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George F. Knowlton

Utah Agricultural Experiment Station

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APHIDS FROM MOUNT TIMPANOGOS, UTAH⁽¹⁾

GEORGE F. KNOWLTON

Research Associate Professor of Entomology
Utah Agricultural Experiment Station

The following report deals particularly with three apparently undescribed aphid species submitted to the writer for identification by Doctor C. Lynn Hayward of the Zoology and Entomology Department of the Brigham Young University at Provo, Utah.

Myzus haywardi Knowlton, n. sp. (fig I, 1-5)

ALATE VIVIPARA: Size 1.8 mm. long; body without definite color markings; antennal tubercles but moderately developed, diverging; antennae dusky to blackish beyond base of III, extending to beyond cornicles; antennal III, 0.54 mm. long with 19 to 23 sensoria; IV, 0.39; V, 0.3 to 0.32; VI, 0.125 to 0.14 + 0.53 to 0.54 mm.; rostrum reaching second coxae; rostral IV + V (fig. 4), 0.095, obtuse; hind tibiae 1.54; hind tarsi (fig. 5) 0.158 mm. long; cornicles pale, cylindrical, 0.395; cauda pale, 0.22, with 3 hairs on each side.

COLLECTION: On *Galium* or *Rudbeckia*, Big Tree Camp, Mt. Timpanogos, Utah, June 7, 1940.

TAXONOMY: This aphid keys to *Myzus scammelli* Mason in the Mason (U. S. Dept. Agr. Misc. pub. 371: 5, 1940) key, from which it differs in: Head with more distinct antennal tubercles, more sensoria on longer antennal III, longer unguis, cauda lacking a definite constriction. In Gillette and Palmer's key (Ann. Ent. Soc. Amer. 27: 201, 1934) *haywardi* runs to *M. mahaleb* Koch (= *lythri* (Schr.)) from which it differs in having more elongate cauda, more sensoria on a longer antennal III, and shorter cornicles.

Key to Aptera of the *Mac. albifrons* Group

1. Cornicles black *zionsensis* K.
Cornicles pale 2
2. Cauda slightly constricted before base..... *timpanogos* n. sp.
Cauda tapering 3
3. Antennal III of aptera with 20 to 45 sensoria..... *albifrons* Essig
Antennal III of aptera with 5 to 17 sensoria..... *thermopsaphis* K.

(1) Contribution from the Entomology Department, Utah Agricultural Experiment Station, Logan.

Macrosiphum timpanogos Knowlton, n. sp. (fig. 1, 6-9)

APTEROUS VIVIPARA: Color pale; size large, 4.1 to 5 mm. long; abdomen 2.75 wide; width through eyes 0.74; ocular tubercles present; rostral IV + V (fig. 6), 0.17; antennae 5.75 mm. long, pale to dusky, darker beyond middle of V; antennal III, 1.23 to 1.26 mm. long, with 11 to 22 sensoria (average 16); IV, 0.95 to 1.21; V, 1.03 to 1.09; VI, 0.24 to 0.25 + 1.64 to 1.7 mm. long; pleural margins of thoracic segments rugulose; cornicles pale, darker at tip, 1.11 to 1.22 mm. long with distal 0.9 to 0.11 reticulated; cauda pale, 0.63 to 0.65 mm. total length, slightly constricted before base with about 5 pairs of lateral hairs; hind tibiae 3.8 to 3.95; hind tarsi 0.24 mm. long.

COLLECTION: Host? (Probably from a lupine of some kind). At Hidden Lake Camp, Mt. Timpanogos, Utah, July 23, 1940.

TAXONOMY: *Macrosiphum timpanogos* n. sp. differs from *M. zionensis* Knt. in having pale rather than black cornicles, more sensoria on antennal III, has longer unguis, cornicles; averages fewer sensoria on antennal III, has longer antennal V, cauda, hind tibiae and body than *M. albifrons* Essig. It differs from *M. thermopsaphis* Knt. in

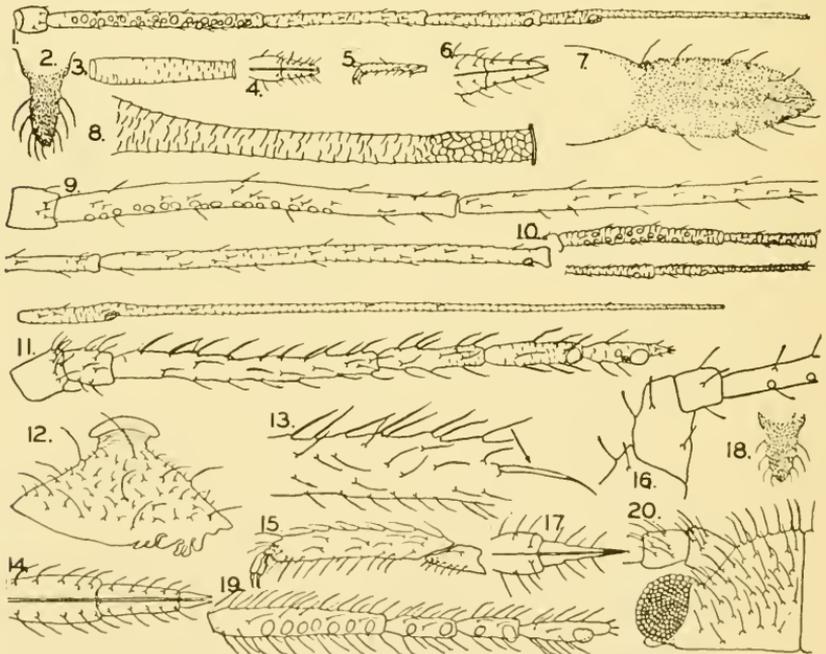


Fig. 1. *Myzus haywardi* n. sp., alate 1-5. *Macrosiphum timpanogos* n. sp., aptera 6-9. *Aphis ribiensis* G.-P., alate 10. *Cimara osborni* n. sp., aptera 11-15, 20. *Macrosiphum coweni* (Hunt.), aptera 16-17. *Flabellomicrosiphum tridentata* (Wil.), aptera 18. *Anocia querci* (Pitch), alate 19.

being larger in size, having longer antennae, longer rostral IV + V, and averages more sensoria on antennal III.

MACROSIPHUM STANLEYI Wilson

Specimens of this species were collected on *Sambucus microbotrys* at Big Tree Camp, Mt. Timpanogos, June 4, August 1 and 2, 1940, and Lost Lake, Uinta Mountains, in Utah, August 28, 1940.

Cinara osborni Knowlton n. sp.⁽²⁾ (fig. 1, 11-15, 20)

APTEROUS VIVIPARA: Body 3.48 to 3.6 mm. long and 1.93 to 2.28 wide across the abdomen; head width 0.85 to 0.93 mm. through eyes; ocular tubercles (fig. 20) well developed; antennae 1.49 to 1.65, pale except distal ends of III, IV, V and most of VI which are darker; antennal III, 0.63 to 0.665, without sensoria; IV, 0.196 to 0.26; V, 0.2 to 0.265, without secondary sensoria; VI, 0.142 to 0.158 + 0.049 to 0.06 mm.; rostrum reaching mid-abdomen; rostral IV + V acute at tip, 0.315 mm. long; hind tibiae 2.53 long (fig. 13) largely pale; abdominal segments with broad pleural sclerotized areas with irregular margins and detached, small, broken off, sclerotized "islands"; body hairs abundant, 0.08 to 0.095; cornicles with broad bases, armed with both long hairs (0.14 mm.) interspersed with more numerous short, fine hairs (fig. 12); anal plate rounded, dusky.

COLLECTION. On *Pseudotsuga mucronata* at Aspen Grove, Mount Timpanogos, Utah, June 30, 1940.

TAXONOMY: This species runs to *Cinara solitaria* (G. and P.) in Gillette and Palmer's key (Ent. Soc. Amer. Ann., 24: 844, 1931). From this it differs in being larger in size, having longer hind tibiae and antennae, and relatively longer antennal III in proportion to length of IV and V. It differs from *Cinara pergandia* (Wilson) in possessing paler hind tibiae with less spine-like bristles, lacking secondary sensoria on antennal V, and in having well developed ocular tubercles.

Types for the present in the collection of the writer. Paratype of *Macrosiphum timpanogos* n. sp. in the insect collection of the Department of Zoology and Entomology, Brigham Young University.

Dr. Hayward also collected: *Macrosiphum stanleyi* Wilson on *Sambucus microbotrys*, *Macrosiphum crenicornum* S.-K., probably on *Geranium* and *Mindarus abietinus* Koch on *Pseudotsuga mucronata*. This latter species was probably accidental on this host.

Some aphids collected around the lower slopes and along highways of Mount Timpanogos by the writer include: *Anoecia quercii* (Fitch)

(2) Named in honor of my distinguished Professor, Dr. Herbert Osborn. The writer is indebted to Professor M. A. Palmer for her suggestions concerning this species.

(fig. 19) on *Cornus stolonifera*, *Eulachnus agilis* (Kalt.) on *Pinus*, *Euceraaphis gillettei* Dav. on *Alnus*, *Chaitophorus viminalis* Mon. on *Salix*, *Periphyllus negundinis* (Th.) on *Acer negundo*, *P. populicola* (Thos.), *Clavigerus salicis* (L.) and *C. bicolor* (Oest.) on *Salix*, *Aphis artemisicola* Wms. on *Artemisia tridentata*, *A. frangulae* Kalt. on *Nepeta cataria*, *A. gregalis* Knlt. on *Chrysothamnus viscidiflorus*, *A. helianthi* on *Helianthus*, *A. ribiensis* G.-P. (fig. 10) and *A. varians* Patch on *Ribes*, *Cavariella capreae* (Fab.) on *Salix*, *Epameibaphis frigidae* Oest. on *Artemisia*, *Flabellomicrosiphum tridentatae* (Wils.) (fig. 18) on *Artemisia tridentata*, *Microsiphum artemisiae* (Gill.) on *Artemisia vulgaris* and *A. tridentata*, *Amphorophora nervata* (Gill.) on *Rosa*, *A. ribiella* (Dav.) on *Ribes*, *A. rubicola* (Oest.) on *Rubus*, *A. sonchi* (Oest.) on *Ribes*, *Capitophorus glandulosus* (Kalt.) on *Artemisia*, *C. gregarius* Knlt. and *C. oestlundii* Knlt. on *Chrysothamnus nauseosus*, *Kakimia cynosbati* (Oest.) on *Ribes*, *Macrosiphum coweni* (Hunt.) (figs. 16-17) on *Artemisia*, *M. packi* Knlt. on *Chrysothamnus nauseosus*, *Thecabius populi-monilis* (Riley) in bead-like leaf galls of *Populus angustifolia*, and *Forda olivacea* Rohwer on grass roots.