPTERA The Nerve-winged Insects

Family Sialidae- The Alderflies

Sialis infumata Newman- Smoky Alderfly

Family Corydalidae- Dobsonflies

Corydalis cornutus Linnaeus- Dobsonfly

Family Chrysopidae- The Green Lacewings

Chrysopa oculata Say- Common Lacewing

Family Myrmeleontidae- The Ant Lions

Dendroleon obsoletum Say

Hesperoleon abdominalis Say

One species taken to family only.

Family Ascalaphidae- The Owlflies

Ulolodes sp.

ORDER TRICHOPTERA The Caddisflies

Family Leptoceridae- The Long-horned Caddisflies

Leptocerus sp.

Family Limnephilidae

Halesus sp.

ORDER LEPIDOPTERA The Moths and Butterflies

SUBORDER HETERONEURA Butterflies and Skippers

Family Papilionidae- The Swallowtail Butterflies

Battus (Papilio) philenor Linnaeus- Pipe Vine Swallowtail

Battus (Papilio) philenor var. hirsutus- Pipe Vine Swallowtail

Graphium (Papilio) marcellus Cramer- Zebra Swallowtail

Graphium (Papilio) celadon Lucas- Zebra Swallowtail

Papilio acauda- Acauda Swallowtail

Papilio glaucus Linnaeus- Eastern Tiger Swallowtail

Papilio polyxenes Fabricius- Black Swallowtail

Papilio cresphontes Cramer- Giant Swallowtail

Papilio troilus Linnaeus- Spicebush Swallowtail

Papilio ajax- Papaw or Zebra Swallowtail

Papilio turnus- Tiger Swallowtail

Family Pieridae- Whites, Sulfurs, Orange-Tips

Colias philodice Boisduval- Alfalfa Butterfly

Colias eurytheme Latrielle- Clouded Sulfur

Eurema nicippe Cramer- Nicippe Sulphur

Eurema lisa Boisduval and LeConte- Little Sulphur

Pieris rapae Linnaeus- The European Cabbage Butterfly

Pieris protodice Linnaeus- Common White Butterfly

Callidryas eubule- Cloudless Sulphur

Family Nymphalidae- The Brushfooted Butterflies

Danaus plexippus Linnaeus- The Monarch

Danaus berenice Cramer- The Queen Butterfly

Euptychia eurytus Fabricius- The Little Wood-satyr

Euptychia cymela Cramer- Little Wood-satyr

Euptoieta claudia Cramer - The Variegated Fritillary

Speyeria cybele Fabricius- The Great Spangled Fritillary

Speyeria diana Cramer- The Diana Fritillary

Lethe creola Skinner- The Creole

Phyciodes tharos var. marcia Edwards- The Pearl Crescent

Nymphalis antiopa Linnaeus- The Mourning Cloak

Polygonia interrogationis Fabricius- The Question Mark

Polygonia progne Cramer- The Common Gray

Vanessa atalanta Linnaeus- Red Admiral

Vanessa virginiensis Drury- The Painted Beauty

Vanessa cardui Linnaeus- The Painted Lady

Precis lavinia Cramer (coenia Hubner)- Buckeye

Limenitis archippus Cramer- Viceroy

Limenitis astyanax Fabricius- Red-spotted Purple

Asterocampa celtis Boisduval and LeConte- The Hackberry Butterfly

Family Libytheidae- The Snout Butterflies

Libythea bachmani Kirtland- Common Snout Butterfly

Family Lycaenidae- The gossamer-winged Butterflies

Lycaena fulla Edwards- Evius Blue

Everes comyntas Godart- The Eastern Tailed Blue

Everes amyntula Boisduval- The Western Tailed Blue

Family Hesperidae- The Skippers

Epargyreus clarus Cramer (tityrus Fabricius)- Silver-spotted Skipper

Thorybes bathyllus Abbot and Smith- Southern Cloudy-wing Skipper

Pholisora catullus Fabricius- Common Sooty Wing

Ancyloxipha numitor Fabricius- Least Skipper

Atalopedes campestris Boisduval- The Sachem

SUBORDER HETEROCERA
The Moths

Family Sphingidae- The Sphinx Moths

Herse cingulata Fabricius- Pinkspotted Hawkmoth

Protoparce sexta Johanssen- The Tomato or Carolina Sphinx

Protoparce quinquemaculatus Haworth- Five-spotted Hawk Moth

Dolba hylaeus Drury- Papaw Sphinx

Ceratomia undulosa Walker- The Waved Sphinx

Atreides plebeja Fabricius- The Phebeian Sphinx

Hyloicus chersis Hubner- Chersis Sphinx

Hyloicus canadensis Boisduval- Sphinx Moth

Hyloicus kalmiae Abbot and Smith- The Laurel Sphinx

Calasymbolus excaecatus Abbot and Smith- The Blinded Sphinx

Calasymbolus astylus Drury- The Huckleberry Sphinx

Pachysphinx modesta Harris- The Big Poplar Sphinx

Cressonia juglandis Abbot and Smith- The Walnut Sphinx

Haemorrhagia thysbe Fabricius- The Hummingbird Clearwing

Haemorrhagia diffinis Boisduval- The Snowberry Clearwing

Pholus satellitia pandorus Hubner- Pandora Sphinx

Darapsa pholus (choerilus) Cramer- The Azalea Sphinx

Darapsa myron Cramer- The Hog Sphinx

Darapsa versicolor Harris- The Hydrangea

Xylophanes tersa Linnaeus- The Tersa Moth

Family Saturniidae- The Giant Silkworms

Samia cecropia Linnaeus- The Cecropia Moth

Samia gloveri Strecker- Glover's Moth

Callosamia promethia Drury- Promethia

Actias luna Linnaeus- The Luna Moth

Telea polyphemus Cramer- The Polyphemus Moth

Automeris io Fabricius- The Io Moth

Hemileuca maia Drury- The Buck Moth

Family Ceratocampidae (Citheroniidae)- The Royal Moths

Anisota stigma Fabricius- The Stigma Moth

Anisota rubicunda Fabricius- The Rosy Maple Moth

Adelocephala bicolor Harris- The Honey-locus Moth

Citheronia regalis Fabricius- The Royal Walnut Moth

Basilona imperialis Drury- The Imperial Moth

Family Arctiidae- The Tiger Moths

Haploa clymene Brown- The Clymene Moth

Haploa colona cf. Hubner- The Colona Moth

Estigmene acraea Drury- The Acraea Moth

Hyphantria cunea Drury- The Fall Webworm

Isia isabella Abbot and Smith- Isabella Tiger Moth

Diacrisia virginica Fabricius- The Virginian TigerMoth

Apantesis virgo Linnaeus- The Virgin Tiger-Moth

Apantesis vittata radians Walker- Banded Tiger-Moth

Apantesis intermedia Stretch- The Intermediate Moth

Apantesis oithona rectilinea French- The Straight Line
Tiger Moth

Apantesis vittata phalerata Harris- Banded Tiger-Moth

Apantesis nais Drury- Tiger Moth

Apantesis sp.-Tiger Moth

Euchaltias sp.-Tiger Moth

Halisidota tessellaris Abbot and Smith- The Tessellated Moth

Family Agaristidae- The Foresters

Alyphia octomaculata Fabricius- The Eight-spotted Forester

Family Noctuidae- The Noctuid Moths

Laphygma frugiperda cf. Abbot and Smith- The Fall Armyworm

Peridroma saucia Hubner- The Common Cut-worm

Euthisanotia unio Hubner- The Pearly Wood Nymph

Noropsis hieroglyphica Cramer

Autographa biboba Stephens

Chanyris cerintha Treitschke

Spragueia onagrus cf. Guenee

Catocala epione cf. Drury- The Epione Moth

Catocala subvirdis cf. Harvey- The Faintly Green Underwing

Catocala dejecta carolina Strecker- Carrie's Underwing

Catocala coccinata Grote- The Scarlet Underwing

Catocala ilia Cramer- The Ilia Underwing

Catocala osculata Hulst- The Beloved Underwing

Catocala hinda French- The Hinda Underwing

Catocala piatrix Grote- The Penitent

Catocala illecta Walker- The Magdalen Underwing

Catocala micronympha Guenee- The Little Bride

Euparthenos nubilis Hubner- Locust Underwing

Panapoda rufimargo var. carneicosta Guenee

Panapoda sp.

Strenoloma lunilinea Grote

Homoptera cingulifera Walker

Family Notodontidae- The Prominents

Apatelodes torrefacta Abbot and Smith- Wild Cherry Moth

Datana ministra Drury- Apple Tree Worm Moth

Nadata gibbosa Abbot and Smith- Rough Prominent

Family Lasiocampidae- Tent Caterpillars

Malacosoma americana Fabricius- The American Tent Caterpillar

One species taken to family only.

Family Geometridae- The Measuring-worms

Dyspteris abortivaria Herrich-Schaeffer- The Bad Wing

Epimecis virginaria Cramer

Phigalia titea Cramer

Cingilia caternaria cf. Drury- The Chain-streak Moth

Plagodis serinaria Herrich-Schaeffer

Plagodis emargataria Guenee

Gonodontis obfirmaria Hubner

Euchlaena effectoria Walker

Pherne parallelia Packard

Pherne jubararia cf. Hulst

Caberodes majoraria cf. Guenee

Caberodes confusaria Hubner

Sabulodes lorata Grote

Prochoerodes transversata- Large Maple Spanworm

Family Epiplemidæ (Cochlidiidæ)

Cochlidion sp.

Family Megalopygidæ- The Flannel-moths

Carama cretata Grote

Family Zygaenidæ- The Smoky Moths

Harrisina americana Guerin-Meneville- Smoky Joe

Family Cossidæ- The Carpenter Moths

Zeuzera pyrina Linnaeus- The Leopard Moth

Prionoxystus robinia Peck- Carpenter Moth

Family Aegeriidæ- The Clear-winged Moths

Sanninoidea exitiosa Say- Peach-borer

Family Pyralidæ- The Pyralid Moths

Eustixia pupula Hubner

Family Pterophoridae- Plume Moths

Oxyptilus periscelidactylus Fitch- The Grapevine Plume

Family Yponomeutidæ- The Beautiful Mining Moths

Yponomeuta multipunctella cf. Clemens

Atteva aurea Fitch- Beautiful Minor Moth

Atteva gemmata Grote

Family Euchromiidæ- Wasp Moths

Scepsis fulciollis

Family Eucleidæ- Slug Caterpillars

Euclea chloris - Green Slug Moth

ORDER MECOPTERA
The Scorpionflies

Family Panorpididae- Scorpionflies

Panorpa venosa cf.

ORDER DIPTERA
The Flies

Family Tipulidae- The Typical Carne Flies

Tipula angustipennis Loew

Tipula abdominalis

Six species taken to family only.

Family Chironomidae- The Midges

Chironomous sp.

Family Culicidae- The Mosquitoes

Aedes sp.

Four species taken to family only.

Family Sciaridae- The Dark Winged Gungus Gnats

Sciara sp.

Family Bibionidae- The March Flies

Biblio sp.

Three species taken to family only.

Family Tabanidae- Horse Flies and Deer Flies

Chrysops pikei Whitney- Deer Fly

Chrysops wiedemanni Krober- Deer Fly

Chrysops callidus Deer Fly

Chrysops sp.

Tabanus atratus Fabricius- Horse Fly

Tabanus nigrovittatus Macquart- Horse Fly

Tabanus sulcifrons Macquart- Horse Fly

Tabanus sp.

Family Rhagionidae- The Snipe Flies

Rhagio sp.

Four species taken to family only.

Family Mydidae- The Mydas Flies

Mydas clavatus Drury

One species taken to family only.

Family Asilidae- The Assassin or Robber Flies

Bombomima lata Macquart

Erax rufilabris Macquart

Leptogaster annulatus Say

Promachus vertebratus Say

Eleven species to family only.

Family Therevidae- The Stilleto Flies

One species taken to family only.

Family Bombyliidae- The Bee Flies

Bombylus sp.

Bombomima thoracica

Anthrax simson

Five species taken to family only.

Family Empididae- The Dance Flies

One species taken to family only.

Family Dolichopodidae- The Long-legged Flies

Dolichopus longipennis

Dolichopus sp. cf.

Family Syrphidae- The Flower Flies

Didea fuscipes Loew

Milesia virginensis

Syrphus americanus

Syrphus ribesili Hannon

Tubifera tenax Linnaeus

Tubifera sp.

Family Drosophilidae- Vinegar Flies, Drunkareds, Fruit Flies

Drosophila melanogaster Meig

Family Ephydriidae- The Shore Flies

One species taken to family only.

Family Muscidae- The House Fly

Graphomyia maculata

Musca domestica Linnaeus

Four species taken to family only.

Family Metopiidae (Calliphoridae) Flesh Flies

Calliphora erythrocephala Meig- Blu Bottle Fly

Lucilia sericata Wiedeman- Blow Fly

Lucilia caesar Linnaeus- Green Bottle Fly

Family Sacrophagidae- Flesh Flies

Cynomyia caverina - Flesh Fly

Sacrophaga haemorrhoidalis - Flesh Fly

Family Tachinidae- The Tachnids

Belvesia bifasciata

Phorocera claripennis Macquart

Eight species taken to family only.

Family Stratiomyidae- The Soldier Flies

Hermetia illucens Linnaeus

Two species taken to family only.

Family Trypetidae- Fruit Flies and Peacock Flies

Rhagoletis pomonella Walsh- Apple Maggot

ORDER SIPHONAPTERA The Fleas

Family Pulicidae- Common Fleas

Ctenocephalides canis Curtis- Dog Flea

ORDER HYMENOPTERA The Bees, Wasps, and Ants

Family Siricidae- The Horn-tails

Tremex columba Linnaeus- The pigeon Tremex

Family Crabronidae (Cimbicidae)- The Sawflies

Cimbex americana Leach- The Elm Sawfly

Family Tenthredinidae- The Typical Sawflies

Endelomyia aethiops Fabricius

Three species taken to family only.

Family Ichneumonidae- The Ichneumon Wasps

Amblyteles grandis- American Ichneumon Wasp

Amblyteles jucundus

Ammobia ichneumonea- American Hunting Wasp

Chlorion ichneumoneum

Ophion macrurum cf.

Ophion sp.

Megarhyssa lunator Fabricius- Longtail Thalesa
Seventeen species taken to family only.

Family Evaniidae- The Ensign Wasp

Evania appendigaster Linnaeus

Family Psammocharidae- The Spider Wasps

Pepsis obliquerugosa Lucas

Psammochares atrox

Two species taken to family only.

Family Chrysididae- The Cuckoo-Wasps

Agapostemon radiatus

Chrysis smaragdula

Family Tiphidae- Wasps

Elis quinquecinta Fabricius

Family Mutillidae- The Velvet Ants

Dasymutilla nigripes

Dasymutilla occidentalis Linnaeus- The Cowkiller Ant

Dasymutilla sp.

Family Scoliidae- The Scoliids

Scolia dubia Say

Family Formicidae- The Ants

Camponotus herculeanus pennsylvanicus DeGeer- Black
Carpenter Ant Winged Queen

Camponotus herculeanus pennsylvanicus DeGeer- Black
Carpenter Ant Worker Major

Camponotus herculeanus pennsylvanicus DeGeer- Black
Carpenter Ant Worker Minor

Pogonomyrmex desertorum- Texas Harvesting Ant

Tetramorium caespitum - Common Law Ant

Fifteen species taken to family only.

Family Vespidae- Hornets, Paper Wasps, Yellowjackets

Monobia quadriens- Hornet

Polistes annularis Linnaeus- Paper Wasp

Polistes fuscatus Lepeltier- Paper Wasp

Polistes variatus Cresson- Typical Wasp

Vespa communis- Paper Wasp

Vespa sp.

Vespula carolina- Yellowjacket

Vespula maculata Linnaeus- Bald-faced Hornet

Vespula maculifrons du Buysson- Yellowjacket

Fourteen species taken to family only.

Family Sphecidae- The Solitary Wasps

Chlorion cyaneum (Chalybion caeruleum)- Spheg Wasp

Sceliphron coementarium Drury- American Mud Dauber

Sphecius speciosus Drury- Cicada Killer Wasp

Spheg urnaria- Thread-waisted Wasp

Four species taken to family only.

Family Andrenidae- Mining Bees

Andrena wilkella Kirby- Burrower Bee

Seven species taken to family only.

Family Megachilidae- Leaf-cutting Bees

Megachile latimanus Say

Family Apidae- The Honey Bees

Apis mellifera Linnaeus

Xylocopa virginica - Carpenter Bee

Family Bombidae- The Bumblebees

Bombus americanorum pennsylvanicus Fabricius- Queen Bumblebee

Bombus americanorum pennsylvanicus Fabricius- Drone Bumblebee

Bombus americanorum pennsylvanicus Linnaeus- Male Bumblebee

Bombus impatiens- Bumblebee

Bombus separatus Cresson- Bumblebee

An annotated checklist of the insects of Montgomery County, Tennessee has been made. A description of the study area, methods, and materials have been described. To date, a total of 943 species have been collected and identified within the study area. These represent 521 genera belonging to 173 families. This number represents only a small portion of the total number of insects that is to be found in this county.

There is a gap in the orders and families of the Class Insecta. The orders not included in the checklist are Embioptera, the webspinners; Zoraptera, the zorapterans; and Strepsiptera, the twisted-wing insects.

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