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FEEDING RECORDS OF APHIDS (HEMIPTERA: APHIDIDAE) FROM WISCONSIN

Andrew H. Williams¹, James C. Trager² and David J. Voegtlin³

ABSTRACT

Basic to our understanding of any animal and its habitat requirements is knowing what it eats. Reported here are observations of feeding by 27 species of aphids encountered in Wisconsin over 1992-2002.

Knowing what an animal eats is basic to our understanding of that animal and its habitat requirements. Reported here are observations of feeding by 27 species of aphids (Hemiptera: Aphididae) collected in Wisconsin by Williams from 1992 through 2002.

Aphids were reared in the lab on the same plant species on which they had been found feeding so that both wingless and winged adults could be secured. These were put into 80% EtOH and sent to Voegtlin, who mounted the aphids on slides, determined them and deposited the specimens in the collection at Illinois Natural History Survey. Ants tending the aphids were collected, point mounted and sent to Trager or A. Francoeur, who determined them and returned them for deposition in the Insect Research Collection (IRC) of the Entomology Department at University of Wisconsin - Madison. Predators of aphids were collected, immatures reared out on those same aphids in the lab and adult specimens deposited in the IRC.

These aphid data are presented in Table 1. Unless otherwise noted in the table, all insects were collected by Williams in prairies and savannas, all plants and aphid predators were determined by Williams, and all ants were determined by Trager. Plant nomenclature follows Gleason and Cronquist (1991).

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LITERATURE CITED

- Gleason, H. A. and A. Cronquist. 1991. Manual of vascular plants of northeastern United States and adjacent Canada. 2nd ed. N. Y. Botanical Garden, Bronx, NY. 910 pp.

Table 1. Observations of aphids feeding on plants, ants tending those aphids and aphid predators.

Aphid	Plant	Ant	Notes
<i>Aphis barberae</i> Robinson	<i>Cirsium discolor</i>	<i>Formica subsericea</i> Say	Crowded under flower buds at tip of stem.
<i>Aphis craccivora</i> Koch	<i>Astragalus canadensis</i>	—	On stems & developing pods, by road at edge of rocky woods.
<i>Aphis decepta</i> Hottes & Frison	<i>Heracleum lanatum</i>	<i>Camponotus noveboracensis</i> (Fitch)	On stems & on small stems under umbels.
	<i>Pastinaca sativa</i>	<i>Formica montana</i> Emery	On stem below umbel.
<i>Aphis monardae</i> Oestlund ¹	<i>Pycnanthemum virginianum</i>	<i>Crematogaster lineolata</i> (Say)	On stems near shoot tips.
	<i>Monarda fistulosa</i>	<i>Formica montana</i> Wheeler ²	On young leaves.
	<i>Monarda fistulosa</i>	<i>Formica prociliata</i> Kennedy & Dennis	On young leaves.
	<i>Monarda fistulosa</i>	<i>Formica subsericea</i> Say	On youngest leaves.
<i>Aphis rumicis</i> Linnaeus	<i>Rumex orbiculatus</i>	—	Aggregated on shoot tip & youngest leaves.
<i>Aphis saniculae</i> Williams	<i>Zizia aurea</i>	<i>Lasius alienus</i> (Foerster)	In tight clusters on stems near their tips & just below flowering umbels.
<i>Aphis solanella</i> Theobald	<i>Cirsium discolor</i>	<i>Formica montana</i> Wheeler	On shoot tips.
	<i>Solanum nigrum</i>	<i>Formica obscuriventris</i> Mayr	On young stems & leaves near shoot tips.
<i>Brachycaudus cardui</i> (Linnaeus)	<i>Onosmodium molle</i>	<i>Formica montana</i> Wheeler	On tender leaves.
	<i>Onosmodium molle</i>	<i>Formica obscuriventris</i> Mayr	On young stems, leaves, flowers & flower buds.
<i>Chaitophorus nigrae</i> Oestlund	<i>Salix</i> sp.	<i>Dolichoderus taschenbergi</i> (Mayr) ²	On petioles & undersides of leaves.

Table 1. Continued.

Aphid	Plant	Ant	Notes
<i>Cinara banksiana</i>	Pepper & Tissot <i>Pinus banksiana</i>	---	On spherical stem nodules shielded by fragile husks & tended by ants that escaped capture.
<i>Hoplochaitophorus quercicola</i>	Monell <i>Quercus macrocarpa</i>	<i>Formica obscuripes</i> Forel	On midveins of undersides of leaves.
<i>Hysteroneura setariae</i>	(Thomas) <i>Prunus americana</i>	<i>Crematogaster cerasi</i> (Fitch) <i>Formica subsericea</i> Say	On youngest leaves, deforming them. In dense clusters on upper stems & inside panicle among spikelets.
<i>Lachnus allegheniensis</i>	McCook <i>Quercus macrocarpa</i>	<i>Formica obscuripes</i> Forel	On young brown bark of knee-high oak. When disturbed, the aphids walked down branch & trunk toward grassy litter below.
<i>Microparsus olivei</i>	Smith & Tuatay <i>Desmodium illinoense</i>	---	Prey of adult <i>Coccinella septempunctata</i> Linnaeus, near shoot tip.
<i>Desmodium illinoense</i>		---	On young loment.
<i>Myzus cerasi</i>	(Fabricius) <i>Prunus pensylvanica</i>	<i>Formica subnitens</i> Creighton	On shoot tips & undersides of youngest leaves.
<i>Uroleucon ambrosiae</i>	(Thomas) <i>Silphium perfoliatum</i>	---	On shoot tips & youngest leaves.
<i>Uroleucon eupatoricolens</i>	(Patch) <i>Eupatorium sessilifolium</i>	---	On shoot tip & on branches of inflorescence bearing buds, by road at edge of rocky woods.
<i>Uroleucon gigantiphagum</i>	Moran <i>Solidago gigantea</i>	---	Prey of larval <i>Chrysoperla ploribunda</i> (Fitch),

Table 1. Continued.

Aphid	Plant	Ant	Notes
<i>Uroleucon gravicorne</i> (Patch)	<i>Erigeron strigosus</i>	---	(reared), on stem and among flowers.
<i>Uroleucon helianthicola</i> (Olive)	<i>Froelichia floridana</i>	<i>Forelius pruinosus</i> (Roger)	Prey of adult <i>Coccinella septempunctata</i> Linnaeus, on stem.
<i>Uroleucon leonardi</i> (Olive)	<i>Ratibida pinnata</i>	---	On stems near inflorescences.
<i>Uroleucon luteolum</i> (Williams)	<i>Solidago canadensis</i>	---	Prey of adult <i>Podabrus tomentosus</i> (Say) ³ , on upper stem.
<i>Uroleucon obscuricaudatum</i> (Olive)	<i>Helioopsis helianthoides</i>	---	On shoot tip.
<i>Uroleucon pepperi</i> (Olive)	<i>Cirsium discolor</i>	---	On stems below flowers, by road at edge of rocky woods.
<i>Uroleucon pieloui</i> (Richards)	<i>Solidago canadensis</i>	---	On stems below flower buds.
<i>Uroleucon tardae</i> (Hottes & Frison)	<i>Helenium autumnale</i>	---	Prey of adult <i>Coccinella septempunctata</i> Linnaeus, on stem tip.
<i>Uroleucon zinzelae</i> Hottes & Frison	<i>Polymnia canadensis</i>	---	On stem tips.
			On young tissues, by road at edge of rocky woods.

¹We disagree with the placement of *A. monardae* as a synonym of *A. gossypii* which was made on the basis of the morphology of a small number of slide mounted specimens.

²Determined by A. Francoeur.

³Determined by D. K. Young.