

## More Records of New Jersey Aphids (Homoptera: Aphididae)

MORTIMER D. LEONARD<sup>1</sup>

COLLABORATOR, ENTOMOLOGY RESEARCH DIVISION, AGRICULTURAL RESEARCH SERVICE,  
U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

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**Abstract:** Listed are 102 aphid species arranged alphabetically by genera and by species under each genus. Detailed records of the localities, dates, food plants and collectors are given for each species and a list of 128 food plants on which the aphids have been collected is included. Sixteen species of the aphids and 44 of the food plants have not been previously recorded from New Jersey. At present 237 aphids on 311 food plants are now known to occur in this state.

Several other collectors are mentioned in connection with individual records.

Determinations, other than those by the author, were made by: Miss Louise M. Russell (LMR), Ent. Res. Div., ARS, USDA; Dr. A. Tom Olive (ATO), Wake Forest College, Winston-Salem, N. C.; Dr. Clyde F. Smith (CFS), North Carolina State University, Raleigh, N. C.; Prof. Emeritus John O. Pepper (JOP) Pennsylvania State University, University Park, Pa.; Prof. Emeritus Theo L. Bissell (TLB), University of Maryland, College Park, Md.; Prof. Emeritus Archie N. Tissot (ANT), University of Florida, Gainesville, Fla.; Dr. M. E. MacGillivray, Research Station, Dept. Agric., Fredericton, N. B., Canada; Dr. F. W. Quednau, Forest Research Laboratory, Sillery (Quebec), P. C., Canada. Ants were identified by Dr. David R. Smith, Ent. Res. Div., ARS, USDA, Washington D. C. Dr. Stanwyn G. Shetler, Department of Botany, U. S. National Museum, Washington, D. C. has again kindly made several identifications of plants.

To all of the above, those who made collections and to those who made determinations, I extend my sincere thanks for their help.

Dr. John B. Schmitt, Department of Entomology, Rutgers University, New Brunswick, N.J. has been kind enough to oversee the preparation of the final typescript of this paper.

CEIR—References so cited are frequent throughout the text. It is the commonly used abbreviation for USDA Cooperative Economic Insect Report, issued weekly by the Plant Pest Control Division, ARS of the department.

MT used throughout the text means Moericke Trap. This is a yellow, water-pan or tray which attracts flying aphids.

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<sup>1</sup> Mail address: 2480 16th St., N.W., Washington, D. C. 20009.

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## LIST OF APHIDS\*

\* An asterisk (\*) indicates the aphid is an addition to previous papers.

*Acyrtosiphon pisum* (Harris) Pea Aphid. Recoveries of the braconid parasite, *Aphidius smithi* Sharma & Rao, were made subsequent to its release at Mt. Holly. The next recoveries in New Jersey were in the fall of 1965 at Moorestown, Rancocas, and Vail. (G. W. Angalet and L. W. Coles in J. Econ. Entomol. **59**:769-770, June 1966). "Very heavy in alfalfa near Cranbury," (CEIR, **17**(25):534, June 23, 1967); "Although the pea aphid buildup [on alfalfa] during June in New Jersey was heavier than during the past two seasons damage was very light," (Summary of Insect Conditions in 1967 in CEIR, **18**(9):415, May 19, 1968). "New Jersey—One per sweep common in most alfalfa May 8," (CEIR, **18**(20):415, May 19, 1968). The following paragraphs pertinent to the pea aphid in New Jersey are taken from the unpublished quarterly reports (kindly made available to me) of the Insect Identification and Parasite Introduction Research Branch, Entomol. Res. Div., ARS, USDA for 1968:

From late Jan. through Feb. the pea aphid was found in very small numbers in the duff collected in alfalfa fields at Moorestown by means of a specially designed duff collector, (Report for the First Quarter).

"The pea aphid was not abundant this year in alfalfa survey fields through mid-June in New Jersey and Delaware. In fact, the aphid has not been sufficiently abundant to cause economic damage to alfalfa during the spring in New Jersey and Delaware during 1966, 1967, and 1968 with the exception of a field near Rancocas, New Jersey during 1966. Previous to 1966 the pea aphid was often reported as causing severe economic damage in alfalfa fields. We find it difficult to obtain data which explains why the population of this pest has been consistently low in fields during the past three years," (Report for the Second Quarter).

"Pea aphid was present throughout the quarter in all of the fields surveyed even though rainfall was considerably below normal. Populations were low to medium until late September when a rapid increase in pea aphid populations occurred in central New Jersey. At Hightstown, N.J. (Mercer County) two alfalfa fields were surveyed on September 23, at which time the pea aphid population averaged 2.1 aphids per six inch plant tip; about equal to 600 aphids per sweep with a standard insect net. At Rancocas, N.J. (Burlington County) aphids averaged in two fields approximately 150 per sweep. Sampling of twelve other fields in Burlington and Mercer Counties, N.J. showed that the buildup of pea aphid in late September was widespread," (Report for the Third Quarter).

"The large buildup of pea aphid populations in Mercer and Burlington Counties, New Jersey, mentioned in the last quarterly report, were controlled by the end of October largely by parasites. Diseased aphids were abundant until mid-October but only a few were found by the end of the month which con-



tained mycelium of *Entomophthora aphidis*. Parasitization of pea aphids was low during September in the alfalfa fields where heavy pea aphid populations occurred. By the end of October, however, 81 to 95% of the full grown aphids examined in 12 fields in Burlington and Mercer Counties were parasitized. The pea aphid population had decreased from an average of 20.3 aphids per six-inch alfalfa stem tip on September 30 to 0.12 aphids per six-inch stem. This decline of population approximates a drop from 600 aphids per sweep with a standard insect net to 3 aphids per sweep. The parasite responsible for the control of the aphid was *Aphidius pulcher*; *Praon* accounted for less than 1% of the parasite mumies collected; and *Aphidius smithi* emerged from only 3 of several thousand mumies collected in Burlington and Mercer Counties. Little buildup of predator populations occurred due to rapid reduction on host populations during October by other biocontrol factors," (Report for the Fourth Quarter).

Reference should be made to the following paper now in press with the Journal of Economic Entomology: "Notes on the spotted alfalfa aphid and the pea aphid in New Jersey, Delaware, and the Eastern Shore of Maryland," by G. W. Angelet, Entomol. Res. Div., ARS, USDA.

*Acyrtosiphon (Rhodobium) porosum* (Sanderson), Yellow Rose Aphid. Ridgewood, June 1966, 1 aptera on rose (DDI coll).

*Acyrtosiphon solani* (Kaltenbach), Foxglove Aphid. Haddonfield, 7-12 June 1967, 3 apterae and 13-22 June 1967, 4 alatae in MT (MDL coll). New Brunswick, 11 Aug. 1959, 1 aptera, 1 alata on potato (H. E. Wave coll & det). Omitted from previous papers. Moorestown, 13 June 1967, 1 aptera in with a number of *Aphis fabae* on rhubarb (HWA coll); 10 June 1967, 12 alatae, nymphs on *Hydrangea* sp. (JAS coll LMR det). Glen Rock. The following records are based on collections made by Mrs. W. Graham Rendell, 121 Boulevard, who is a well-known grower and hybridizer of orchards and other tropical flowering plants in her home. Presumably only three of the plant genera herein recorded have ever been mentioned as host plants for aphids. 16 Nov 1967 and Feb 1968, 2 apterae, 10 nymphs on flowers of *Gesneria cuneifolia*. Standardized Plant Names gives *Gesneria* as a synonym of *Corytholoma* and *Naegelia* but *cuneifolia* is not included in these; 24 Oct 1967 a light infestation on flowers of *Columnea* vars. "Oriole" and "Golden Dragon"; 15 Nov 1967, 3 apterae on *Columnea* hybrid "Betty Stocker"; 16 Nov 1967, 20 apterae, 2 nymphs on flowers of *Hypocerta wettsteinii*; 15 Nov 1967, 10 apterae, nymphs on leaves of *Corytholoma (Rechsteineria) verticillata*; Mar 1968, 10 apterae, nymphs on buds of the orchids *Leliocattleya luminosa* (SPN gives *Epidendrum aurantiacum* and *Lc. truffautiana*); Sept 1968 a number of apterae, nymphs on *Columnea* hybrids "Rongo" and "Butterfly"; 14 Nov 1968 about 40 apterae, nymphs on *Gloxinia* hybrid (an intergeneric hybrid between *Siningia* and *Rechsteineria*), the plant grown indoors under luminescent light; Dec 1968 a few apterae, nymphs and 1 alata on *Streptocarpus rexii* hybrid.



Attention should be called to the following excellent publication, "Biology of the foxglove aphid in the Northeastern United States" by H. E. Wave and W. A. Shands, ARS USDA Tech Bull No. 1338 in cooperation with the Maine and New Jersey Agricultural Experiment Stations, 40 pp., July 1965. Information on this aphid in New Jersey is contained on pp. 29-31.

*Amphorophora crataegi* (Monell), Four-spotted Hawthorn Aphid. Green Brook, Hunterdon County (B and F Landscape Co.) 18 September 1968, a number of apterae, nymphs on leaves of *Crataegus crusgalli* (Stinson coll). Third record for N.J.

*Aphis asclepiadis* Fitch. Moorestown, 10 Oct. 1964 on *Apocynum cannabinum* and 30 Oct 1964 on milkweed (L. W. Coles coll). Omitted from previous paper.

\**Aphis cephalanthi* Thomas. Browns Mills, 1 July 1966 on *Cephalanthus occidentalis* (L.L. Pechuman coll). First record for N.J. since the record in preliminary list on *Impatiens* refers to *impatiens*.

*Aphis coreopsidis* Thomas. A letter dated 18 July 1966 from Dr. L. L. Pechuman states, "I noticed this aphid on *Nyssa sylvatica* on July 1 at Browns Mills. They were on both small and medium sized trees throughout the Browns Mills area; in several cases they were so abundant that the trees were dripping with honeydew." Haddonfield 18 June 1966, scarce on a large *Nyssa sylvatica* (MDL and DLW coll).

*Aphis craccivora* Koch, Cowpea Aphid. Wayne, 19 July 1966 a heavy infestation on *Caragana arborescens pendula* in a nursery (Conlon coll). Somerset, 20 June 1966 on bittersweet, many apterae (N.J. Dept. Agr. ?Stinson coll). Moorestown, 10 July 1967 on *Robinia pseudoaccacia*, 21 alatae, apterae, nymphs (JAS coll). Princeton, 11 July 1967 on *Sophora japonica* (N.J. Dept. Agr. coll LMR det); 5 July 1967 a heavy but scattered infestation on *Cladrastis lutea*, Yellowwood. (N.J. Dept. Agr. coll).

*Aphis fabae* Scopoli, Bean Aphid. Atlantic County summer of 1966 a heavy infestation on new leaves of *Euonymus* ap. (Junghans coll). "Light to moderate on beans in Cape May and Cumberland Counties," (CEIR, **17**:764, 18 Aug. 1967). Ridgewood, 19 June 1966 numerous on mockorange (DDL coll). "Increasing on beans in southern counties," (CEIR, **17**(30):677, July 1967). Moorestown, 13 June 1967 on rhubarb (HWA coll). Delaware Water Gap 21 June 1967, 1 alata, about 30 aptera collected from *Polygonum* sp. and attended by the ant, *Crematogaster lineata* (Say), (W. H. Day coll). "Curling young bean leaves in several Cape May County fields," (CEIR, **18**:732, 2 Aug. 1968).

*Aphis gossypii* Glover. Cotton Aphid. Hackensack (Home Nursery) 14 June 1966, a heavy infestation on terminal shoots of *Althea rosea* (Conlon coll). Upper Montclair (Paul F. Sachs Nursery) on tips of flowerstems of *Hesperis matronalis*; infestation moderate since many plants had been sprayed (Conlon



coll). Moorestown 14 June 1967 heavy on terminals of rose-of-sharon but most specimens dead (MDL & JAS coll); 13 June 1967 a number from *Vaccinium corymbosum* (HWA coll MDL and LMR det to "near" *gossypii*); 14 June 1967 many alatae and a very few small nymphs on *Forsythia* sp. (MDL & JAS coll MDL det with query).

*Aphis hederæ* Kaltenbach, Ivy Aphid. Haddonfield, a very few were found on 12 June 1967 but examination of several small plantings later that year and several times from spring to fall in 1966 and 1968 failed to reveal the presence of this aphid on English ivy. (MDL).

*Aphis helianthi* Monell. Moorestown, summer 1967, in EAR's garden, a light infestation on *Helianthus annuus* (MDL coll). In Plant List of previous paper but record omitted from the text.

*Aphis pomi* DeGeer, Apple Aphid. Haddonfield 20 June 1967 abundant and curling the leaves of a fair sized bush of *Chaenomeles speciosa* and attended by many ants, *Crematogaster cerasi* (Fitch), (MDL coll); 2 Nov 1968 a very few alatae and nymphs on the same plant (MDL). South Bound Brook 30 June 1966 a medium infestation on flowering crab (Stinson coll).

Millington, Somerset Co. (Long Hill Nursery) 28 June 1966, heavy on tips of crabapple (Sayer coll). "Infestations damaged sucker growth [apple] in Southern New Jersey until controlled in the early summer. This species was more abundant in 1967 than in past years," (Summary of Insect Conditions—1967 in CEIR, **18**(11):192, 15 Mar 1968). "Difficult to find in orchards Statewide," (CEIR, **18**(24):522, 14 June 1968). "Curling sucker leaves in unsprayed apple blocks," (CEIR, **18**(26):588, June 28, 1968). Greenbrook, Somerset Co., 20 June 1967 heavy infestation of apterae on terminals of *Cotoneaster* sp. (Stinson coll). Moorestown, 13 June 1967, several alatae, apterae, nymphs on *Chaenomeles japonica* (HWA coll). Freehold, Monmouth Co., (Bobbink Nurseries, Inc.), 26 July 1968 a light infestation on leaves of *Malus atrosanguinea*: 25 July 1968, a light infestation on *M. purpurea* "eleyi"; 29 July 1968 a heavy infestation on leaves and stems of *M. hopa*; 30 July 1968, a light infestation on leaves and stems of *Sorbus americana* (all Griner, Dept. Agr. coll).

*Aphis rumicis* Linnaeus, Dock Aphid. Ridgewood 29 June 1967 abundant in curled leaves of a large *Rumex obtusifolia* (MDL and DDL coll).

*Aphis spiraeicola* Patch, Spiraea Aphid. Trenton 23 Aug 1966 light on tips of *Spiraea bumalda* var. Anthony Waterer (Stinson coll). South Orange, 24 June 1966 heavy on tips of *Pyracantha* sp. (Stinson coll). Haddonfield 8 June 1966 the terminal shoots of a small planting on bridalwreath *Spiraea* encrusted with aphids but by 10 days later almost all had disappeared (MDL); 10–21 June 1966 a light infestation was present on a few terminals of *Pyracantha* sp. (MDL) attended by the ants *Crematogaster cerasi* (Fitch) and *Lasius neoniger* Emery; 24 Apr 1968 a small planting of *Spiraea vanhouttei* had a few tender tips lightly infested (MDL). Paramus, Bergen Co. 14 June 1967 light on



*Pyracantha* sp. (Conlon coll). Moorestown 10, 13 June 1967 a very few on *Pyracantha* sp. (HWA); 10 June 1967 many, all stages on red horticultural plum (JAS coll LMR det). Mendham 15 June 1967 heavy on tips of *Spiraea vanhouttei* (NJ Dept. Agr. coll). Neshanic, Somerset Co. 16 June 1967 a light infestation on *Pyracantha* sp. (Stinson coll). Freehold, Monmouth Co., 30 July 1968 a light infestation on leaves and stems of *Spiraea thunbergii* (Griner coll). Rake Pond, 20 June 1966 several alatae on *Lyonia (Pieris) mariana* (Marucci coll LMR det). Previously recorded as actually occurring on this plant.

*Brachycaudus cardui* (Linnaeus), Thistle Aphid. Ridgewood June 1966 on thistle (DDL coll) attended by the ant, *Penolepis imparis* (Say).

*Branchycaudus persicicola* (Boisduval), Black Peach Aphid. (Formerly *Anuraphis persicaeniger* Smith) As *Myzocallis caryaefoliae* "Killed several peach trees in each of two plantings in New Jersey," (Summary Insect Conditions—1966 in CEIR, **17**(13):230, 21 March 1967). In CEIR, **17**(16):318, 21 Apr 1967 the name of the aphid was corrected to read "the black peach aphid, *Brachycaudus persicicola* (Boisduval)." "Reported in several Camden County blocks of newly planted fruit [peach] trees," (CEIR, **17**(17):346, April, 28, 1967). "Killed several nonbearing trees [peach trees] in one Camden County orchard," (CEIR, **18**(11):193, March 15, 1968).

*Brevicoryne brassicae* Linnaeus, Cabbage Aphid. "This species and *Myzus persicae* increasing on crucifers in central and southern counties," (CEIR, **18**(40):945, Oct 4, 1968). Haddonfield, 22–24 Oct 1968, 4 alatae in MT (MDL).

\**Calaphis* n. sp. Haddonfield, 16 June 1967, 1 alata in MT (MDL coll Quednau det).

\**Calaphis* n. sp. Quednau in MS. Haddonfield, 14 April 1968 (MDL coll) and June 1968 (DLW coll—Quednau det) on *Betula populidolia*.

\**Calaphis alni* Baker. Haddonfield, 16 June 1967, 1 or 2 alatae in MT (MDL coll—Quednau det).

*Calaphis betulella* Walsh. Haddonfield, 16 June 1967, 1 or 2 alatae in MT (MDL coll Quednau det); 15 June 3 alatae; 17–18 June 3 alatae; and 19–22 June 1966, 3 alatae in MT (MDL coll); 13–22 June 1967, 2 alatae in MT (MDL).

*Capitophorus elaeagni* (DelGuercio), Oleaster Thistle Aphid. Haddonfield, 15 July 2 alatae and 16 June 1 alatra 1966; 7–12 June 1967, 8 alatae; 13–22 June 1967, 10 alatae and 22–24 Oct 1968 all in MT and MDL coll.

*Capitophorus hippophaes* (Walker), Polygonum Aphid. Haddonfield, 16 June 1966, 2 alata in MT (MDL). Cranbury, 11 July 1967, 1 alata in MT in potato field (DeBlois coll).

*Chaitophorus* sp. Indian Mills, 26 May 1963 on *Salix* sp. (HWA coll—MacG det). Cranbury, 24 July 1967, 1 alata in MT in potato field (DeBlois coll).



*Chaitophorus viminalis* Monell, Little Black and Green Willow Leaf Aphid. Haddonfield, 13–22 June 1963, 1 alata in MT (MDL coll-Quednau det).

*Chromaphis juglandicola* (Kaltenbach), Walnut Aphid. Moorestown, 22 July 1967, 19 alatae, 3 "pupae"; and 14 Aug 1967, 5 alatae, 7 "pupae" on *Juglans regia*; 29 Aug 1967, 3 alatae, 1 "pupa," 12 nymphs on *Juglans nigra* (all EAR coll—TLB det).

?*Cinara braggii* (Gillette). Somerville (M T M Nurseries), 17 June 1966 on tips of *Picea* sp. (Stinson coll JOP det with query).

\**Cinara carolina* Tissot. Browns Mills, Burlington Co., 8 June 1968 alatae, apterae on *Pinus rigida* (L L Pechuman coll JOP det). Pepper and Tissot are of the opinion that *carolina* is identical with Wilson's *atlantica*.

\**Cinara cupressi* (Buckton). Hess' Nursery, Wayne, Passaic Co., 5 May 1966 on *Juniperus scopulorum* (Blue Haven), Rocky Mountain Juniper grafts *J. virginiana* was used as root-stock. About 2000 plants were in a greenhouse. Conlon states the aphids had been numerous but had been sprayed with lindane just before he arrived. (Conlon coll ANT and JOP det).

*Cinara pilicornis* (Hartig) Pemberton 24 May 1939 on *Picea* sp. (Wm. J. Haudé coll ANT det with query). Omitted from previous lists. Haddonfield, 17 June 1966 many on a Norway spruce (MDL and DPL coll ANT det). A number of mirrid bugs, *Microphyllelus* sp. (det. Froeschner) were associated with this aphid. *M. modestus* Reuter has been recorded as occurring with aphids on elm and feeding on their honeydew (Knight in Ill. Nat. Hist. Surv. Bull., **22**, p. 41, 1941). Additional specimens were present on the same tree in the summer of 1968 (DLW coll).

*Cinara pinea* (Mordwilko). Clark (Zdanovich Nursery), 6 June 1966 light to medium on tips and bark of *Pinus* spp. (Conlon coll JOP det).

*Cinara pinicola* Kaltenbach. "Occurs on spruce in the Appalachian Highlands area." (N J Prelim List under *Cinara abietis* (Fitch).

*Cinara strobi* Fitch, White Pine Aphid. W. V. Griffin Nurseries, Heege Farm, Middlesex Co., ?1967, 9 apterae on *Pinus strobus* (Addison Driver Coll—MDL det).

\**Cinara tujaefilina* (DelGuercio), Arborvitae Aphid. New Jersey, Intercepted at USDA Plant Quarantine in New York City by Inspector R Day 26 June 1968, 9 apterae, nymphs on arborvitae (LMR det).

\**Cinara watsoni* Tissot. Red Lion, Burlington Co., 8 June 1968, apterae only on *Pinus rigida* (L L Pechuman coll JOP det) and Chatsworth, Burlington Co., 10 June 1968, apterae on *P. rigida* (L L Pechuman coll JOP det).

*Cinara* sp. Allendale, 13 June 1967 light on *Picea pungens* (Conlon coll—MDL det).

*Coloradoa rufomaculata* (Wilson), Pale Chrysanthemum Aphid. Moorestown, 10 June 1967 a few alatae, apterae on cultivated chrysanthemums (HDA coll).



*Dactynotus* sp. Haddonfield, 24–27 July 1965, 18 alatae in MT (MDL coll ATO det).

*Dactynotus* sp. Moorestown, 9 Sept 1967, about 50 alatae, apterae on Gloriosa Daisy (EAR coll).

*Dactynotus ambrosiae* complex. Chester 3 Aug 1959 on *Erigeron* sp. (H E Wave coll ATO det 20.VII.66). Haddonfield, 16–18 June 1966 alatae in MT (MDL coll).

*Dactynotus erigeronensis* (Thomas), Canadian Fleabane Aphid. Moorestown, Sept 1965 on *Erigeron canadensis* (Roger Fuester of USDA coll). Haddonfield, 18 June 1966 on *E. annuus* and 2 collections on *E. canadensis* (MDL and DLW coll).

*Dactynotus grivicornis* Patch. Moorestown, Sept 1965 on *Erigeron canadensis* (Roger Fuester of USDA coll). Haddonfield, 18 June 1966 on *E. annuus* (MDL and DLW coll).

*Dactynotus leonardi* Olive. Moorestown, 24 Aug 1965 on *Rudbeckia hirta* (EAR coll). Ridgewood, 24 Aug 1968, about 25 alatae, apterae, nymphs from *Rudbeckia hirta* (DDL coll).

*Dactynotus nigrotuberculatus* Olive. Haddonfield, 17–18 June 1966 alatae in MT (MDL coll). Ridgewood, 20 May 1965 on *Solidago* sp. (DDL coll). Moorestown, 30 June 1965 many on *Solidago* sp. (HWA coll).

*Dactynotus paucosensoriatus* Hille Ris Lambers. Moorestown, 6 Oct 1964 on *Aster* sp. (EAR coll).

*Dactynotus sonchellus* (Monell). Haddonfield, 18 June 1966 on *Lactuca* sp. (MDL and DLW coll).

*Dactynotus tissoti* (Boudreaux). Haddonfield, 13–22 June 1967, 2 alatae in MT (MDL coll Quednau det).

*Eriosoma americana* (Riley), Woolly Elm Aphid. Burlington County, 10 June 1947 accidental on blueberry (W E Tomlinson coll 1 slide in USNM).

*Eriosoma crataegi* (Oestlund). Pennington, Mercer Co. (Howe's Nurseries), 7 Aug 1968 a number on stems of *Crataegus crusgalli* (Stinson coll).

*Eucallipterus tiliae* (Linnaeus), Linden Aphid. (Formerly in *Myzocallis*.) Haddonfield, 19–22 June 1966, 1 alata in MT (MDL coll). Moorestown, 14 Aug 1967, a very few on *Tilia cordata* (EAR coll).

\**Euceraphis deducta* Baker. Haddonfield, 14 Apr 1968 a fair infestation just starting on a small yellow birch in back yard of 217 Rhoads Ave. (MDL coll Quednau det). First record for New Jersey.

*Euceraphis lineata* Baker. Haddonfield, June 1968, 1 alata, 1 aptera in with a number of *Calaphis* n. sp. Quednau on the yellow birch at 217 Rhoades Ave. (DLW coll Quednau det). Second record for New Jersey.

*Euceraphis mucida* (Fitch). Haddonfield, 1 sexupara, 2 alate males in MT 22–24 Oct 1968 (MDL coll Quednau det). Second record for New Jersey.



\**Fimbriaphis* sp. Mr. P. E. Marucci wrote me as follows on 6 March 1969: Hammonton, 26 May 1966 "Aphids collected on blueberries were so numerous throughout an entire field of twenty acres of the Weymouth variety that stunting of foliage was occurring and the field had to be sprayed with parathion for control. This was the first instance in eighteen years in which I have observed economic damage inflicted on blueberries by aphids. A correspondent in Connecticut experienced damaging aphid population in cultivated blueberries in 1964. In both instances the use of sevin instead of malathion to control blueberry maggot the previous year was probably responsible. This vial had more than 100 aphids, including alatae. It was determined by Miss Louise Russell as *Fimbriaphis* sp. with the following note: specimens differ from the types of *scammelli* (Mason) which has been transferred from *Myzus* to *Fimbriatus*. (This was done by Richards). Chatsworth, 24 May 1966 2 nymphs on cranberries (Marucci coll LMR det) and a single aphid on cultivated blueberries Folsom, 10 May 1966 (Marucci coll LMR det as *Myzus* sp. prob *scammelli*).

\*\**Glabromyzus howardii* (Wilson), Poison Ivy Aphid. Jobstown, 7 June 1966 a number of apterae on poison ivy (Leon W. Coles coll). The record in the "Preliminary List" from Ridgewood, May 1938 on poison ivy under *Rhopalosiphum rhois* Monell belongs here.

*Hyadaphis foeniculi* (Passerini), Honeysuckle and Parsnip Aphid. (Formerly *Phopalosiphum conii* (Davidson.) Moorestown, 14 June 1967 heavy on terminals of *Lonicera* sp. (MDL and JAS coll—LMR det).

*Hyalopterus pruni* (Geoffroy), Mealy Plum Aphid. Princeton, 13 July 1967 a heavy infestation on *Prunus blireiana* (Stinson coll).

\*\**Izzyphya flabella* Sanborn. Haddonfield, 16 June 1966, 1 alata in MT (MDL coll).

*Kakimia essigi* Gillette & Palmer, Black-backed Columbine Aphid. Moorestown, 13 June 1967 on *Aquilegia* sp. (HWA coll).

*Longistigma caryae* (Harris), Giant Bark Aphid. "Common on oaks in central and southern counties." (CEIR, 17(41):927, 13 Oct 1967. Colts Neck, 15 Nov 1967 a light infestation on oak twigs (G Pope coll). Moorestown, Sept 1967 on basswood (R W Fuester of USDA coll). "Heavy on oak during the fall in central and northern New Jersey." (Summary of Insect Conditions—1967 in CEIR, 18(13):249, 29 March 1968).

*Macrosiphoniella sanborni* (Gillette), Chrysanthemum Aphid. Woodcliff Lake, 10 June 1967 light on new growth of cultivated chrysanthemum (Conlon coll).

?*Macrosiphoniella tanacetaria* (Kaltenbach). Ridgewood, 24 Aug 1968 on "Painted Daisy" or "Pyrethrum" (may be *Chrysanthemum coccineum*) about 25 nymphs and a few apterae (DDL coll).

*Macrosiphum* sp. Haddonfield, 28 Aug-2 Sep, 9 alatae and 24-27 Sept 1965, 9 alatae in MT (MDL coll ATO det).



\**Macrosiphum californicum* Essig. Ridgewood, 9 June 1968, 1 alatae, 8 apterae, nymphs on *Salix discolor* and 7 July 1968, 6 apterae on same tree (DDL coll).

*Macrosiphum euphorbiae* (Harris), Potato Aphid. Moorestown, 30 Oct 1964 on milkweed and 20 Oct 1964 on *Apocynum cannabinum* (Leon W Coles coll); 15 June 1966 scarce on many *A. cannabinum* plants (MDL coll); 13 June 1967 a few on *Aquilegia* sp. (HWA coll); 14 June 1967 2 apterae on *Chaenomeles japonica* (MDL and JAS coll); 22 June, Aug 1967 alatae, 1 small nymph on *Datura* sp. (W H Day coll); 10 June 1967 several alatae, apterae, nymphs on *Apocynum androsaemifolium*, 1 aptera on *Philadelphus inodorus*, 14 aptera, alatae on *Aster* sp., 30 alatae, aptera, nymphs on *Rosa* sp., and 13 alatae, apterae, nymphs on *Lactuca alba*, 9 Oct 25 alatae, apterae, nymphs on winter squash all 1967, JAS coll LMR det; 14 June 1967 quite a few on tender growth of *Hydrangea* sp. both green and pink forms present (MDL and JAS coll) a number parasitized by *Aphidius nigripes* (Ashmead) Paul Marsh det.

Haddonfield, 2 May 1936 many apterae on cult rose (MDL and DPL coll); 18 June 1966 moderate on several *Apocynum cannabinum* (MDL); 15–16 June 1966, 6 alatae in MT and 13–22 June 1967, 4 alatae in MT (MDL). Ridgewood, June 1966, 1 aptera on cult rose (DDL coll); 25 June 1967 a few nymphs on *Dicentra* sp. (DDL coll LMR det). Bound Brook, Ivy Hill Gardens, 22 June 1966 light on *Iris* sp. (Stinson coll). Delaware Water Gap, 21 June 1967, 1 alata on *Solanum carolinense* (W H Day coll). Glen Rock, July 1968, 1 alata, about 65 apterae, nymphs on buds and blooms of a single rose plant (Marion Rendell coll). Waterford, 8 Aug 1967, 4 alatae in MTs in a strawberry field (DeBlois coll). Cranbury, 11 July 1967, 6 alatae, and 18 July, 1967, 7 alatae in MTs in potato fields (DeBlois coll). "Very abundant on tomatoes throughout the State." (CEIR, **17**(25):539, 23 June 1967). "Light to moderate on tomatoes in southern counties." (CEIR, **17**(29):650, 21 July 1967). "Eggs more abundant than during same time in 1966. Percent viable eggs averaged 61.1 compared with 33.5 in 1966." (CEIR, **17**(13):220, 31 March, 1967). "Populations in New Jersey were heavy and injury moderate on tomatoes and potatoes early in the season but numbers were very light on eggplant and peppers." (Summary of Insect Conditions in 1967 in CEIR, (**18**(10):161, 8 March 1968). "Light to moderate in most tomato fields." (CEIR, **18**(25):551, June 21, 1968). "Troublesome in many tomato fields Statewide." (CEIR, **18**(26):584, 28 June 1968). Ridgewood, 15 July 1967, 1 alata, 2 nymphs, 1 "pupa" on *Lithospermum* sp. (DDL coll in his garden). Swedesboro, 5 May 1967, a considerable number on *Asparagus officinalis* (JAS coll LMR det).

The potato aphid egg survey was continued during the 3-year period on the swamp rose, *Rosa palustris*, by the N. J. Dept. Agr. with the following results:

Average percentage of viable eggs found per site per county:



County	1966	1967	1968
Burlington	23.1	45.1	50.2
Cumberland	14.7	28.5	27.0
Gloucester	6.6	19.8	94.8
Mercer	15.6	47.0	58.0
Middlesex	19.0	78.0	25.0
Monmouth	25.0	64.0	31.0
Salem	5.3	36.8	25.0
State Average	33.5	61.1	79.4
Total No. Eggs	421	1007	1420

Results of the 1969 survey made 8 Jan-24 Jan have recently become available so are here included:

County	No. sites surveyed	No. potato aphid eggs
Burlington	6	129
Cumberland	2	17
Gloucester	5	367
Mercer	4	68
Monmouth	3	69
Salem	4	62
Totals	24	712
Percent viable eggs	62.1	

\**Macrosiphum gaurae* (Williams). In "A Preliminary List of the Aphids of New Jersey" (J. N.Y. Entomol. Soc., **64**:110, 1956) Leonard recorded *M. pseudorosae* Patch from *Oenothera* sp. Sept 1946 from Haddonfield. Dr. M. E. MacGillivray in Ann. Entomol. Soc. Amer., **61**:353, 1968 states that the specimen on which this record is based is *gaurae*.

*Macrosiphum liriodendri* (Linnaeus), Tuliptree Aphid. Haddonfield, 18 June 1966 a large tuliptree heavily infested (MDL and DLW coll). Red Lion, Burlington Co., 1 July 1966 on *Magnolia virginiana* (L L Pechuman coll). Moorestown, 14 July 1967 a few on tuliptree (EAR coll). Freehold, Monmouth Co., 2 Aug 1968, a light infestation on tuliptree (Griner coll).

*Macrosiphum rosae* (Linnaeus), Rose Aphid. Ridgewood, 14 June 1967 on rose attended by the ant, *Prenolepis imparis* (Say), (DDL coll); Ridgewood, 25 June 1967 abundant on cult rose on one terminal shoot (MDL coll); 9 June 1968 several alatae, apterae on Blaze rose (a climber) and on Dorothy Perkins Crimson Rambler and a few wingless on Floribunda rose (DDL coll); June 1966 numerous on cultivated roses (DDL coll). Clark 6 June 1966 light in roses (Conlon coll). Haddonfield, 8-12 June 1967, 2 alatae in MT (MDL coll). Riverton, 1 Oct 1967 many on cultivated roses (B Townshend coll thru W H Day). Cherry Hill, 13 June 1967, 2 alatae, 3 apterae on Burford holly (HWA



coll). Moorestown, 12 June 1966 moderate on cultivated roses (MDL and W E Flemming coll); 14 June 1967, 17 alatae, 12 apterae on *Buxus* sp. (MDL and JAS coll); 6 Jan 1966, 3 apterae and several very young on rose cuttings indoors (EAR coll); 10 June 1967, 5 alatae on cult rose (JAS coll LMR det). Glen Rock, July 1968 a few apterae, nymphs on rose blooms (Marion Rendell coll).

\**Masonaphis pepperi* MacGillivray. New Lisbon, 16 May 1966 on blueberry many aphids collected in greenhouse; 11 specimens on a slide, alatae, apterae, nymphs, in USNM (Marucci coll LMR det).

\**Masonaphis* (*Masonaphis*) *rhokalaza* Tissot and Pepper. Red Lion, Burlington Co., 30 June 1966 on *Rhododendron viscosum* (L L Pechuman coll MacG det). Woodcliff Lake, 10 July 1967 light on new growth of *Rhododendron* sp. (Conlon coll).

?*Masonaphis* sp. Rake Pond, 20 June 1966, 5 nymphs on *Gaylussacia frondosa* (Marucci coll LMR det as "apparently *Masonaphis* sp.").

*Melanocallis caryaefoliae* (Davis), Black Pecan Aphid. (ESA's List of Official Common Names places this in *Myzocallis*. Richards places it in *Tinocallis*). Ridgewood, 17 May 1936, 1 alata on hickory (MDL coll). Haddonfield, 16 June 1967, 1 or 2 alatae in MT (MDL coll Quednau det).

*Monellia costalis* (Fitch), Black-margined Aphid. This species has a single record in my "Preliminary List of New Jersey Aphids" (J. N. Y. Entomol. Soc., 64:112, 1956) from Ridgewood, July 1936 on *Quercus* sp. In October 1966 I happened to look at the slides upon which this record was based and was surprised to find that I had misidentified them. They were sent to Dr. A. N. Tissot who determined them as a mixture of *Myzocallis walshii* (Mon.) and *M. multisetis* B. and T. (See data under these species). *M. costalis* was not collected in New Jersey until 1947 and again in 1963 (Leonard's "Further records of New Jersey aphids in J. N. Y. Entomol. Soc., 75:85, 1967).

*Monelliopsis caryae* (Melell), American Walnut Aphid. (In previous lists under *Monellia*). Moorestown, 14 Aug 1967, several alatae, 1 "pupa" on *Juglans nigra* (EAR coll TLB det).

*Myzocallis discolor* (Monell), Eastern Dusky-winged Aphid. Haddonfield, 19-22 June 1966, 2 alatae in MT and 7-12 June 1967, 2 alatae in MT (MDL coll).

*Myzocallis multisetis* Boudreaux and Tissot. Ridgewood, 4 July 1936, alatae, nymphs mixed with those of *M. walshii* on *Quercus* sp. (MDL coll ANT det).

*Myzocallis punctata* (Monell), Clear-winged Oak Aphid. Haddonfield, 16 June 1 alata and 17-18 June 1966 1 alata (dark form) and 19-22 June 1966, 3 alatae in MT (MDL coll). Cranbury, 11 July 1967, 1 alata in MT in potato field and Waterford, 8 Aug 1967, 1 alata in MT in strawberry field (DeBlois coll).

*Myzocallis tiliae* (Linnaeus), (see *Eucallipterus tiliae* L.).



*Myzocallis walshii* (Monell). Ridgewood, 4 July 1936 alatae, nymphs mixed in with *M. multisetis* B and T (MDL coll ANT det).

*Myzus cerasi* (Fabricius), Black Cherry Aphid. Haddonfield, 11 June 1967 many on water-sprouts of a cherry (MDL and DLW coll); attended by many ants, *Prenolepis imparis* (Say).

?*Myzus certus* (Walker). New Brunswick, 5 Apr 1959 on *Stellaria media* (H E Wave coll det V F Eastop who states this is in the *certus* group and is probably *certus* but is not *persicae*).

*Myzus persicae* (Sulzer), Green Peach Aphid. "Incidence of this aphid in New Jersey was abnormally high owing to shortage of normal weed hosts because of the prolonged drought and subsequent migration of alates to irrigated crops during midsummer and late summer. Potatoes, tomatoes, peppers, and other crops were damaged (p. 179). Incidence was abnormally high in lettuce and other crops were damaged." (p. 190). (Summary of Insect Conditions in New Jersey—1965, in CEIR, **16**(10):179, 190, March 11, 1966). "Green peach aphid was significantly less abundant than in 1965 on tomatoes, peppers and potatoes in New Jersey." (Summary in Insect Conditions—1966, in CEIR, **17**(12):206, 24 March 1967). "Green peach aphid was significantly less abundant than in 1965 on cruciferous crops in New Jersey, probably due to extremely hot weather during early July." (*Ibid*, p. 210). "Light to moderate on eggplant in Essex, Warren and Burlington Counties; on tomato thruout State." (CEIR, **17**(31):705, 4 Aug 1967). "Light to moderate on crucifers near Fairfield, Essex Co." (*Ibid*, p. 706). "Extremely abundant on peach trees in central and southern counties. Winged adults indicate impending migration to summer host plants; need for control doubtful." (CEIR, **16**(23):517, 1966). "Winged and young forms noted in Cape May County on eggplant." (CEIR, **16**(32):782, 12 Aug 1966). "Light to moderate on peppers and tomatoes in central and southern counties." (CEIR, **16**(33):808, 19 Aug 1966). "Appearing on escarole and early endive." CEIR, **17**(26):567, 30 June, 1967. "Increasing on pepper near Elm, Camden Co.; common on tomatoes thruout State." (CEIR, **17**(30):676, 28 July 1967). Haddonfield, 13–22 July 1967, 1 alata in MT (MDL coll); 12 Aug 1967, 3 alatae in MT (MDL coll). Ridgewood, (Schweinfurth's Florists), 24 June 1967, scarce in a greenhouse of carnations (MDL and DDL coll). Moorestown, Aug 1967, 4 alatae on *Datura* sp. (W H Day coll); 10 June 1967, 1 aptera on *Aster* sp. (JAS coll LMR det); 18 Nov 1967, about 60 apterae from a tree tomato, *Cyphomandra betacea*, which had been brought indoors before the first frost; on Feb 1968 the upper surface of the leaves of this plant were still considerably infested (EAR coll). Waterford, 8 Aug 1967, 8 alatae and 22 Aug 1967, 15 alatae in MTs in strawberry fields (DeBlois coll). Cranbury, 11 July, 3 alatae, 9 Aug, 4 alatae, 16 Aug about 50 alatae and 30 Aug, 3 alatae, all in 1967, and in MTs in potato fields (DeBlois coll). Glen Rock, May 1968, about 50 apterae, nymphs from *Hibiscus rosasin-*



*sis* indoors (Marion Rendell coll). "Generally less abundant in New Jersey than in recent years although the numbers were moderate on beans throughout 1967." (Summary of Insect Conditions—1967, in CEIR, **18**(10):163, March 8, 1968). "Infestations were moderate on lettuce throughout the season." (Summary of Insect Conditions—1967, in CEIR, **18**(10):168, 8 March 1968).

*Nasonovia ribisnigri* Mosley. Moorestown, 12 June 1966 and 16 June 1967 a fair number on upper part of flower-stems of several *Hieracium gronovii* (MDL and W E Flemming coll); 15 June 1966 fairly numerous on upper part of stems and on flower heads of a number of *H. pratense* (MDL and W H Day coll).

*Neoceruraphis viburnicola* (Gillette), Snowball Aphid. Haddonfield, 19 April, 2 alatae, 22 April, 4 alatae and 21 April, 4 alatae in the MT at 217 Rhoads Ave.; cool weather followed with some rain and no more came to the yellow pan until April 24 when 21 alatae were taken; all of these were spring migrants; a large snowball bush is but a few feet away from the MT; on this many ants were present, *Crematogaster cerasi* (Fitch).

*Ovatus crataegarius* (Walker), Mint Aphid. Moorestown, 12 Jul 1968, a very few on a small patch of peppermint (MDL and W E Flemming coll).

*Pemphigus* sp. "Damaged escarole in muck soil near Vienna, Warren Co." (CEIR, **18**(30):701, 26 July 1968. This note was given under *Pemphigus bursarius* (Linnaeus). However specimens were later sent to Dr. Clyde F. Smith who replied that they could not be specifically identified.

*Pergandeidia trirhoda* (Walker). Ridgewood, 12 Oct 1936 on *Aquilegia* sp., many specimens on 9 slides and Haddonfield, 25 Oct 1936, on *Aquilegia* sp., many specimens on 8 slides (MDL coll). Both records omitted from previous lists.

*Periphyllus californicus* (Shingi). Harrington Park (Giotta's Nursery), 23 May 1966 on *Acer palmatum dissectum*, 10 plants infested (Conlon coll JOP det).

*Periphyllus lyropictus* (Kessler), Norway Maple Aphid. Haddonfield, 8 June 1966 fairly abundant on Norway maple street trees on Rhoads Ave. but reported that somewhat earlier infestation had been heavy and considerable leaf-drop had occurred (MDL).

*Periphyllus negundinis* Thomas, Boxelder Aphid. Haddonfield, 10 June 1966 a large boxelder very lightly infested (MDL).

*Phyllaphis fagi* (Linnaeus). Haddonfield, 8–22 June 1966 many leaves on the large copper beech at 213 Rhoads Ave. heavily infested (MDL); 18 June 1967 abundant on the same tree (MDL); 16 and 13–22 June 1967, 2 or 3 alatae each in MT (MDL coll Quednau det).

*Pleotrichophorus glandulosus* (Kaltenbach). (Formerly in *Capitophorus*). Haddonfield, 8–23 June 1966 scarce on a few small patches of *Artemisia vulgaris* (MDL coll).

*Prociphilus imbricator* Fitch, Beech Blight Aphid. "Beech Blight Aphid



heavily infested beech trees in New Jersey during the late summer and early fall." (Summary of Insect Conditions—1967 in CEIR, **18**(13):249, 29 Mar 1928).

*Rhopalosiphum maidis* (Fitch), Corn Leaf Aphid. "In New Jersey high numbers infested sweet corn plantings throughout the season and injury was very noticeable. Aphids on flag leaves and husks reduced the market value." (Summary of Insect Conditions—1967 in CEIR, **18**(8):101, 27 Feb 1968). "First of season noted on sweet corn in Cape May County field." (CEIR, **18**(32):753, 9 Aug 1968). "Still troublesome on sweet corn in many areas." (CEIR, **18**(35):832, 20 Aug 1968).

*Rhopalosiphum nymphaeae* (Linnaeus), Waterlily Aphid. Saddle River, Bergen Co. (Wm. Tricker, Inc.), 12 July 1967 on arrowhead, lotus, waterlilies, heavy infestation on leaves. (Conlon coll).

*Schizaphis graminum* (Rondani), Greenbug. Prof. J. O. Pepper wrote me 23 March 1968 that he has slides made from collections made by R. S. Filmer in "NJ" by "sweeping" in 1961 as follows: Oct 6, 1 alata; Oct 9, 1 alata; Nov 6, 2 alatae. Harmony, Warren Co. On 5 Dec 1968 the greenbug was found in a 10–15 acre field of barley; the plants were 6–8 ins. tall. The infestation was reported to be common throughout the field and the older leaves were yellow to white in color. At the same time this aphid was collected from orchard grass on the edge of a wheat field but no aphids were found on the wheat (Harry Surfass, Warren Co. Agr. Agt. coll; specimens transmitted through Stuart R. Race, Ext. Ent., College of Agriculture, Rutgers University). This occurrence on barley is also noted in CEIR, **19**(6):69, 1968. The collection of the greenbug on orchardgrass is only its second known occurrence on that plant in the Atlantic Coast States, the other one being on young orchardgrass seedlings at Clarksville, Howard Co., Md. in 1958. (see U. S. Dept. Agr. Coop. Econ Ins. Rpt **8**(47):953, 1958).

\**Stegophylla quercina* Quednau. Ridgewood, 31 May 1936 on *Quercus* sp. (MDL coll Quednau det who wrote 7 Dec 1966 "This record is from a slide given me by the late Prof. E. O. Essig and determined by him as *Phyllaphis fagi* L.").

*Therioaphis maculata* (Buckton), Spotted Alfalfa Aphid. Mr. L. Donald DeBlois has kindly furnished the results of the New Jersey Department of Agriculture Spotted Alfalfa Surveys. The figure following each date is the number of specimens collected in alfalfa by 300–450 sweeps in 1966 and 250–300 sweeps in 1967 of a 15 inch insect sweep net:

1966—Cumberland Co.: Greenwich 5 Dec. 4; Shiloh 5 Dec. 1. Gloucester Co.: Jefferson 9 Dec. 3; Mullica Hill 9 Dec. 2; Salem Co.: Centerton 6 Dec. 3; Elmer 6 Dec. 3; Quinton 6 Dec. 1; Welchville 6 Dec. 1.

1967—Burlington Co.: Evesboro 8 Nov. 90; Hedding 31 Oct. 1; Mt. Holly 31 Oct. 2; Vincentown 31 Oct. 50. Cumberland Co.: Bacon's Neck 3 Oct. 30; Fairton 3 Oct. 10;



Greenwich 2 Oct. 25; Roadstown 2 Oct. 60; Shiloh 2 Oct. 90; Stow Creek Landing 3 Oct. 100; Woodruff 9 Oct. 15. Gloucester Co.: Bridgeport 17 Oct. 20; Hurffville 6 Nov. 100; Mullica Hill 17 Oct. 100. Monmouth Co.: Allenwood 16 Oct. 1; Clarksburg 16 Oct. 2; Cream Ridge 16 Oct. 2. Salem Co.: Alloway 5 Oct. 50; Centerton 6 Nov. 100; Harmersville 5 Oct. 250; Pole Tavern 9 Oct. 29; Shirley 5 Oct. 600; Welchville 5 Oct. 2.

New Jersey Dept. Agr. Spotted Alfalfa Survey for 1968 during the period 10 Oct to 22 Oct 1968:

COUNTY	NO. FIELDS SURVEYED	INFESTED NO. FIELDS	POPULATION RANGE
Burlington	6	5	0-40 per 100 sweeps
Cumberland	6	6	25-800 per 100 sweeps
Gloucester	6	6	50-150 per 100 sweeps
Mercer	5	5	7-12 per 300 sweeps
Monmouth	5	5	6-17 per 300 sweeps
Middlesex	5	5	1-11 per 300 sweeps
Salem	6	6	50-500 per 300 sweeps
Total	39	38	

The following paragraphs pertinent to the spotted alfalfa aphid are taken from the unpublished (kindly made available to me) quarterly reports of the Insect Identification and Parasite Introduction Research Branch, Entomol. Res. Div., ARS, USDA for 1967:

“During September 1966 this aphid was recovered at Moorestown, Medford, Bridgeton and Greenwich. During a warm spell on Jan 24, 1967 when the temperature was in the 60’s a few spotted alfalfa aphids were collected at Dover, Del. and on Jan 25 at Greenwich, N.J. These recoveries indicate that the aphid remains active in the field when weather conditions are favorable during the winter months.” (Report for first quarter).

“A search was made for spotted alfalfa aphid beginning in March at weekly intervals at 3 locations in Delaware and 6 in New Jersey. The aphid was not recovered until June. These results indicate that it does not overwinter in either of these states and that it migrates northward during late spring.” (Report for second quarter).

Following are the dates and localities where the spotted alfalfa aphid was first recovered during the quarter: 19 July Greenwich, 3 aphids per 100 sweeps; 27 July Moorestown, 27 aphids per 100 sweeps; 2 Aug Medford, 2 aphids per 100 sweeps; 2 Aug Rancocas, 2 aphids per 100 sweeps. By the end of the quarter the population at Moorestown had increased to 173 aphids per 100 sweeps. (Report for third quarter).

Populations of the spotted alfalfa aphid at Moorestown per 100 sweeps during the last quarter:



Date—10/5, 10/12, 10/23, 10/30, 11/7, 11/14, 11/27, 12/5, 12/13, 12/29.  
 Pop.—252, 398, 983, 236, 72, 31, 25, 5, 4, 0.

Mr. George Angelet, Insect Identification and Parasite Introduction Research Branch, Entomol. Res. Div., ARS, USDA at Moorestown, N.J. wrote me 6 Jan 1969 as follows:

"I did not do much with the spotted alfalfa aphid during 1968 but did check several areas in New Jersey for the presence of the insect. Following are the localities where I have found the aphid as well as the areas where it was not present:

*Present* Greenwich, Fairton, Rhoadstown, Shiloh, Moorestown, Cream Ridge, Pole Tavern, Elmer, Rancocas, Medford, Jacksonville.

*None found*—Hightstown, Cranbury, Marlboro, Vail, Hope, Quakerstown.

NOTE BY AUTHOR: It should be noted that the data in the above quarterly reports are the result of Mr. Angelet's activities. It should also be noted that Mr. Angelet has in press with the J. Econ. Entomol. a paper entitled, "Notes on the spotted alfalfa aphid and the pea aphid in New Jersey, Delaware, and the Eastern Shore of Maryland," in which some of the foregoing data is presented in a somewhat different manner. In it he also has observations on the parasites and predators of these two aphids. My thanks are due him for permission to use his data.

In regard to the spotted alfalfa aphid the following paragraph in his paper is significant:

H. M. Graham, "Effects of temperature and humidity on the biology of *Therioaphis maculata* (Buckton)," in Univ. Calif. Publ. Entomol., **16**(2): 47-80, 1959 reported that a low humidity, 25 to 30% and 30°C are optimum for rapid reproduction of the spotted alfalfa aphid and that high humidity is detrimental to its reproduction. The regions of the world in which *T. maculata* has been reported to be a serious pest of alfalfa are semiarid with relatively high temperatures during the periods when the aphid is active. The average annual rainfall from April to September in the areas where my studies were made range from about 20 to 25 inches and relative humidity about 75% at 8:00 a.m. and 65% at noon during July. These environmental conditions in the study areas in addition to the low temperatures during the winter months are likely to be highly unfavorable to the rapid reproduction of this species.

*Tuberolachnus salignus* (Gmelin), Giant Bark Aphid. (Often placed in *Lachnus*). Wayne, Pasaic Co. 19 Sept 1967 a very heavy infestation on bark of willow (Conlon coll). "Common on willow trees throughout the State." (CEIR, **17**(41):927, 13 Oct 1967). "Heavy throughout New Jersey during the late summer and early fall. (Summary of Insect Conditions 1967 in CEIR, **18**(13): 249, 29 Mar 1968).



## LIST OF FOOD PLANTS\*

\* Plants marked with one asterisk (\*) are additional species and with two asterisks (\*\*) are additional genera to those in the previous lists.

- Acer negundo* (Boxelder)  
*Periphyllus negundinis*  
 \* *Acer palmatum dissectum* (Japanese Red Maple)  
*Periphyllus californicum*  
*Acer platanoides* (Norway Maple)  
*Periphyllus lyropictus*  
 Alfalfa—see *Medicago sativa*  
 \*\* *Althaea rosea*  
*Aphis gossypii*  
 \*\* *Anthurium schezeriana*  
*Acyrtosiphum solani*  
*Apocynum androsaemifolium* (Spreading Dogbane)  
*Macrosiphum euphorbiae*  
*Apocynum cannabinum* (Indian Hemp)  
*Aphis asclepiadis*  
*Macrosiphum euphorbiae*  
 Apple—see *Malus pumila*  
*Aquilegia* sp. (Columbine)  
*Kakimia essigi*  
*Macrosiphum euphorbiae*  
*Pergandeidia trirhoda*  
 Arrowhead, Common—see *Sagittaria latifolia*  
*Artemisia vulgaris* (Mugwort)  
*Pleotricophorus glandulosus*  
*Asclepias syriaca* (Common Milkweed)  
*Aphis asclepiadis*  
*Asparagus officinalis*  
*Macrosiphum euphorbiae*  
*Aster* sp.  
*Dactynotus paucosensoriatus*  
*Macrosiphum euphorbiae*  
 Azalea, Swamp—see *Rhododendron viscosum*  
 Barley—see *Hordeum vulgare*  
 Basswood—see *Tilia*  
 Beech—see *Fagus*  
*Betula populifolia* (Gray or Yellow Birch)  
*Euceraaphis deducta*  
*Euceraaphis linenta*  
*Calaphis* n. sp.  
*Calaphis betulaecolens*  
 Birch, Gray—see *Betula populifolia*  
 Birch, Yellow—see *Betula populifolia*  
 Bittersweet—see *Celastrus*  
 Blackeye Susan—see *Rudbeckia hirta*  
 Black Locust—see *Robinia pseudacacia*  
 Bleedingheart—see *Dicentra*  
 Blueberry—see *Vaccinium*  
 Boxelder—see *Acer negundo*  
 Boxwood—see *Buxus*  
 \*\* *Buxus* sp. (Boxwood)  
*Macrosiphum rosae*  
*Capsicum frutescens* (Redpepper)  
*Macrosiphum euphorbiae*  
*Myzus persicae*  
 \*\* *Caragana arborescens pendula*  
 ? *Aphis craccivora*  
 Carnation—see *Dianthus*  
*Carya* sp. (Hickory)  
*Melanocallis caryaefoliae*  
*Celastrus scandens* (Bittersweet)  
*Aphis craccivora*  
*Cephalanthus occidentalis* (American Bittersweet)  
*Aphis cephalanthi*  
*Chaenomeles japonica* (Flowering Crab)  
*Aphis pomi*  
*Macrosiphum euphorbiae*  
 \* *Chaenomeles speciosa*  
*Aphis pomi*  
 Cherry—see *Prunus*  
 Chickweed—see *Stellaria media*  
 Chinese Scholar Tree—see *Sophora japonica*  
*Chrysanthemum* sp. (cult)  
*Coloradoa rufomaculata*  
*Macrosiphoniella sanborni*  
*Cichorium endivia* (Endive or Escarole)  
*Myzus persicae*  
*Pemphigus* sp.  
*Cirsium* sp. (Thistle)  
*Brachycaudus cardui*  
 \*\* *Cladrastis lutea* (Yellow-wood)  
*Aphis craccivora*  
 Columbine—see *Aquilegia*  
 \*\* *Columnea* sp. vars. "Oriole" and "Yellow Dragon"  
*Acyrtosiphon solani*



- Columnnea* hybrid "Betty Stoehr"  
*Acyrtosiphon solani*
- \**Columnnea* hybrid "Orange Fire"  
*Acyrtosiphon solani*
- \**Columnnea percrassa*  
*Acyrtosiphon solani*
- Corn Sweet—See *Zea mays* var. *saccharata*
- \*\**Corytholoma* sp.  
*Acyrtosiphon solani*
- Cotoneaster* sp.  
*Aphis pomi*
- Crabapple—see *Malus*
- Crataegus crusgalli* (Cockspur Hawthorn)  
*Amphorophora crataegi*  
*Eriosoma crataegi*
- Cucurbita pepo* (Pumpkin)  
*Macrosiphum euphorbiae*
- \*\**Cyphomandra betaceae* (Tomato Tree)  
*Myzus persicae*
- Dactylis glomelata* (Orchardgrass)  
*Schizaphis graminum*
- Daisy Fleabane—see *Erigeron annuus*
- \*\**Datura* sp.  
*Macrosiphum euphorbiae*  
*Myzus persicae*
- Dianthus caryophyllus* (Carnation)  
*Myzus persicae*
- \*\**Dicentra* sp. (Bleedingheart)  
*Macrosiphum euphorbiae*
- Dock, Broad-leaved—see *Rumex obtusifolia*
- Dogbane, Spreading—see *Apocynum androsaemifolium*
- Eggplant—see *Solanum melogena*
- English Ivy—see *Hedera helix*
- Endive or Escarole—see *Cichorium endivia*
- \*\**Epidendrum aurantiacum* an orchid  
(synonym of *Leliocattleya luminosa*)  
*Acyrtosiphon solani*
- \**Erigeron annuus* (Daisy Fleabane)  
*Dactynotus erigeronensis*  
*Dactynotus gravicornis*  
*Dactynotus tissoti*
- Erigeron* sp. (Fleabane)  
*Dactynotus ambrosiae* complex
- \**Erigeron canadensis* (Horseweed Fleabane)  
*Dactynotus erigeronensis*  
*Dactynotus gravicornis*
- Escarole or Endive—see *Cichorium endivia*
- Euonymus* sp. (Spindle Tree)  
*Aphis fabae*
- Evening Primrose—see *Oenothera*
- Fagus* sp. Beech  
*Phyllaphis fagi*  
*Prociphilus imbricator*
- Fagus sylvatica* var. *purpurea* (Copper or Purple Beech)  
*Phyllaphis fagi*
- Firethorn—see *Pyracantha*
- Fleabane—see *Erigeron*
- Flowering Crab—see *Chaenomeles japonica*
- Forsythia* sp.  
? *Aphis gossypii*
- \*\**Gaylussacia frondosa* (Blue Huckleberry)  
? *Masonaphis* sp.
- \*\**Gesneria cuneifolia*  
*Acyrtosiphon solani*
- Gloriosa Daisy—see *Rudbeckia hybrid*
- Gloxinia*—see *Sinningia*
- Goldenrod—see *Solidago*
- Gromwell—see *Lithospermum* sp.
- Hawthorn—see *Crataegus*
- Hedera helix* (English Ivy)  
*Aphis hederæ*
- Helianthus annuus* (Common Sunflower)  
*Aphis helianthi*
- \*\**Hesperis matronalis* (Sweet Rocket)  
*Aphis gossypii*
- \**Hibiscus rosa-sinensis* (Rose-of-China)  
*Myzus persicae*
- Hickory—see *Carya*
- \**Hieracium gronovii*  
*Nasonovia ribisnigri*
- \**Hieracium pratense* (King Devil)  
*Nasonovia ribisnigri*
- Holly—see *Ilex*
- Honeysuckle—see *Lonicera*
- Hordeum vulgare* (Barley)  
*Schizaphis graminum*
- Hydrangea* sp.  
*Acyrtosiphon solani*  
*Macrosiphum euphorbiae*
- \*\**Hypocerta wettsteinii*  
*Acyrtosiphon solani*
- \**Ilex* sp. Burford Holly  
*Macrosiphum rosae*
- Indian Hemp—see *Apocynum cannabinum*
- Iris* sp.  
*Macrosiphum euphorbiae*
- Ipomoea batatas* (Sweet Potato)  
*Myzus persicae*
- Juglans nigra* (Black walnut)



- Chromaphis juglandicola*  
*Monelliopsis caryae*  
*Juglans regia* (English or Persian Walnut)  
*Chromaphis juglandicola*  
 \*\**Juniperus scopulorum* (Blue Haven)  
*Cinara cupressi* (Rocky Mt. Juniper)  
 Kidney Bean—see *Phaseolus vulgaris*  
 King Devil—see *Hieracium pratense*  
 \*\**Leliocattleya luminosa*—see also *Epidendron aurantiacum*  
*Acyrtosiphon solani*  
 Lettuce—see *Lactuca*  
*Lactuca* sp. (Lettuce)  
*Dactynotus sonchellus*  
 \**Lactuca alba*  
*Macrosiphum euphorbiae*  
*Lactuca sativa* (Garden Lettuce)  
*Myzus persicae*  
 \*\**Leliocattleya truffautiana* an orchid  
 (see also *Epidendron aurantiaca*)  
*Acyrtosiphon solani*  
*Liriodendron tulipifera* (Tuliptree)  
*Macrosiphum liriodendri*  
 \*\**Lithospermum* sp. (Gromwell)  
*Macrosiphum euphorbiae*  
*Lonicera* sp. (Honeysuckle)  
*Hydaphis foeniculi*  
*Lotus*—see *Nelumbium*  
*Lycopersicon esculentum* (Tomato)  
*Macrosiphum euphorbiae*  
*Myzus persicae*  
*Lyonia (Pieris) mariana* (Scatterbush)  
*Aphis spiraeicola*  
*Magnolia virginianum* (Sweetbay)  
*Macrosiphum liriodendri*  
*Malus* sp. Crabapple  
*Aphis pomi*  
 \**Malus atrosanguinea* (Carmine Crabapple)  
*Aphis pomi*  
 \**Malus hopy*  
*Aphis pomi*  
*Malus pumila* (Apple)  
*Aphis pomi*  
 \**Malus purpurea eleyi* (Crimson Crabapple)  
*Aphis pomi*  
 Maple, Japanese—see *Acer palmatum* dissection  
 Maple, Norway—see *Acer platanoides*  
*Medicago sativa*—see Alfalfa  
*Acyrtosiphon pisum*  
*Therioaphis maculata*  
*Mentha spicata* (Spearmint)  
*Ovatus crataegarius*  
 Milkweed—see *Asclepias*  
 Mockorange—see *Philadelphus*  
 Mountain Ash—see *Sorbus*  
 Mugwort—see *Artemisia vulgaris*  
*Nelumbium (Nelumbo) lutea* (American Lotus)  
*Rhopalosiphum nymphaeae*  
*Nymphaea* sp. (Waterlily)  
*Rhopalosiphum nymphaeae*  
*Nyssa sylvatica* (Tupelo)  
*Aphis coreopsidis*  
 Oak—see *Quercus*  
*Oenothera* sp. (Evening Primrose)  
*Macrosiphum gaurae*  
 Orchardgrass—see *Dactylis glomerata*  
 Orchid—see *Epidendron*  
 Orchid—see *Leliocattleya*  
 Painted Daisy—see *Chrysanthemum*  
 Peach—see *Prunus persica*  
*Phaseolus vulgaris* (Kidney Bean)  
*Aphis fabae*  
*Philadelphus* sp. (Mockorange)  
*Aphis fabae*  
*Philadelphus inodorus*  
*Aphis fabae*  
*Macrosiphum euphorbiae*  
*Picea* sp. (Spruce)  
*Picea* sp. (Spruce)  
*Cinara braggii*  
 ?*Cinara pilicornis*  
*Cinara pinicola*  
 \**Picea (excelsa) abies* (Norway Spruce)  
*Cinara pilicornis*  
 \**Picea pungens* (Colorado Blue Spruce)  
*Cinara* sp.  
*Pinus* sp. Pine  
*Cinara pinea*  
*Pinus rigida* (Pitch Pine)  
*Cinara carolina*  
*Cinara pinivora*  
*Cinara watsoni*  
*Pinus strobus* (White Pine)  
*Cinara strobi*  
*Pinus sylvestris* (Scotch Pine)  
*Cinara pinea*  
 Plum—see *Prunus*  
 Poison Ivy—see *Rhus toxicodendron*  
*Polygonum* sp. (Smartweed)  
*Aphis fabae*



- Potato—see *Solanum tuberosum*  
*Prunus* sp. (Cherry)  
*Myzus cerasi*  
*Prunus* sp. a red horticultural plum  
*Aphis spiraeicola*  
\**Prunus blireiana* (Blireiana Plum)  
*Hyalopterus pruni*  
*Prunus persicae* (Peach)  
*Brachycaudus persicicola*  
*Myzus persicae*  
*Pyracantha* sp. (Firethorn)  
*Aphis spiraeicola*  
\**Pyrethrum* sp. or *Chrysanthemum coccineum*? (Painted Daisy)  
? *Macrosiphoniella tanacetaria*  
*Quercus* sp. (Oak)  
*Longistigma caryae*  
*Myzocallis multisetis*  
*Myzocallis walshii*  
*Stegophylla quercina*  
\**Rechsteineria verticillata*  
*Acyrtosiphon solani*  
Redpepper—see *Capsicum frutescens*  
*Rheum rhaponticum* (Rhubarb)  
*Aphis fabae*  
\*\**Rhododendron viscosum* (Swamp Azalea)  
*Masonaphis rhokalaza*  
Rhubarb—see *Rheum rhaponticum*  
*Rhus toxicodendron* (Poison Ivy)  
*Glabromyzus howardii*  
*Robinia pseudacacia* (Black Locust)  
*Aphis craccivora*  
*Rosa* sp. (Rose, cultivated)  
*Acyrtosiphon porosum*  
*Macrosiphum euphorbiae*  
*Rosa palustris* (Swamp Rose)  
*Macrosiphum euphorbiae*  
Rose-of-China—*Hibiscus rosa-sinensis*  
*Rudbeckia hybrid* (Gloriosa Daisy)  
*Dactynotus* sp.  
*Rudbeckia hirta* (Blackeye Susan)  
*Dactynotus leonardi*  
*Rumex obtusifolia* (Broad-leaved Dock)  
*Aphis rumicis*  
*Sagittaria latifolia* (Common Arrowhead)  
*Rhopalosiphum nymphaeae*  
*Salix* sp. (Willow)  
*Chaitophorus* sp.  
*Tuberolachnus salignus*  
*Salix discolor* (Pussy Willow)  
*Macrosiphum californicum*  
Smartweed—see *Polygonum*  
Snowball Tree—*Viburnum opulus*  
\**Solanum canadense*  
*Macrosiphum euphorbiae*  
*Solanum melogena* (Eggplant)  
*Macrosiphum euphorbiae*  
*Myzus persicae*  
*Solanum tuberosum* (Potato)  
*Acyrtosiphon solani*  
*Macrosiphum euphorbiae*  
*Myzus persicae*  
*Solidago* sp. (Goldenrod)  
*Dactynotus nigrotuberculatus*  
*Sophora japonica* (Chinese Scholar Tree)  
*Aphis craccivora*  
*Sorbus americana* (American Mountainash)  
*Aphis pomi*  
Spearmint—see *Mentha spicata*  
Spindletree—see *Euonymus*  
*Spiraea bumalda* (Anthony Waterer)  
*Aphis spiraeicola*  
*Spiraea prunifolia* (Bridalwreath Spiraea)  
*Aphis spiraeicola*  
\**Spiraea thunbergii*  
*Aphis spiraeicola*  
*Spiraea vanhouttei*  
*Aphis spiraeicola*  
Spruce—see *Picea*  
Squash—see *Cucurbita pepo*  
*Stellaria media* (Common Chickweed)  
? *Myzus certus*  
\*\**Streptocarpus rexii*  
*Acyrtosiphon solani*  
Sunflower—see *Helianthus*  
Sweetbay—see *Magnolia virginiana*  
Sweet potato—see *Ipomoea batatas*  
Sweet Rocket—see *Hesperis*  
Thistle—see *Cirsium*  
\*\**Thuja* sp. (Arborvitae)  
*Cinara tujaefilina*  
*Tilia* sp. (Basswood)  
*Longistigma caryae*  
*Tilia cordata* (Littleleaf Linden)  
*Eucallipterus tiliae*  
Tomato—see *Lycopersicon*  
Tree Tomato—see *Cyphomandra*  
Tuliptree—*Liriodendron*  
Tupelo—see *Nyssa sylvatica*  
*Vaccinium corymbosum* (Cultivated High-bush Blueberry)



? *Aphis gossypii*

*Fimbriaphis* sp.

*Masonaphis pepperi*

*Viburnum opulus* (European Cranberry

Bush or Snowball Tree)

*Neoceruraphis viburnicola*

Walnut—see *Juglans*

Waterlily—see *Nymphaea*

Willow—see *Salix*

Yellow-wood—see *Cladrastis lutea*

*Zea mays* var. *saccharata* (Sweetcorn)

*Rhopalosiphum maidis*





Leonard, Mortimer Demarest. 1971. "More Records of New Jersey Aphids (Homoptera: Aphididae)." *Journal of the New York Entomological Society* 79, 62–83.

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