

Preliminary Annotated List of Indiana Aphididae

VIRGIL R. KNAPP

Indiana Department of Natural Resources
Indianapolis, Indiana 46204

Abstract

There are at present 218 species recorded representing 4 subfamilies, 9 tribes and 64 genera, but this represents only a fraction of the potential number. Further additions will be made to the list as time allows.

Since there is much confusion concerning the taxonomy of the Aphididae, complete agreement with the present nomenclature is not possible. Further clarification of this matter is called for.

Preliminary Annotated List of Indiana Aphididae

The records of Indiana aphids are scattered widely throughout state records and reports of various agencies. The only previous state lists were compiled by Morrison (28) in 1911 and Baldwin (1) in 1912.

Other records were found in the Indiana Academy of Science Annual Insect Report of the Year, by Davis from 1925 to 1956 (4 thru 20), and by Osmun from 1957 to 1966 (29 thru 37).

Another source was the Annual Reports of the Division of Entomology, Indiana Department of Natural Resources.

Some records were taken from the Purdue University slide collection of aphids where the data was complete and verified by an entomological authority. Included was the author's thesis collection (21) which was verified by W. P. Mason, U.S.D.A.

The University of Wisconsin Research Bulletin 277, October 1969, was also scanned for Indiana records from the Yellow Pan Trap Survey collections in the state.

The collections referred to as "recent" were made by T. F. Johnson or by co-workers in the Division of Entomology, Indiana Department of Natural Resources in the course of their nursery inspection work. The author is indebted to these several collectors for their efforts, especially Mr. Johnson.

Since the aphid literature is so scattered and fragmentary the author makes no claims as to the taxonomic structure of the family Aphididae. Basically a combination of "The Plant Lice, or Aphididae of Illinois" by Hottes & Frison (25) and "Aphids of the Rocky Mountain Region" by M. A. Palmer (38) has been followed as a guide for the subfamily, tribe, and generic set-up of the family. Some genera are included according to the listing on the slide rather than attempting to compare them with more recent taxonomic nomenclature.

There are 4 subfamilies, 9 tribes, 64 genera, and 218 species recorded to date in Indiana. The author realizes that this is but a small

number of the total species to be found in the state. Any help from other interested people within the state in sending in records or specimens would be greatly appreciated.

Following is an annotated list of the aphids reported as occurring in Indiana up to the present date.

Family *Aphididae*

Subfamily *Aphinae* Gillette & Palmer

Tribe *Lachnini* Wilson

Subtribe *Anocina* Baker

Genus *Anoecia* Koch

corni Fab.

(*Aphis corni* Fab.)

(*Anoecia corni* Koch)

Three subterranean collections reported in conjunction with ants (*Lasius neoniger* Emery and *Lasius umbratus* Emery). Collections from Boone and Hamilton Counties during June, 1971 on dandelion roots by T. F. Johnson.

quercii (Fitch) White-banded Dogwood Aphid

(*Eriosoma quercii* Fitch)

(*Eriosoma cornicola* Walsh)

(*Anoecia quercii* Baker)

One slide in the Purdue collection from Tippecanoe County on *Cornus* sp., October 10, 1911 by J. J. Davis. One collection in Tippecanoe County (21) on trumpet vine, October 8, 1938. Collected by Johnson in Marion County on dogwood, June 3, 1971. Seven slides in the Purdue collection under the name of *Schizinuera panicola* Thomas which according to Hottes and Frison (25) is a synonymy to *Anoecia quercii* Fitch. All collected by J. J. Davis except one which is initialed W.J.F. The host of all collections was the roots of *Muhlenburgia* (grass) except one found on *Eleusine indica* (Goose grass). Collection dates varied from August 17 to October 31, of various years.

setariae Gillette & Palmer

Collected in the Yellow Pan Trap Survey (27) in June and July.

Subtribe *Eulachnina* Baker

Genus *Eulachnus* Del Guercio

agilis (Kalt.) Powdery Scotch Pine Needle Aphid

(*Lachnus agilis* Kalt.)

(*Schizolachnus agilis* Mordvilko)

(*Eulachnus agilis* van der Goot)

Recorded only on Austrian pine in Marion County on May 20, 1971. Reported from other states on other species of pine.

rileyi (Williams) Powdery Pine Needle Aphid

(*Lachnus rileyi* Williams)

(*Eulachnus rileyi* Davis)

Two slides in the Purdue collection from Marion and Tippecanoe Counties on pine by J. J. Davis, June and October 1912 and 1916, in Tippecanoe County on Norway pine dated November 5, 1938 (21). And by T. F. Johnson on red pine in Hamilton County, June 25, 1971.

Subtribe *Cinarina* Börner

Genus *Cinara* Curtis

fornacula Hottes Green Spruce Aphid

One collection reported in Indiana by T. F. Johnson in Hamilton County, June 6, 1971 from spruce.

palmerae (Gillette) Spotted Spruce Aphid

(*Lachnus palmerae* Gillette)

(*Cinara palmerae* Gillette & Palmer)

Represented by four collections; three by T. F. Johnson on *Picea* from Hamilton County, May and June 1971, the other from a Marion County house (just inside from a planting of *Picea* sp.) dated January 27, 1971.

pinea (Mordvilko)*(Lachnus pineti* Fab.)*(Lachnus pineus* Mordvilko)

Ten collections by T. F. Johnson from Boone, Hamilton and Marion Counties on Austrian pine, and Scotch pine dated from May 20 thru June 31, 1971. One collection on Scotch pine in Morgan County by the author.

pinicola (Kalt.)*(Lachnus pinicola* Kalt.)

One collection by T. F. Johnson from Marion County on *Picea* sp., May 20, 1971.

schwarzii (Wilson) Short-haired Mottled Ponderosa Pine Aphid*(Lachniella schwarzii* Wilson)*(Lachnus schwarzii* Palmer)*(Cinara schwarzii* Gillette & Palmer)

One record in the Purdue Collection, by J. J. Davis, November 22, 1912 in Tippecanoe County on Jersey pine.

strobi (Fitch) White Pine Aphid*(Eriosoma strobi* Fitch)

First recorded in 1941 (21). Collected on June 25 and November 17, 1938 in Boone County on white pine; taken in Hamilton and Marion Counties on white pine from May 20 to June 6, 1971.

Subtribe *Lachnina* BörnerGenus *Lachnus* Burmeister*hyalinus*

One slide in the Purdue collection dated April 24, 1916, by H. Morrison from *Picea excelsa*. I did not find this species in the literature.

salignus (Gmelin) Giant Willow Aphid*(Aphid salicis* Sulzer)*(Aphid saligna* Gmelin)*(Lachnus punctatas* Burmeister)*(Aphis viminalis* Boyer de Fonscolombe)*(Lachnus dentatus* LaBaron)*(Lachnus viminalis* Cockerell)*(Tuberolachnus viminalis* Knowlton)*(Lachnus salignus* Gillette & Palmer)

One report in the Purdue collection, October 15, 1913, Tippecanoe County on *Salix* sp.

Genus *Longistigma* Wilson*caryae* Harris Giant Bark Aphid*(Aphis caryae* Harris)

This largest of American aphids, was reported by Morrison (28) and Wallace (42) as feeding on willows, sycamore and poplars. Davis (15) reported it unusually abundant on sycamore. I collected it in both Marion and Madison Counties in 1967 and 1971, respectively.

longistigma Wilson Linden Aphid

Reported as very common every year by Davis (5, 7, 10, 12). Reported on several timber trees including oak and linden. One slide in the Purdue collection by Davis in Tippecanoe County on sycamore, July 6, 1912.

Subtribe *Tramina* BakerGenus *Trama* Heyden*rara* Mordvilko Long-footed Dandelion Aphid*(Trama oculata* Gillette & Palmer)

Six collections, all feeding on dandelion roots and in association with ant species *Acanthomyop interjectus* (Mayr) and *Lasius neoniger* Emery.

troglydotes Heyden

First collected by T. F. Johnson in Hamilton County on dandelion, August 1, 1971.

Tribe *Panaphini* PalmerSubtribe *Phyllaphina* PalmerGenus *Stegophylla* Oestlund*quercicola* (Monell) Oak Aphid*(Callipterus quercicola* Monell)*(Phyllaphis querci* (Fitch)*(Phyllaphis quercicola* Baker)

(*Stegophylla quercicola* Gillette & Palmer)

Two slides in the Purdue collection by J. J. Davis, one a type specimen, from Tippecanoe County on white oak, May 31, 1913. I collected one sample from Starke County on oak, August 20, 1970.

Subtribe *Panaphina* Palmer

Genus *Calaphis* Walsh

betulaecolens (Fitch) Common Birch Aphid

Collected in flight in Marion County by T. F. Johnson, June 2, 1972.

betulella Walsh

Collected by the author, July 17, 1970, and by T. F. Johnson, May 17, 1971 from river birch in Marion County.

Genus *Euceraphis* Walker

betulae (Koch) European Birch Aphid

(*Callipterus betulae* Koch)

(*Euceraphis betulae* Gillette)

First collected in Johnson County from white birch by the author, June 15, 1970.

Genus *Monellia* Oestlund

caryae (Monell) American Walnut Aphid

(*Callipterus caryae* Monell)

(*Monellia caryae* Davidson)

Reported from Kosciusko County in mid July by Morrison (28), and July 22, 1939 from Fountain County on wild grape (21).

caryella (Fitch) Little Hickory Aphid

Reported once by Morrison (28).

costalis (Fitch)

Collected in Clark County, July 18, 1938 on hickory (21).

nigropunctata Granovsky

Collected in the Yellow Pan Trap Survey (27) in August.

Genus *Myzocallis* Passerini

alhambra Davidson Western Dusky-winged Oak Aphid

(*Myzocallis discolor* Monell)

(*Myzocallis discolor* var. *coloradensis* Gillette & Palmer)

Collected by J. J. Davis in Tippecanoe County on white oak, October 12, 1963, and in Hamilton County on white oak by the author.

aonidis (Kalt.)

Collected in Marion County (21) from flowering *Nicotiana*, July 24, 1938.

asclepiadis (Monell)

(*Callipterus asclepiadis* Monell)

This milkweed aphid collected in July and August, 1938 in Boone, Clinton, Hamilton, Fulton and Marion Counties. These specimens are in the Purdue collection.

bella (Walsh) Cloudy Winged Oak Aphid

(*Aphis bella* Walsh)

Collected by Morrison (28), the author in Marion County, and T. F. Johnson. All collections on pin oak, ranging from May 17 to July 15, 1970 and 1971.

discolor (Monell) Eastern Dusky-winged Oak Aphid

(*Callipterus discolor* Monell)

(*Myzocallis discolor* Baker)

Reported by Morrison (28) from Hamilton and Kosciusko Counties. Also in Clark County (21) on white oak June 14, 1938. T. F. Johnson made two collections in Hamilton county on milkweed, July 30 and August 1, 1971.

maureri Swain

(*Myzocallis maureri* Swain)

(*Myzocallis kiowanica* Hottes)

(*Myzocallis tonkawa* Hottes)

Two collections by T. F. Johnson in June 1971 in Hamilton County on milkweed.

punctata (Monell) Clear-winged Oak Aphid

(*Callipterus punctata* Monell)

(*Myzocallis punctata* Gillette & Palmer)

First reported in 1911 by Morrison (28) from Hamilton County in June. Two records from Marion and Warren Counties (21) on flowering tobacco and red oak, May 27 and July 24, 1938.

tiliae (Linn.) Linden Aphid

(*Aphis tiliae* Linn.)

(*Callipterus (Eucallipterus) tiliae* Davis)

Taken in Tippecanoe County, May 28, 1939 and by T. F. Johnson in Hamilton County, July 30, 1971. Both collections on basswood.

walshii (Monell)

(*Callipterus walshii* Monell)

One slide in the Purdue collection by J. J. Davis from red oak in Tippecanoe County, September 5, 1962.

Genus *Neosymydobius* Baker

albasiphus (Davis)

(*Symydobius albasiphus* Davis)

Several type specimens in the Purdue collection from white oak in Tippecanoe County by J. J. Davis, October 8, 1913.

Genus *Phyllaphis* Koch

fagi (Linn.)

One slide in the Purdue collection by G. E. Gould from beech, October 3, 1943.

Genus *Callipterus* Koch

asclepiadis (Monell)

(*Aphis asclepiadis* Passerini)

(*Aphis asclepiadis* Fitch)

(*Aphis lutescens* Monell)

(*Aphis nerii* Boyer de Fonscolombe)

Reported by Morrison (28) in Marion County.

Genus *Therioaphis* Walker

maculata (Buckton) Spotted Alfalfa Aphid

(*Myzocallis maculata* Buckton)

Reported by Davis (20) in southwestern Indiana in October. Osmun (28 thru 36) reported its progress northward through the state. It now occurs in all counties.

riehmi (Börner) Sweetclover Aphid

Collected in the Yellow Pan Trap Survey (27) May to October.

trifolii (Monell) Yellow Clover Aphid

(*Myzocallis ononidis* (Kalt.))

(*Callipterus trifolii* Monell)

Reported by Morrison (28) as abundant throughout the state. A slide in the Purdue collection by J. J. Davis in Tippecanoe County on red clover in November 1912.

Genus *Tinocallis* Matsumura

caryaefoliae (Davis) Black Pecan Aphid

Collected in the Yellow Pan Trap Survey (27) in June.

kahawaluokalani Kirkaldy Crapemyrtle Aphid

Collected in the Yellow Pan Trap Survey (27) in August.

Subtribe *Drepanosiphina* Baker

Genus *Drepanaphis* Del Guercio

acerifoliae (Thomas) Painted Maple Aphid

(*Siphonophora acerifolii* Thomas)

(*Drepanaphis acerifolii* Baker)

Reported throughout the state since 1911 (28). Davis (6, 8) reported it as abundant in the late summer and fall on silver maple. Recent collections from May 17 through September 16 in DeKalb (21), Hamilton, Marion, Shelby and Tippecanoe Counties. The common host is soft maple; but also taken feeding on pin oak, hard maple and boxelder.

carolinensis (Smith)

Collected in the Yellow Pan Trap Survey (27) from April thru October.

monelli (Davis)

(*Phymatosiphum monelli* Davis)

One collection from Tippecanoe County on horsechestnut on May 28, 1939; one 1970 collection by the author in Wayne County on black maple, July 10; three collections by T. F. Johnson in May 1971, two from Norway maple in Marion County, one from soft maple in Hamilton County.

Genus *Drepanosiphum* Koch

braggi Gillette

Collected in flight in Marion County by T. F. Johnson, May 31, 1971.

Subtribe *Chaitophorina* BakerGenus *Chaitophorus* Koch*aceris* Linn. Maple Chaitophorus

Reported only by Morrison (28) from Marion County in June.

flaveolus (Walker)

Collected by author in St. Joseph County on *Elaeagnus* sp., September 15, 1970.

populifoliae Davis Clear-winged Aspen Aphid

(*Chaitophorus populifoliae* Fitch)

(*Chaitophorus populifoliae* Oestlund)

Only reported by Morrison (28) from Marion County.

populifoliae (Fitch)

Reported by Morrison (28) from Kosciusko County, and from Tippecanoe County (21) on weeping willow, October 14, 1938.

smithiae (Monell) Willow Grove Aphid

Reported by Morrison (28) in Marion County, and as abundant in the state by Davis (8, 10, 15, 17, 20). Two slides in the Purdue collection from Tippecanoe County by Davis. The reported host was *Populus deltoides*, October 10, 1913 and November 2, 1915. One collection from Tippecanoe County (21) on linden, October 8, 1938.

viminalis (Monell) Little Black & Green Willow Aphid

(*Chaitophorus nigrae* Oestlund)

Reported by Morrison (28) from Marion and Hamilton Counties; two collections from Boone County (21) on willow, June 6, 1938, and Marshall County (21) on weeping willow, July 31, 1938.

Genus *Periphyllus* van der Hoeven*lyropictus* (Kessler) Norway Maple Aphid

(*Chaitophorus lyropictus* Kessler)

(*Chaitophorus aceris* Linn.)

(*Periphyllus lyropictus* Hottes & Frison)

Recorded by Wallace (39), and as abundant throughout the state (6, 8, 9, 15).

negundinis (Thomas) Boxelder Aphid

(*Periphyllus negundinis* Gillette & Palmer)

Reported by Davis (4, 6). Two collections from Tippecanoe County (21) on boxelder, May 12, 1939 and October 16, 1949. Recent collections by T. F. Johnson on boxelder in Boone, Hamilton and Marion Counties, in May and June 1971.

populicola (Thomas) Cloudy-winged Cottonwood Aphid

(*Chaitophorus populicola* Thomas)

(*Periphyllus populicola* Gillette & Palmer)

Reported by Morrison (28); three slides in the Purdue collection from *Populus deltoides* in August of 1914 and 1915; reported from Marion and Pike Counties from cottonwood and flowering tobacco (21); and collected recently by the author from cottonwood in LaPorte County.

Genus *Sipha* Passerini*flava* (Forbes) Yellow Sugarcane Aphid

(*Chaitophorus flavus* Forbes)

All specimens in the Purdue Collection by J. J. Davis and W. J. P. in 1911 and 1912 from Tippecanoe County except one from Lawrence County. Hosts were millet, *Muhlenbergia*, corn, *Agrostis stalinifera*, *Lolium perenne* and wheat.

Subtribe *Pterocommina* BakerGenus *Pterocomma* Buckton*salicis* (Linn.) Spotted Willow Aphid

(*Aphis salicis* Linn.)

(*Melanoxanthus salicis* Buckton)

(*Melanoxantherium salicis* Theobald)

(*Clavigerus salicis* Gillette & Palmer)

(*Pterocomma salicis* Baker)

Reported once by Morrison (28) from Marion County.

Tribe *Setaphini* PalmerGenus *Setaphis* van der Goot*viridis* van der Goot

One collection from Hamilton County on basswood, July 29, 1971.

Tribe *Aphini* Gillette & PalmerSubtribe *Aphina* Gillette & PalmerGenus *Aphis* Linn.*armoraciae* Cowen Western Aster Root Aphid*(Aphis middletonii* Thomas)

Collected in Hamilton County on corn by T. F. Johnson, June 28, 1971. Appeared to have a favorable relationship with *Lasius (Lasius) neoniger*, Emery ants, which were present in the same ecological area.

avenae Fab.*(Rhopalosiphum prunifoliae* (Fitch)*(Rhopalosiphum avenae* Fab.)

Heavy population reported by Davis (6, 9) in certain sections of the state. Several collections by Davis in Tippecanoe County in the Purdue collection. Hosts are wheat or apple, ranging from March through October.

bakeri Cowen Short-beaked Clover Aphid*(Aphis cephalicola* Cowen)

Two records in the Purdue collections, one May 28, 1913 from *Crataegus*, the other October 7, 1938 (21) from peanuts.

brevis Sanderson Long-beaked Clover Aphid*(Aphis crataegifoliae* Fitch)

This specimen in the Purdue collection taken May 28, 1913 in Tippecanoe County on *Crataegus* sp.

caliginosa Hottes & Frison

Collected once by the author in Tippecanoe County on *Euonymus europea*.

cephalanthi Thomas Button-bush Aphid*(Aphis impatientis* Thomas)

Reported only by Morrison (28) from Kosciusko County.

coreopsidis Thomas*(Siphonophora coreopsidis* Thomas)

One slide in Purdue collection, August 3, 1911 from Tippecanoe County by J. J. Davis.

cornifoliae Fitch

Collected by T. F. Johnson in Hamilton County from dogwood, June 8, 1971.

craccivora Koch

Collected in the Yellow Pan Trap Survey (27) from April thru November.

debilicornis (Gillette & Palmer)*(Anuraphis debilicornis* Gillette & Palmer)

Two collections by the author, one in Tippecanoe County (21), October 1, 1938 on wild sunflower, another in Marion County, July 6, 1970, host unknown.

feminea Hottes Red & Black Cherry Aphid*(Aphis tuberculata* Patch)

Collected by T. F. Johnson in Hamilton County, July 14, 1971 on wild cherry.

folsomii Davis

One slide (type specimen) in the Purdue collection by J. J. Davis, July 18, 1912 in Tippecanoe County on *Parthenocissus quinquefolia*.

forbesi Weed Strawberry Root Aphid

Likely still exists, although all records are from past years; *i.e.* reported by Morrison (28) from most parts of Indiana; by Baldwin (1) as common on strawberry; and Marshall (26).

gladioli Felt Gladiolus Aphid

Reported in 1931 by Wallace (44) on gladiolus bulbs in storage.

gossypii Glover Melon or Cotton Aphid

Reported by Morrison (28) from Marion County on nasturtiums in early summer; by Davis (4) on melon and cucumber, abundant July and August from all parts of the state; and Davis (6) from Kosciusko County. Reported by Davis as destructive to melons during August in Hendricks, Jackson, Miami, Newton and Starke Counties; in July and early August in Benton, Fountain, Huntington, Kosciusko, Lawrence and Tippecanoe Counties (9); and doing unusually heavy damage throughout the state on melons and cucumbers (10). Abundant in Northern Indiana in late August (14); reported as a serious pest of cucumbers, cantalopes, watermelons and rarely on squash and pumpkin (23). The Purdue collection contains several slides by J. J. Davis and C. R. C. varying from May to October, from soybeans, cotton and potatoes. Reported on rhubarb, grapefruit, quince, cucumbers,

- August lilies, milkweed and *Callirhoe alcaeoides* in Boone and Tippecanoe Counties from May 28 to October (21). The author and T. F. Johnson made several collections ranging from May to August from Hamilton, LaPorte, Marion and Tippecanoe Counties on: gladiolus, forsythia, lamb's quarter, Anthony-water spirea, honey-suckle and milkweed.
- hederae* Kalt. Ivy Aphid
Collected September 1, 1939 from English Ivy in Tippecanoe County (21).
- helianthi* Monell Sunflower Aphid
(*Aphis oxybaphi* Oestlund)
(*Aphis gillettei* Cowen)
Reported by Morrison (28) in 1911 from Marion County; in Tippecanoe County (21) from trumpet-vine on October 8, 1938; and by T. F. Johnson in Hamilton County from giant ragweed, August 1, 1971.
- illinoisensis* Shimer Grapevine Aphid
Reported abundant in Vigo County 1927 by Davis (6) on June 24; Davis in 1930 (9) in Tippecanoe and Montgomery Counties in June; and on wild grape in Marion County (21), July 24, 1938.
- impatientes* Thomas
Three slides by Davis in the Purdue collection from *Impatiens* sp. in Tippecanoe County, September 4, 10, 23, 1911.
- lutescens* Monell Milkweed Aphid
(*Aphis nerii* Boyer de Fonscolombe)
One specimen by J. J. Davis in the Purdue collection from Tippecanoe County on *Apocynum* and *Romisaeifolium*, June 10, 1912; four collections by T. F. Johnson in Hamilton County, on milkweed in June and July, 1971.
- maidiradicis* Forbes Corn Root Aphid
(*Aphis maidis* Fitch)
Reported in 1925 by Davis (4) from most parts of the state on aster roots; and as destructive to corn in Clark County (8); and in 1930 (9) and 1932 (10) again reported as destructive. In 1926, reported as being commonly attended by the ant *Lasius* sp. on the roots of asters, zinnia, sweet sultana, dandelion, sour dock, pigweed, smartweed, crabgrass and foxtail. Davis reported this species often found with *Prodipphilus erigeronensis*. Seven slides in the Purdue collection by Davis in Tippecanoe County from *Plantago* sp., and *Acalypha virginica*, and roots of *Lepidium Rumex altissima*, corn, *Capella*, and dock. One record in a Yellow Pan Trap in Hamilton County, June 5, 1961. Ten recent collections by T. F. Johnson from Boone and Hamilton Counties on grass, narrow leaf dock, roots of dandelion, roots of corn, plantain and in ant nests with *Lasius neoniger* Emery.
- medicaginis* Koch
(*Aphis laburni* Kalt.)
Reported by Morrison (28); Davis (4, 8) indicated heavy infestation on cowpeas in southwestern Indiana. The Purdue collection has four Tippecanoe County records by Davis; three on cowpeas and one on black locust, plus a record on lima beans in 1940. Knapp (21) has one record from beans, in Tippecanoe County, August, 1940. T. F. Johnson collected one sample on black locust in Hamilton County, July 30, 1971.
- middletonii* (Thomas) Aster Root Aphid
(*Aphis maidi-radicis* Forbes)
The Purdue collection has three slides from Tippecanoe County by J. J. Davis, July 18 and August 3, 17, 1911, all from roots of *Erigeron canadensis*. Recent finds in ant colonies require verification.
- neilliae* Oestlund
One slide from Tippecanoe County on *Physocarpus* sp., June 15, 1912.
- oestlundii* Gillette
One slide in Purdue collection, by C. R. Cleveland from Lake County on *Oenothera biennis*, June 7, 1923. Also collected by T. F. Johnson, July 14, 1971 in Hamilton County, on *Oenothera* sp.
- persicae-niger* Smith
Listed by Morrison (28), and by Baldwin (1) as common on cherry, peach and plum; one slide in the Purdue collection, by Davis from Lawrence County on peach, May 13, 1924; collected by Johnson on lamb's quarters in Boone County, June 4, 1971.
- pomi* DeGeer Apple Aphid
(*Aphis mali* Fab.)

Reported throughout the state by Morrison (28) and Davis (4, 5, 6, 9, 35, 36, 37); by Baldwin (1) as common on apple; two collections on pear trees in Tippecanoe County (21) June 8, 1938; numerous collections in Hancock and Kosciusko Counties (21) on cotoneaster, apple and crabapple, June and July of 1970; and one collection by T. F. Johnson in Hamilton County on apple with *Lasius* sp. and *Pallidifulva nitidiventris* in attendance.

pseudohederae Theobald False Ivy Aphid

One collection by author in Wayne County on *Hedera helix* (variegated), February 11, 1972 in a greenhouse.

rociadae Cockerell The Russet-colored Larkspur Aphid

One record from Tippecanoe County on *Delphinium tricorne* in Purdue collection, May 8, 1913.

rubicola Oestlund Thimbleberry Aphid

Reported in 1924 by Wallace (40) as very common on red raspberry.

rumicis Linn. Dock Aphid

(*Aphis carbocolor* Gillette)

Reported by Morrison (28) from Hamilton County; by Davis (4, 5, 6) on nasturtium and poppy scattered over the state; by Davis (10) as destructive to cultivated dock at Brookston on June 13; and Davis (13) as abundant on nasturtiums at Indianapolis on July 30. Four collections by the author from narrow-leaved dock, nasturtium and burdock from Boone, DeKalb and Tippecanoe Counties (2); and recently in Marion County on *Euonymus europaeus*, July 13, 1970. Six collections by T. F. Johnson in Boone and Hamilton Counties in May and June on narrow-leaved dock.

sambuci Linn.

One slide in Purdue collection, from Steuben County on elder, June 17, 1931.

solidaginifoliae Williams

One slide in Purdue collection by J. J. Davis from Tippecanoe County on *Solidago* sp., October 5, 1911.

spiraella Schout

One record by Morrison (28) from Marion County.

spiraecola Patch Spirea Aphid

(*Aphis spiraella* Schouteden)

Reported often as a pest of *Spirea* sp.; and reported by Davis (6, 7, 8, 9). Several collections by the author on varieties of spirea (21). All collections from Tippecanoe County except one in DeKalb County. Recent collections from Marion County on *Spirea* sp. in May and June and one from Hamilton County on *Viburnum opulus*, July 4, 1971.

spiraephila Patch The Brown Spirea Aphid

One collection by T. F. Johnson on *Spirea* sp. in Marion County, May 2, 1971.

vernoniae Thomas Ironweed Aphid

First reported by Morrison (28) from Hamilton County in mid-June; three slides in the Purdue collection by J. J. Davis, from Monroe, Carroll and Tippecanoe counties on *Vernonia*; one collection from Marion County (21) on ironweed, July 24, 1938.

viburniphila Patch Viburnum Aphid

Two collections from Tippecanoe County (21) on *Viburnum dentatum*, April 18, 1938, and May 22, 1939; Found by the author on *Viburnum dentatum* in Marion County, June 15, 1970.

Genus *Aspidaphis* Gillette

adjuvans (Walker)

Collected in Yellow Pan Trap Survey (27) in May and June.

polygoni Patch

(*Aphis adjuvans* Walker)

(*Aspidaphis adjuvans* Laing)

(*Aspidaphis polygoni* Gillette)

(*Aphalara polygoni* Patch)

One slide in the Purdue collection by J. J. Davis from Greene County on *Polygonum*, July 14, 1916.

Genus *Brachycolus* Buckton

holci Hardy

Collected in Yellow Pan Trap Survey (27) in May and June.

Genus *Dysaphis* Börner*apifolia* (Theobald)

Collected in Yellow Pan Trap Survey (27) in June and July.

plantaginea (Passerini) Rosy Apple Aphid

(*Aphis sorbi* Kalt.)

(*Aphis pyri* Boyer de Fonscolombe)

(*Aphis malifoliae* Fitch)

(*Anuraphis rosea* Baker)

(*Aphis rosea* Gillette & Palmer)

(*Aphis rosea* (Baker))

(*Myzus rosea* ?)

A pest of long standing; first listed by Morrison (28) in Marion County; reported for several years by Davis (4, 5, 6, 7, 11) from numerous counties; reported by Osmun (28, 30, 32, 33, 34, 35, 36) as a lesser pest; one slide from Tippecanoe County in Purdue collection, June 1, 1922; and collected once by the author in Boone County on sweet apple, June 12, 1938.

Genus *Neoceruraphis**viburnicola* (Gillette)

(*Aphis viburnicola* Gillette)

Reported by Davis (5, 6, 10) as very abundant in central Indiana causing serious malformations of viburnums. Two recent collections by T. F. Johnson, July 21, 1971, in Boone County from grasses.

Genus *Hysteroneura* Davis*setariae* (Thomas) Rusty Plum Aphid

(*Siphonophora setariae* Thomas)

(*Aphis setariae* Oestlund)

(*Hysteroneura setariae* Cutright)

(*Aphis setariae* (Thomas))

First reported by Morrison (28) in Marion County, June, 1911; reported by Baldwin (1) on cherry, peach and plum; Wallace (39) on plum; and Davis (6) and Wallace (42) found it abundant in central Indiana. Purdue collections by J. J. Davis include several slides of this species from plum in Tippecanoe County. Collections by T. F. Johnson in Boone and Hamilton Counties on foxtail grass, mostly in June 1971.

Genus *Brevicoryne* van der Goot*brassicae* (Linn.) Cabbage Aphid

(*Aphis brassicae* Linn.)

Widely reported throughout the state as follows: Morrison (28); Davis (4), abundant on turnip during July in central and northern Indiana; Davis (6), abundant on cabbage in Vigo County, July 8; Davis (8), abundant on cabbage in St. Joseph County, July 11; Davis (9) abundant on cabbage in St. Joseph, Hamilton, Boone and Madison Counties, May 18 to July 21; Davis (10), Boone County, May 18 to July 21; Davis (12) normally abundant; Davis (13), especially abundant in Harrison and Montgomery Counties in June, and heavy on cabbage and kale in southern Indiana, September. Several collections (21) from Boone and Tippecanoe Counties (21) on cabbage, brussel sprouts and onions, August 31 to November 6, 1938.

Genus *Cavariella* Del Guercio*aegopodii* (Scopoli)

Collected in Yellow Pan Trap Survey (27) from April to October.

Genus *Dactynotus* Rafinesque*nigrotuberculatus* Olive

Collected in Yellow Pan Trap Survey (27) from May through August.

rudbeckiae (Fitch) Goldenglow Aphid

(*Aphis rudbeckiae* Fitch)

(*Macrosiphum rudbeckiae* Essig)

(*Macrosiphum rudbeckiae* (Fitch))

Reported state-wide by H. Morrison (28); destructive to goldenglow, according to Wallace (39) and Davis (9); three slides in Purdue collection from Tippecanoe County on *Siphium perfoliatum* and *Onchus* sp., by J. J. Davis and D. G. Tower, September 16, 1911 and May 29, 1914; five specimens from Boone, Hamilton and Tippecanoe Counties (21), July and August of 1938 and 1939; eight collections by T. F. Johnson and the author from Hamilton and Hendricks Counties

on ragweed, goldenglow, wild lettuce and aster, June through September of 1970 and 1971.

Genus *Hyalopterus* Koch

atriplicis (Linn.) The Boat Gall Aphid

(*Aphis atriplicis* Linn.)

(*Aphis chenopodii* Cowen)

(*Hyalopterus atriplicis* Hayhurst)

Four collections, three on *Chenopodium* (Lamb's Quarters), one on potatoes; two collections by Cleveland in Lake County, June 1923; one by T. F. Johnson in Boone County, June 3, 1972, and one in Hamilton County, July 11, 1972.

pruni (Geoffroy) Mealy Plum Aphid

(*Aphis arundinis* Fab.)

(*Aphis pruni* Fab.)

(*Hyalopterus arundinis* Davidson)

(*Hyalopterus arundinis* (Fab.))

One collection by T. F. Johnson in Boone County on grass, July 11, 1971.

Genus *Rhopalosiphum* Koch

berberidis (Kalt.) Barberrry Plant-louse

(*Aphis berberidis* Kalt.)

(*Rhopalosiphum berberidis* Gillette & Palmer)

One collection on *Mahonia* sp. from Hendricks County by the author.

fitchii (Sanderson) Apple Grain Aphid

(*Aphis mali* Fab.)

(*Aphis fitchii* Sanderson)

(*Rhopalosiphum prunifoliae* Baker & Turner)

Reported by Davis (4, 5, 10) as occurring early in season but scarce; three collections from Tippecanoe County on wheat (21); one collection by author in Johnson County on quince, July 14, 1970.

maidis (Fitch) Corn Leaf Aphid

(*Aphis maidis* Fitch)

(*Rhopalosiphum maidis* Webster)

Of great economic importance and reported consistently through the years by Morrison (28); Davis (11, 13); and Cleveland (3). Reported as abundant in corn and sorghum throughout the state by Osmun (30 thru 37) from 1957 thru 1966. The Purdue collections contain many slides of this species from Tippecanoe County by J. J. Davis from June to September. Many entries from Boone, Fountain, Hamilton, Cass, Fulton and Marion Counties (21) from corn, flowering *Nicotiana*, hen and chickens, snow-on-the-mountain, dahlia, sunflower, wild lettuce, *Yucca*, tomatoes, and blue funkia lily; and several collections in Hamilton County by T. F. Johnson on corn, milkweed and grasses, June and July of 1971.

melliferum (Hottes)

(*Aphis xylostei* Schrank)

(*Hyadaphis mellifera* Hottes)

Three collections in Boone County (21) on parsnip, wild carrot and cultivated carrot, July and September, 1939.

nymphaeae (Linn.) Waterlily Aphid

(*Aphis nymphaeae* Linn.)

(*Aphis aquatica* Jackson)

(*Rhopalosiphum nymphaeae* Patch)

One record from Boone County (21) on water-hyacinths, October 30, 1938; and from Marion County on waterlily, January 4, 1971.

poae Gillette

All specimens in Purdue Collection from Tippecanoe County on blue grass by J. J. Davis, October 1911 and November 1912.

rhoeis Monell Sumach Aphid

(*Amphorophora howardi* Wilson)

(*Rhopalosiphum howardi* Davis)

Reported by Morrison (28) from Tippecanoe County; five slides in Purdue collection by J. J. Davis from Carroll, Lawrence and Tippecanoe Counties on *Elymus canadense* and sumach, 1911 and 1912; one collection in Boone County (21) on sumach, August 16, 1939.

rufiabdominalis (Sasaki)

Collected in Yellow Pan Trap Survey (27) from May through October.

rufomaculatum (Wilson) Pale Chrysanthemum Aphid*(Aphis rufomaculata* Wilson)*(Siphocoryne artemisiae* Del Guercio)*(Stephensonia lahorensis* Das)*(Rhopalosiphum lahorensis* Takahashi)*(Rhopalosiphum rufomaculatum* Hille Ris Lambers)

Seven slides in the Purdue collection from Tippecanoe County in greenhouses on *Chrysanthemum* sp., January and April, 1915 to 1936; one record from Tippecanoe County (21) on *Chrysanthemum* sp.; another by the author from Vigo County on *Chrysanthemum* sp. in a greenhouse, February 18, 1971.

sonchi Oestlund

Previous records are represented by slide specimens in Purdue collection, all collected by J. J. Davis in Tippecanoe County on *Sonchus oleraceus*, July 8, 1912, October 15, 1913, and July 1, 1915.

Genus *Hyadaphis* Kirkaldy*erysimi* (Kalt.)

Collected in Yellow Pan Trap Survey (27) from April through November.

foeniculi (Passerini)

Collected in Yellow Pan Trap Survey (27) in August.

pastinacae Linn.*(Cavariella essige* (Gillette & Bragg))*(Rhopalosiphum pastinacae* Linn.)*(Aphis aegopodii* Scopoli)

Reported by Morrison (28) from Marion County; another record in Purdue collection by J. J. Davis in Tippecanoe County on *Pastinaca sativa*, parsnip, July 3, 1912.

pseudobrassicae (Davis) Turnip Aphid*(Aphis pseudobrassicae* Davis)*(Rhopalosiphum pseudobrassicae* Gillette & Palmer)

Reported by Davis (4, 5, 7, 8, 9, 11, 14, 16) on turnip; radish, horseradish and cabbage from all parts of the state; ten slides in Purdue collection with type specimens; one from Elkhart and rest from Tippecanoe County, July through October, with three slides collected in a greenhouse, by J. J. Davis, January 1914, on radish, wild mustard, grape, *Brassica* and turnip; one collection from Boone County (21) on white turnip, October 28, 1939.

siphocoryne Xylaster

One slide in Purdue collection from Tippecanoe County on *Pastinaca sativa*, July 3, 1912.

Genus *Toxoptera* Koch*muhlenbergiae* Phillips & Davis Grass Aphid

Reported by Phillips and Davis in Wayne and Tippecanoe Counties by Morrison (28); nine slides in Purdue collection, some are type specimens, all collected on *Muhlenburgia* sp. in Tippecanoe County from July to October.

Genus *Schizaphis* Börner*graminum* (Rondani) Greenbug*(Aphis graminum* Rondani)*(Toxoptera graminum* Pergande)

A pest of grain crops since 1911 (28) when it was reported throughout the state as the cause of crop failure of oats by Davis (9); several collections are in Purdue collection from Marion, Tippecanoe and Wayne Counties, 1907, 1908 and 1911.

Subtribe *Macrosiphina* BakerGenus *Amphorophora* Buckton*senoriata* Mason Raspberry Cane Aphid

The only record is in the Purdue collection, from Tippecanoe County on wild raspberry, July 19, 1914.

singularis Hottes & Frison

The only collection was by the author in Hamilton County on crabgrass, June 28, 1971.

Genus *Cryptomzus* van der Goot*ribis* (Linn.) Currant Aphid*(Aphis ribis* Linn.)*(Myzus ribis* Gillette & Bragg)*(Capitophorus ribis* Theobald)*(Capitophorus ribis* Linn.)

First reported by Baldwin (1) on gooseberries and currants; also reported as serious and abundant throughout the state by Davis (4, 5, 6, 8, 13); one slide exists in Purdue collection from Boone County, April 26, 1966.

Genus *Capitophorus* van der Goot

fragaefolii (Cockerell) Strawberry Aphid

(*Myzus fragaefolii* Cockerell)

(*Capitophorus fragaefolii* Hottes & Frison)

(*Capitophorus fragariae* (Theobald))

One specimen collected by the author in LaPorte County on *Rosa rugosa*, June 11, 1970.

hippophaes (Walker) Polygonum Aphid

Collected in Yellow Pan Trap Survey (27) in September and October.

minor (Forbes)

(*Siphonophora minor* Forbes)

(*Capitophorus minor* Hottes & Frison)

Reported by Marshall (26) feeding on fruits.

Genus *Kakimia* Hottes & Frison

houghtonensis (Troop) Gooseberry Witchbroom Aphid

(*Aphis houghtonensis* Troop)

(*Myzus houghtonensis* Davis)

(*Myzus* (*Kakimia*) *houghtonensis* Hottes & Frison)

(*Kakimia houghtonensis* Gillette & Palmer)

First found and named by Prof. J. Troop in Marion County, in 1904-1905; reported by Morrison (28); reported by Davis (4, 5, 6, 7, 8) as abundant on gooseberries in central to northern Indiana.

Genus *Macrosiphum* Passerini

ambrosiae (Thomas) Brown Ambrosia Aphid

(*Siphonophora ambrosiae* Thomas)

(*Tritogenaphis kosacaudis* Knowlton)

(*Macrosiphum ambrosiae* Hottes & Frison)

(*Macrosiphum solidaginis* (Fab.))

(*Siphonophora solidaginis* Williams)

(*Macrosiphum ambrosiae* (color variety) Gillette & Palmer)

Found widespread on wild lettuce, goldenrod and fall aster in Boone, Cass, Hamilton, Hendricks, Marion, Noble and Tippecanoe Counties (2), June to October 1941.

avenae (Fab.) English Grain Aphid

Collected in Yellow Pan Trap Survey (27) from April through October.

begoniae Shout

Specimens in Purdue collection by H. Morrison (28) on *Begonia* sp. in greenhouses, January 31, 1911.

coryli Davis

Cotypes of this species in Purdue University collection, one by J. J. Davis, July 5, 1912; another by D. G. Tower, July 3, 1915. Both from Tippecanoe County on hazel.

creelii Davis

Two slides in Purdue collection, from alfalfa in greenhouses, Tippecanoe County, November 13, 1913.

dirhodum (Walker) Rose Grass Aphid

(*Aphis dirhoda* Walker)

(*Macrosiphum dirhodum* Patch)

Collected from Hamilton and Marion Counties on various species of rose, June and July, 1971.

erigeronensis (Thomas) White-top Aphid

(*Siphonophora erigeronensis* Thomas)

(*Macrosiphum erigeronensis* Hottes & Frison)

First reported by Morrison (28) in early summer in Hamilton and Kosciusko Counties; two records in Purdue collection, by J. J. Davis on *Erigeron annuus* and *Erigeron canadensis*, September 12 and 31, 1911.

euphorbiae (Thomas) Potato Aphid

(*Macrosiphum gei* (Koch))

(*Macrosiphum solanifolii* Ashmead)

(*Siphonophora euphorbiae* Thomas)

(*Siphonophora gei* Koch)

(*Siphonophora solanifolii* Ashmead)

(*Nectarophora asclepiadis* Cowen)

(*Nectarophora heleniella* Cockerell)

First reported by Morrison (28) and Davis (4), as abundant in Lake County on potatoes; by Gould (23) and Osmun (31) in Boone, Carroll, DeKalb, Marion and Tippecanoe Counties (21) from calendula, cannas, cotton, dahlia, eggplant, flowering tobacco, poppies, roses, rhubarb, swiss chard and tomato. The Purdue collection contains slides collected by J. J. Davis in Tippecanoe County from *Euphorbia corollata* and rose; ten slides by C. R. Cleveland in 1923 and two in 1924 in Tippecanoe County from *Physalis* sp., potato, tomato, jimson weed and wild rose; two slides by G. E. Gould from egg plant and tomatoes in Tippecanoe County, 1939; three collections by the author from cut-leaf philodendron, wild lettuce and potted tulips in greenhouses in Vanderburg and Vigo Counties, 1971; and eight collections by T. F. Johnson from Hamilton and Marion Counties on red mulberry, *Tulipa* sp. and wild lettuce, May 17 through June 8, 1971.

frigidae (Oestlund)

(*Nectarophora frigidae* Oestlund)

(*Macrosiphum frigidae* Essig)

One slide in Purdue collection by H. Morrison (28) on *Verbena alternifolia*, from Hamilton County, June 16, 1912.

frigidicola (Gillette & Palmer)

Collected in Boone County (21) on *Achillea* sp., August 6, 1939.

granarium (Kirby) Grain Aphid

(*Aphis granaria* Kirby)

(*Siphonophora granaria* Buckton)

(*Macrosiphum granarium* Phillips)

First reported by Davis (12) as abundant in heads of wheat in early June in southern Indiana and again from many places in the state (18); three slides in Purdue collection, from Wayne and Knox Counties, June, July and November; T. F. Johnson found it feeding on rye in Boone County, June 4, 1971.

ilini Hottes & Frison

J. J. Davis has one slide in Purdue collection, from Tippecanoe County on sunflower, September 19, 1915.

liriodendri (Monell) Tulip Tree Aphid

(*Siphonophora liriodendri* Monell)

Reported by Morrison (28) in Marion County, late June and July; one report (21) from Boone County on tulip trees, dated July 27, 1939; and two collections by the author from Shelby County on tulip trees, June 1 and June 10, 1971.

orthocarpi Davis

One type specimen in Purdue collection by H. Morrison (28), April 16, 1909.

pallens Hottes & Frison

Collected in Yellow Pan Trap Survey (27) in May and June.

pseudodirhodum Patch

Five slide specimens in Purdue collection by C. R. Cleveland in Lake, St. Joseph and Tippecanoe Counties on *Rosa* sp., June and July, 1923 and 1924.

pseudorosae Patch

(*Nectarophora pallida* Oestlund)

Collected by T. F. Johnson in Hamilton County on *Rosa multiflora*, June 9, 1971.

rosae (Linn.) Rose Aphid

(*Aphis rosae* Linn.)

(*Siphonophora rosae* Buckton)

(*Nectarophora rosae* Oestlund)

(*Macrosiphum rosae* Essig)

Reported since 1911 by Morrison (28); Davis (4, 10) reported as common and generally destructive; the Purdue collection contains only one slide by C. R. Cleveland from Tippecanoe County on rose, June 14, 1923; one record from Marion County (21) on hybrid tea rose, August 23, 1939; T. F. Johnson made six collections in Hamilton County from *Rosa multiflora* June 1971.

sanborni Gillette Chrysanthemum Aphid

(*Macrosiphum chrysanthemi* Oestlund)

(*Siphonophora chrysanthemicolens* Williams)

(*Macrosiphum sanborni* Theobald)

(*Macrosiphoniella sanborni* Theobald)

Reported by Morrison from Marion County (28); Purdue collections contain three

slides of specimens from Tippecanoe County on chrysanthemum in greenhouses; the author (21) reported three collections from DeKalb, Marion and Tippecanoe Counties on chrysanthemum; and one recent collection by T. F. Johnson from Marion County on chrysanthemum, June 8, 1971.

solidaginis (Fab.) Goldenrod Aphid

Two records exist in the Purdue collection from Steuben County on goldenrod and bull thistle, June 17, 1931.

sonchellum (Monell) Red Lettuce Aphid

(*Siphonophora sonchella* Monell)

(*Macrosiphum williamsi* Gillette & Palmer)

(*Macrosiphum sonchellum* Gillette & Palmer)

One collection from wild lettuce in Starke County, September 3, 1970.

tarapici (Kalt.)

Reported in Boone County (21) on dandelion, August 16, 1939.

taraxaci (Kalt.) Dark Dandelion Aphid

Collected in Yellow Pan Trap Survey (27), May through October.

tiliae (Monell)

(*Siphonophora tiliae* Monell)

T. F. Johnson found 3 specimens on basswood in Hamilton and Marion Counties, May 17, July 4 and 29, 1971.

venae fuscae Davis

Three slides, including type specimens, by J. J. Davis in Tippecanoe County from *Rumex crispis* and *Polygonum cristatum*, September, October and November, 1911 and 1912, one in Purdue collection. A recent collection by T. F. Johnson in Marion County was on a late specimen caught in flight, June 2, 1971.

viticola Thomas

Reported by Morrison (28) from Marion and Kosciusko Counties in mid July.

Genus *Masonaphis* Passerini

pepperi MacGillivray

Collected in Yellow Pan Trap Survey (27) from April through August.

Genus *Acyrtosiphum* Mordvilko

cryptobium (Hille Ris Lambers)

Collected in Yellow Pan Trap Survey (27) in May and June.

malvae (Mosley)

Collected in Yellow Pan Trap Survey (27) in May and June.

pisum (Harris) Pea Aphid

(*Aphis pisum* Harris)

(*Aphis onobrychis* Boyer de Fonscolombe)

(*Aphis pisi* Kalt.)

(*Macrosiphum pisi* Davis)

(*Acyrtosiphon pisum* (Harris))

(*Macrosiphum pisi* (Kalt.))

Reported by Morrison (28) from Marion County; Davis (4, 7, 10, 12) in Adams, Elkhart, LaGrange, LaPorte, Fulton, Marshall, Grant and Greene Counties, on alfalfa, clover, and peas. Nearly all of 31 slides in Purdue collection were collected by J. J. Davis in Tippecanoe County from the clover family, April through November.

porosum (Sanderson) Yellow Rose Aphid

One record from Tippecanoe County (21) on climbing rose, June 5, 1938; collected by T. F. Johnson in Hamilton County on multi-flora rose, June 7, 1971.

Genus *Myzus* Passerini

cerasi (Fab.) Black Cherry Aphid

(*Aphis cerasi* Fab.)

(*Myzus cerasi* Gillette & Taylor)

This important economic pest was first recorded by Morrison (28), later by Baldwin (1) on cherry, peach, plum and sweet cherry; also reported as abundant and destructive throughout central Indiana (4), northern Indiana and St. Joseph County (6) and in north central Indiana (8); recent collections from Tippecanoe County (21) in 1941 and Hamilton County by T. F. Johnson June 3 and 8, 1971, on black cherry and sour cherries.

convolvuli (Kalt.)

(*Myzus solani* (Kalt.))

Taken April 30, 1939, on Boone County on *Verbena* sp. (21).

elaegni Del Guercio

Two slides in Purdue collection by J. J. Davis from Tippecanoe County on *Elaeagnus angustifolia*, October 23, 1912 and November 10, 1911.

essigi Gillette & Palmer

(*Myzus aquilegiae* Essig)

The Purdue collection contains two specimens collected on *Aquilegia* sp. in Tippecanoe County by J. J. Davis, April 30, 1916 and May 20, 1916.

lactucae (Schrank)

(*Aphis lactucae* Schrank)

The author collected one sample in Fulton County on lettuce, September 3, 1970.

lycopersici (Clark)

Two slides in Purdue collection by J. J. Davis from Tippecanoe County on roses, October 16, 1915 and November 2, 1915.

monardae (Davis) Horsemint Aphid

(*Phorodon monardae* Williams)

(*Rhopalosiphum monardae* Williams)

(*Myzus monardae* Williams)

One collection by author from Wayne County on Water Ivy, February 11, 1972.

persicae (Sulzer) Green Peach Aphid

(*Aphis persicae* Sulzer)

(*Aphis dianthi* Schrank)

(*Siphonophora achyranthes* Monell)

(*Myzus malvae* Oestlund)

Reported since 1911 by Morrison (28) in Marion County, last of May to the first of June; reported as common on peach, cherry and plum by Baldwin (1); reported as a pest of tomato in central and northern Indiana by Davis (4, 12, 19); reported as a serious pest of tobacco late in the season and of potatoes by Osmun (29, 30, 31); 24 slides in Purdue collection by J. J. Davis and C. R. Cleveland from April through November; the author (21) made 15 collections in Boone, DeKalb and Tippecanoe Counties from apple, *Bryophyllum* sp., beets, cabbage, *Cineraria* sp., foxglove, green peppers, egg plant, radishes, rhubarb and elm, in 1938, 1939 and 1940; recent collections by the author in greenhouses on *Cineraria* sp., *Hybiscus* sp. and snapdragons from Elkhart, Vigo and Wayne Counties, January through March 1971 and 1972, and others by T. F. Johnson in Boone, Hamilton and Marion Counties, May and June, 1972.

plantagineus Passerini Plantain Aphid

One collection by T. F. Johnson from Hamilton County on *Plantago* sp., July 14, 1971.

rosarum Buckton Rose Leaf Aphid

One record by H. Morrison (28), from Marion County in the summer.

solani (Kalt.) Foxglove Aphid

(*Aphis solani* Kalt.)

(*Macrosiphum solani* Theobald)

(*Myzus pseudosolani* Theobald)

(*Myzus convolvuli* (Kalt.))

One collection by the author from Cass County on *Gladiolus* sp., September 1, 1970.

Genus *Neomyzus* van der Goot*circumflexus* (Buckton) Crescent Marked Lily Aphid

(*Siphonophora circumflexa* Buckton)

(*Myzus vincae* Gillette)

(*Macrosiphum circumflexum* Theobald)

(*Myzus circumflexus* Theobald)

Three collections from Tippecanoe County on *Anemone cylindrica*, *Rudbeckia laciniata* (in cold storage) and *Polymiria canadensis* on February 1, 1913; taken in Marion County by H. F. Dietz, on *Vinca minor*, January 24, 1916; found in Delaware County by author on lily, January 29, 1970.

Genus *Phorodon* Passerini*humuli* (Schrank) Hop Aphid

(*Aphis humuli* Schrank)

(*Phorodon humuli* Riley)

Reported by Morrison (28) from Marion County in July on hops.

Genus *Rhopalosiphonins* Baker*staphyleae* (Koch)

Collected in Yellow Pan Trap Survey (27) in June.

Subfamily *Eriosomatinae* KirkaldyTribe *Eriosomatini* BakerGenus *Colopha* Monell*graminis* (Monell)*(Tetraneura graminis* Monell)*(Rhizobius spicatus* Hart)*(Colopha ulmicola* (Fitch))

One slide in the Purdue collection, by J. J. Davis from *Spartina michauxiana*, September 8, 1911; some authors consider this species as a dimorphic form of *Colopha ulmicola* (Fitch).

ulmicola (Fitch) Elm Cockscombgall Aphid*(Byrsocrypta ulmicola* Fitch)*(Tetraneura graminis* Monell)*(Colopha graminis* Hottes & Frison)*(Colopha ulmicola* Baker)

Earliest report by Morrison (28) from all parts of state; Baldwin (1) reported a cockscomb-like structure on upper surfaces of elm leaves; J. J. Davis reported it as abundant (4, 9, 11, 12, 14) from many parts of the state.

ulmisacculi (Patch)*(Tetraneura ulmisacculi* Patch)*(Tetraneura ulmifoliae* Baker)

Three collections by T. F. Johnson, two in Hamilton County on the roots of grass, in conjunction with ants of an unidentified species, April 25, 1971; and one in Boone County from a nest of *Lasius neoniger* Emery, May 1, 1971.

Genus *Eriosoma* (Leach)*americanum* (Riley) Woolly Elm Aphid*(Schizoneura americana* Riley)*(Eriosoma americanum* Patch)

Reported by H. Morrison (28) and Baldwin (1) as wrinkling and rolling leaves of American Elm; also reported by Davis (12) during June; An early collection by J. J. Davis in Tippecanoe County, June 5, 1912, is in Purdue collection.

crataegi (Oestlund) Woolly Crataegus Aphid*(Schizoneura crataegi* Oestlund)

Reported by Morrison (28) in Marion County; and by the author in Johnson County, July, 1970, and Marion County on hawthorn, September 9, 1971.

lanigerum (Hausmann) Woolly Apple Aphid

(on apple)

(Aphis lanigera Hausmann)*(Schizoneura lanigera* Gillette)*(Eriosoma lanigerum* Becker)

(on elm)

(Schizoneura americana Riley)*(Schizoneura lanigera* Patch)*(Eriosoma lanigerum* Gillette & Palmer)*(Eriosoma rosetti* Gillette)*(Eriosoma crataegi* (Oestlund))

This serious economic pest was first reported by Morrison (28) as abundant in the state; reported by Baldwin (1) on roots of apple; by Davis (4, 6, 8, 9) and Osmun (34, 35, 36, 37); two slides in Purdue collection, by J. J. Davis in Tippecanoe County on elm, May 17, 1913; and by G. E. Gould in Tippecanoe in a greenhouse, April 22, 1936; the author collected one series (21) in Hendricks County on American Elm, July 29, 1938; recent collections include one by the author in Grant County on Mt. Ash, July 22, 1970; two collections by T. F. Johnson, in Hamilton County, one feeding on American Elm, July 13, 1971, the other in a pile of rotting fence posts in galleries of unidentified ants; and a Boone County record was also found by T. F. Johnson in a rotten stump with ants (*Lasius minutus* Emery).

Genus *Gobaishia* Matsumura*ulmifusus* (Walsh & Riley) Red Elm Gall Aphid

(*Pemphigus ulmi-fusus* Walsh & Riley)

(*Gobaishia ulmi-fusus* Hottes & Frison)

First recorded by Morrison (28) in Marion County, June and July; Baldwin (1) reported the solitary spindle-shaped galls on upper surfaces of red elm leaves; Three slides by J. J. Davis in the Purdue collection from Tippecanoe County on elm, June 1911 and 1912.

Tribe Pemphigini Baker

Genus *Mordivilkoja* Del Guercio

vagabunda (Walsh) Poplar Vagabond Aphid

(*Byrsocrypta vagabunda* Walsh)

(*Pemphigus vagabunda* Walsh)

(*Pemphigus oestlundii* Cockerell)

(*Mordivilkoja vagabunda* Gillette)

Reported by Morrison (28) in Marion County on Carolina poplar; reported by Baldwin (1) as causing a folded, convoluted mass of poplar foliage; the Purdue collection contains one slide by D. G. Tower in Tippecanoe County on poplar, July 1, 1915.

Genus *Geoica* Hart

radiciola (Essig) Bean Root Aphid

(*Pemphigus radiciola* Essig)

(*Trifidaphis radiciola* (Essig))

(*Geoica radiciola* (Essig))

Two collections from Jasper and Boone Counties on *Fesque* sp.

squamosa Hart

(*Pemphigus utricularius* Passerini)

(*Geoica utricularia* Mordivilko)

(*Geoica utricularia* (Passerini))

(*Geoica squamosa* Hart)

Collected by Frank T. Chapisis in Tipton County on barley, no date given; another collection by T. F. Johnson in Hamilton County on blue grass, May 23, 1971.

Genus *Neoprociphilus* Patch

aceris (Monell)

(*Pemphigus aceris* Monell)

Specimens in Purdue collections by F. N. Wallace in Delaware County on Norway maple June 17, 1921.

attenuatus (Osborn & Serrine) Smilax Aphid

(*Pemphigus attenuatus* Osborn & Serrine)

Three collections from Austrian pine by T. F. Johnson, Marion County, May 1972.

Genus *Pemphigus* Hartig

lactucae Fitch

(*Pemphigus brevicornis* (Hart))

One collection by T. F. Johnson in Hamilton County, feeding on *Solidago* sp., May 23, 1971.

nortonii Maxson

Collected in Yellow Pan Trap Survey (27) in June and July.

populitransversus Riley Poplar Petiolgall Aphid

Reported by Morrison (28) from Marion County, July 8, 1911, and by C. H. Baldwin (1) on cottonwood; one slide in the Purdue collection by J. J. Davis in Tippecanoe County on *Populus* sp., October 11, 1912; one collection from Boone County (21) on *Delphinium* sp., September 3, 1939.

populivenae Fitch Sugarbeet Root Aphid

(*Pemphigus populivenae* Fitch)

One slide in Purdue collection by J. J. Davis in Tippecanoe County on *Poplar* sp., July 8, 1914.

tartareus Hottes & Frison

One slide in Purdue collection by J. J. Davis in Tippecanoe County on the roots of *Bidens* sp., October 3, 1913.

Genus *Prociphilus* Koch

erigeronensis (Thomas) White Aster Root Aphid

(*Tychea erigeronensis* Thomas)

(*Trama erigeronensis* Forbes & Hart)

(*Forda flavula* Rohwer)

(*Prociphilus erigeronensis* Patch)

Reported by Davis (3 thru 8) as infesting the roots of asters, sweet peas, zinnia, sweet sultans, dandelion, ragweed, spanish needle, cocklebur, lettuce, salsify, bean and dahlia, likely throughout the state. Three slides in Purdue collection; one from Marshall County on *Polygonum* roots, April 26, 1911; one by J. J. Davis in Tippecanoe County, September 6, 1911; the third in Delaware County on aster roots, October 10, 1923; most recent records by T. F. Johnson in Boone County on roots of dandelion, aster and in ant nests of species *Acanthomyops claviger* (Roger) and *Lasius neoniger* Emery.

fraxinifolii (Riley) Leafcurl Ash Aphid

(*Pemphigus fraxinifolii* Riley)

(*Prociphilus fraxinifolii* Jackson)

Reported by Morrison (28); also by the author in Kosciusko and Marion Counties from ash, June 19 and 25, 1970.

imbricator (Fitch) Beech Blight Aphid

(*Eriosoma imbricator* Fitch)

Reported by Morrison (28) from Elkhart County; and by the author from Marion County feeding on beech branches, September 18, 1972.

tessellatus (Fitch) Woolly Alder Aphid

(*Eriosoma tessellata* Fitch)

One slide in Purdue collection, taken in Madison County on soft maple, June 28, 1916.

venafuscus (Patch) Smokey-winged Ash Aphid

(*Pemphigus venafuscus* Patch)

(*Prociphilus venafuscus* Patch)

Collected by T. F. Johnson in Boone County, on ash in conjunction with a nest of *Lasius umbratus* (Nylander) ants, May 14, 1971; another collection made in Hamilton County, May 23, 1971.

Tribe *Fordini* Baker

Genus *Forda* Heyden

formicaria Heyden Grain Root Aphid

(*Forda formicaria* Heyden)

(*Forda occidentalis* Hart)

All specimens collected by T. F. Johnson, five in Hamilton County from dandelion and grasses and one in Boone County from an ant nest (*Lasius (Lasius) alienus* (Foerester)).

occidentalis Hart

(*Forda formicaria* Heyden)

Seven slides in Purdue collection, two by Davis in 1911 on roots of blue grass and *Lymus* sp., both from Tippecanoe County; another by Davis in 1912 in Elkhart County from wheat roots; H. Fox collected one from Tippecanoe County in 1912 on *Elymus virginicus*; another from Tippecanoe County on rye, May 2, 1914; and by Troop in Elkhart County on wheat roots, November 20, 1914.

olivacea Rohwer

Six collections by T. F. Johnson in both Boone and Hamilton Counties on Italian rye and dandelion roots, March through August; one collection by the author in Marion County on dandelion roots in an ant nest, March 19, 1972.

Genus *Trifidaphis* Del Guercio

phaseoli (Passerini)

(*Tychea phaseoli* Passerini)

(*Tullgrenia phaseoli* van der Goot)

(*Trifidaphis phaseoli* Theobald)

All collections by Johnson in Boone County from wild lettuce, beans and from an ant's nest, *Lasius neoniger* Emery, May 1, 1971.

Subfamily *Hormaphinae* Gillette & Palmer

Tribe *Cerataphini* Gillette & Palmer

Genus *Cerataphis* Lichtenstein

lataniae (Boisduval) *Latania* Aphid

(*Coccus lataniae* Boisduval)

(*Cerataphis lataniae* Gillette & Palmer)

One slide in Purdue collection from Marion County on palm.

Tribe *Hormaphini* Gillette & PalmerGenus *Hormaphis* Osten Sacken

hamamelidis Fitch Witch-hazel Aphid
(*Bryocrypta hamamelidis* Fitch)

One collection reported by Morrison (28).

Genus *Hamamelistes* Shimer

spinosus Shimer

Two collections, one by the author in Kosciusko County on birch, June 25, 1970;
another by R. B. Cummings in Johnson County on witch-hazel, September 8, 1972.

Misc. Genera

Genus *Melanozantharium*

saliet Harr.

Reported in 1926 by J. J. Davis (5) as common every year.

Genus *Phenacaspis*

spiricola D & M

The only record is the cotype specimen in Purdue collection, by H. Morrison and
H. R. Dietz in Knox County on honey locust, August 31, 1915.

Genus *Tinocallis*

ulmifoliae (Monell)

Davis (6) gives only record.

Genus *Trioza*

maura Patch

Single slide in Purdue collection, by J. J. Davis in Tippecanoe County on *Salix* sp.,
November 23, 1918.

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