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Feeding Records of True Bugs (Hemiptera: Heteroptera) from Wisconsin, Supplement

Andrew H. Williams

Abstract

In order to understand any animal and its habitat requirements, we must know what it eats. Reported here are observations of feeding by 27 species of true bugs (Hemiptera: Heteroptera) encountered in various habitats in Wisconsin over the years 2003–2014. This is the first report of *Anasa repetita* Heidemann (Coreidae) from Wisconsin.

Knowing what an animal eats is essential to our understanding of that animal and its habitat requirements. Over the years 2003–2014, I accumulated many observations of insects feeding in Wisconsin. These data are vouchered by hand-collected specimens given to the Insect Research Collection of the Entomology Department at University of Wisconsin - Madison.

These data are organized in two tables: Table 1 presents plant feeding records and Table 2, insect feeding records. Data for nymphs and adults are both included; nymphs were reared out. Some species appear in both tables. Only infrequently does one find a predator feeding; the predation event that presumably preceded feeding rarely is encountered. The animal feeding records probably represent predation, although in most instances a possibility of mere scavenging exists.

Presented here are 27 species in 9 families of bugs: Alydidae, Coreidae, Cydnidae, Lygaeidae, Miridae, Nabidae, Pentatomidae, Reduviidae, and Rhopalidae. All insects were collected by me, and all insects and plants were determined by me. This is the first report of *Anasa repetita* Heidemann (Coreidae) from Wisconsin; adults and nymphs were collected on 15 September 2006, at T4N R6W S34 in Grant County, beside Closing Dam Road by the Mississippi River at Eagle Valley Nature Preserve. Data reported here supplement similar data reported in Williams (2004). Plant nomenclature herein follows Gleason and Cronquist (1991).

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Table 1. Observations of Heteroptera feeding on plants. Bugs were adults unless otherwise indicated. Repeated insertion of mouthparts into flower openings was assumed to be feeding on nectar (N). An immobile bug with its mouthparts inserted into plant tissue was assumed to be feeding on developing seeds (DS), ripe seeds (RS), leaves, stems, flowers or fruits. Seeds fed upon were attached to plants. Stems fed upon were in or just below inflorescences. Determinations done by the author.

BUG SPECIES	PLANT SPECIES	PLANT FAMILY	PLANT STRUCTURE & NOTES
Alydidae			
<i>Alydus curinus</i> (Say)	<i>Asclepias syriaca</i> <i>Asclepias tuberosa</i> <i>Desmodium cuspidatum</i> <i>Pycnanthemum tenuifolium</i>	Asclepiadaceae Fabaceae Lamiaceae	N N DS N
<i>Alydus pilosulus</i> Herrich-Schaeffer	<i>Astragalus canadensis</i>	Fabaceae	RS, nymph, reared
<i>Megalotomus quinquespinosus</i> (Say)	<i>Asclepias tuberosa</i> <i>Ceanothus ovatus</i>	Asclepiadaceae Rhamnaceae	N N, nymph, reared on developing seeds of <i>Lupinus perennis</i>
Coreidae			
<i>Anasa repetita</i> Heidemann	<i>Echinocystis lobata</i>	Cucurbitaceae	stems anywhere along their length & developing fruits, adults & nymphs, reared; first report of this insect from Wisconsin
<i>Euthochtha galeator</i> (Fabricius)	<i>Helenium autumnale</i> <i>Silphium terebinthinaceum</i>	Asteraceae	stem stem, nymph, reared
<i>Merocoris distinctus</i> Dallas	<i>Asclepias incarnata</i>	Asclepiadaceae	N
<i>Piezogaster calcarator</i> (Fabricius)	<i>Ambrosia trifida</i>	Asteraceae	stem, nymph, reared

Table 1. Continued.

BUG SPECIES	PLANT SPECIES	PLANT FAMILY	PLANT STRUCTURE & NOTES
Cydnidae			
<i>Corimelaena lateralis lateralis</i> (Fabricius)	<i>Polytaenia nuttallii</i> <i>Taenidia integerrima</i>	Apiaceae	flowers, DS flowers, DS
<i>Galgupha ovalis</i> Hussey	<i>Plantago patagonica</i>	Plantanaceae	blooming inflorescence
<i>Sehirus cinctus</i> (Palisot de Beauvois)	<i>Leonurus cardiaca</i> <i>Stachys palustris</i>	Lamiaceae	DS, adults & nymphs, reared DS, RS
Lygaeidae			
<i>Lygaeus turcicus</i> Fabricius	<i>Pycnanthemum tenuifolium</i>	Lamiaceae	N
<i>Neacoryphus bicrucis</i> (Say)	<i>Cacalia atriplicifolia</i> <i>Cacalia muhlenbergii</i> <i>Cacalia suaveolens</i> <i>Cacalia tuberosa</i>	Asteraceae	DS, RS, adults and nymphs, reared DS, adults and nymphs, reared DS, adults and nymphs, reared DS, RS
Miridae			
<i>Adelphocorus lineolatus</i> (Goeze)	<i>Polytaenia nuttallii</i> <i>Asclepias amplexicaulis</i>	Apiaceae Asclepiadaceae	N N
<i>Poecilopapsus lineatus</i> (Fabricius)	<i>Rhus copalina</i> <i>Tortilis japonica</i> <i>Lychnis alba</i> <i>Leonurus cardiaca</i>	Anacardiaceae Apiaceae Caryophyllaceae Lamiaceae	leaves leaves leaves leaves
Nabidae			
<i>Nabucula subcoleoprata</i> Kirby	<i>Cirsium arvense</i> <i>Solidago canadensis</i>	Asteraceae	N N

Table 1. Continued.

BUG SPECIES	PLANT SPECIES	PLANT FAMILY	PLANT STRUCTURE & NOTES
Pentatomidae			
<i>Acrosternum hilare</i> (Say)	<i>Asclepias incarnata</i>	Asclepiadaceae	N
<i>Apoeilus bracteatus</i> (Fitch)	<i>Asclepias syriaca</i>	Asclepiadaceae	N
<i>Chlorochroa persimilis</i> Horvath	<i>Asclepias tuberosa</i>	Asclepiadaceae	N
<i>Cosmopepla bimaculata</i> (Thomas)	<i>Aquilegia canadensis</i> <i>Agastache scrophulariataefolia</i> <i>Galeopsis tetrahit</i> <i>Leonurus cardiaca</i> <i>Nepeta cataria</i> <i>Physostegia virginiana</i> <i>Satureja vulgaris</i> <i>Stachys palustris</i> <i>Teucrium canadense</i> <i>Mimulus ringens</i> <i>Scrophularia lanceolata</i> <i>Scrophularia marilandica</i>	Ranunculaceae Lamiaceae	DS, adults & nymphs, reared flowering inflorescences DS, adults & nymphs, reared DS, adults & nymph, reared DS, adults & nymphs, reared DS, adults & nymphs, reared DS, nymphs, reared DS, adults & nymphs, reared DS DS, adults & nymphs, reared DS DS, adults & nymphs, reared
<i>Euschistus servus euschistoides</i> (Vollenhoven)	<i>Asclepias syriaca</i> <i>Asclepias syriaca</i> <i>Asclepias tuberosa</i> <i>Erechtites hieracifolia</i> <i>Echinocystis lobata</i> <i>Desmodium cuspidatum</i> <i>Scrophularia marilandica</i>	Asclepiadaceae Asteraceae Cucurbitaceae Fabaceae Scrophulariaceae	green pod, adult & nymph, reared N N DS developing fruit DS, adult & nymphs, reared DS

Table 1. Continued.

BUG SPECIES	PLANT SPECIES	PLANT FAMILY	PLANT STRUCTURE & NOTES
<i>Euschistus tristigmus luridus</i> Dallas	<i>Astragalus canadensis</i> <i>Scrophularia marilandica</i>	Fabaceae Scrophulariaceae	RS DS & stems, adult & nymphs, reared
<i>Euschistus variolarius</i> (Palisot de Beauvois)	<i>Eryngium yuccifolium</i> <i>Asclepias syriaca</i>	Apiaceae Asclepiadaceae	N green pod, adult & nymph, reared. stem, at old oviposition sites of the weevil <i>Rhyssomatus lineaticollis</i> (Say)
	<i>Asclepias lanuginosa</i> <i>Pycnanthemum tenuifolium</i> <i>Oenothera biennis</i>	Lamiaceae Onagraceae	N N N, piercing floral tube
<i>Holcostethus limbolaris</i> (Stål)	<i>Ranunculus pensylvanicus</i>	Ranunculaceae	DS
<i>Trichopepla atricornis</i> Stål	<i>Polytaenia nuttallii</i>	Apiaceae	DS, nymphs, reared
Reduviidae			
<i>Phymata americana americana</i> Melin	<i>Eulhamia graminifolia</i> <i>Rudbeckia subtomentosa</i> <i>Verena hastata</i>	Asteraceae Verbenaceae	N N N
Rhopalidae			
<i>Arhyssus lateralis</i> (Say)	<i>Satureja vulgaris</i>	Lamiaceae	DS, nymphs, reared

Table 2. Observations of Heteroptera feeding on insects. All were adults. Determinations done by the author. Killing of prey, denoted (P), was observed only on one occasion.

FEEDING BUG	INSECT FED UPON	INSECT ORDER & FAMILY
Nabidae <i>Nabacula subcoleoptrata</i> Kirby	<i>Aphis asclepiadis</i> Fitch P	Hemiptera, Aphididae
Reduviidae <i>Phymata americana americana</i> Melin	<i>Helophilus fasciatus</i> Walker <i>Alydus eurinus</i> (Say) <i>Myzinum quinquecinctum</i> (Fabricius) <i>Polistes dominula</i> (Christ) <i>Hemaris diffinis</i> (Boisduval)	Diptera, Syrphidae Hemiptera, Alydidae Hymenoptera, Tiphiidae Hymenoptera, Vespidae Lepidoptera, Sphingidae
<i>Sinea diadema</i> (Fabricius)	<i>Tetraopes tetraphthalmus</i> (Forster) <i>Diabrotica cristata</i> (Harris) <i>Diabrotica virgifera</i> LeConte <i>Coccinella septempunctata</i> (Linnaeus) <i>Cycloneda munda</i> (Say)	Coleoptera, Cerambycidae Coleoptera, Chrysomelidae Coleoptera, Chrysomelidae Coleoptera, Coccinellidae Coleoptera, Coccinellidae

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