

**Grass Feeding Insects of the Western Ranges:  
An Annotated Checklist**

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An Annotated Checklist**

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## Introduction

Because the livestock industry is a major economic entity in the western United States, the rangelands of the west are important natural resources. Ninety-nine percent of the 650 million acres of rangeland found in the contiguous United States occurs in the 17 western states. Annual forage production in this region varies from 500 pounds (desert grasslands) to 3½ tons (alpine meadows) per acre (U.S. Forest Service 1980), much of the production in the form of grasses. Each year this plant biomass is converted to detritus, animal tissue and metabolic energy by livestock, wildlife, arthropods and soil micro-organisms. As primary consumers of live or standing-dead grasses, livestock and wildlife compete with grazing insects on these ranges, and studies indicate that the insects consume the greater proportion of the standing crop (Haws, 1978). While some insects are notorious range pests, at times requiring control measures, most of the turnover is attributable to the combined feeding of an array of grazing arthropods.

The objective of the following report is to catalog the diversity of grass-consuming insects on the western ranges and to provide a guide to the published knowledge of their biologies. Specifically, the report takes the form of an annotated checklist. We have attempted to include all of the insect species known or suspected to be grass feeders in the Four-Corners region: the states of Arizona, New Mexico, Nevada, Colorado and Utah. It will include, therefore, the vast majority of grazing insects found in the adjoining range states as well. The species are arranged by Order and Family and then alphabetically by genus and species. In-

formation provided under each species includes the distribution, feeding habits, and citations to the taxonomy, biology and, in some cases, control methods.

Since the biologies of many range insects are incompletely known, a certain amount of discretion was required in deciding whether to include certain species. The following criteria were used. All species for which there are published reports of observed grass feeding, stomach analyses confirming grasses in the diet, or laboratory rearing on grasses are included. In addition, species belonging to genera for which the known habits indicate an exclusive or primarily grass feeding habit are included. In such cases, the notation "probable grass feeder" is made under the species in question. If this notation is followed by a citation, it indicates that the authority cited has made the statement that the members of that genus are grass-feeders.

Polyphagous species which probably include grass in their diet are not listed unless there is a definite report of grass feeding. Species are not included if the only indication of a grass association is their collection on grass, as for example by sweeping. Species which feed strictly on corn, bamboo or cane are not included, as these are not considered "grasses" for the purposes of this report.

Grass hosts are listed by generic name only. True monophagy is rare in grass feeding insects if it exists at all. Common names in the original citation have been changed to generic here, except where ambiguity obscures the identity of the grass, as in the term "bunchgrass." Appendix I provides the common names for the grass genera cited in the text.

## Acknowledgements

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J. P. Kramer	USNM-Smithsonian	Fulgoroidea
M. W. Nielson	USDA-Tucson	Cicadellidae
W. L. Nutting	Texas A&M University	Cerambycidae
M. E. Rice	Louisiana State University	Chrysomelidae
E. G. Riley	Oregon State University	Miridae
M. D. Schwartz	University of Arizona	Isoptera
T. Sechrist	Colorado State University	Acrididae
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# Coleoptera

## Anthicidae

The one reported grass-associated species is believed to be a pollen feeder. The adults are reported with enough frequency on grass to be suspected of feeding on grass pollen. Taxonomy: Werner, 1973.

### *Ischyropalpus lividus* (Casey).

NM. Taken on *Bouteloua* (1).

1. Watts, 1963.

## Buprestidae

While the majority of buprestids pass the larval stages in woody plants, the genus *Agrilus* has been associated with herbaceous forbs. One species has been reported on grass in our region. Taxonomy: Fisher, 1928.

### *Agrilus pulchellus* Bland.

AZ. Found on *Sporobolus* and *Heteropogon* (1).

1. UA records.

## Bruchidae

Larvae of bean weevils develop in seeds, mainly in legumes and the association of adults with grass is suspect. Nevertheless, the adults of the species of one genus have been reported frequently on grama grass. Taxonomy: Arnett, 1968; Horn, 1885.

### *Zabrotes cruciger* Horn.

CO, NM. Taken on *Bouteloua* (1).

1. Watts, 1963.

### *Zabrotes spectabilis* Horn.

AZ, NM, NV. Taken on *Bouteloua* (1).

1. Watts, 1963.

## Carabidae

Most ground beetles are predatory insects, but certain genera are primarily or entirely herbivorous, and some show distinct preferences for grass. The adults are mainly seed feeders; little is known of the larval preferences. Taxonomy: Ball, 1968; Hatch, 1932, 1953; Hayward, 1908.

### *Amara acomana* Casey.

NM. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara acuminata* Casey.

NM. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara atrichata* Minsk and Hatch.

UT. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara bifrons* Gyllenhal.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara brevipennis* Casey.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara californica* Dejean.

NM. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara carinata* LeConte.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara castilia* Casey.

NM. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara cockerelli* Casey.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara conflata* LeConte.

UT. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara confusa* LeConte.

CO, NM. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara convexa* LeConte.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara cupreolata* Putzeys.

CO. Principally a grass feeder, eats *Poa*, *Agrostis*, *Festuca*, and *Lolium* (1).

1. Johnson and Cameron, 1969.

### *Amara ebenina* Casey.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara fallax* LeConte.

CO, UT. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara farcta* LeConte.

CO, UT. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara hesperia* Casey.

NM, UT. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara ilidahoana* Casey.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara impuncticollis* (Say).

UT. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara latior* Kirby.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara laurana* Casey.

NM. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara littoralis* Mannerheim.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara turbata* Casey.

CO. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Amara wingatei* Casey.

NM. Probable grass feeder (1).

1. Johnson and Cameron, 1969.

### *Anisodactylus rusticus* Say.

CO. Feeds readily on grass seed (1).

1. Johnson and Cameron, 1969.

### *Harpalus caliginosus* Fabricius.

AZ, CO, UT. (Murky Ground Beetle). Feeds readily on seeds of *Poa* and *Elymus* (1).

1. Johnson and Cameron, 1969.

*Harpalus pensylvanicus* DeGeer.

CO, NM, NV, UT. Feeds on Phleum, Zea, Echinochloa, Poa, Triticum, and Setaria (1).

1. Kirk, 1973.

*Stenolophus pallipes* (Fabricius).

AZ, NM. An active grass feeder (1).

1. Johnson and Cameron, 1969.

**Cerambycidae**

Usually associated with woody plants, the larvae of a few longhorn beetles develop on grass roots. *Crossidius pulchellus* is an exception; the report here is based on stomach samples of the adult; the larva is known to develop on snakeweed roots. Taxonomy: Linsley, 1962; Linsley and Chemsak, 1976.

*Crossidius pulchellus* LeConte.

AZ, CO, NM, UT. Adults are polyphagous, gut contents included Bouteloua (1); also has been collected on Bouteloua (2).

1. Lavigne, 1980; 2. Watts, 1963.

*Prionus emarginatus* Say.

CO, NM, UT. Feeds on roots of Oryzopsis (1).

1. Gwynn and Hosteler, 1978.

*Prionus fissicornis* Haldeman.

CO. A root feeder of native grasses of the Great Plains (1).

1. Linsley, 1962.

*Typocerus octonotatus* (Haldeman).

CO, NM. Host plants are Andropogon, Agropyron, Sporobolus and Sorghastrum. Larvae cause severe damage to the crown (1).

1. Linsley and Chemsak, 1976.

*Typocerus serraticornis* Linsley and Chemsak.

NM, NV, UT. Ex Oryzopsis (1).

1. Linsley and Chemsak, 1976.

**Chrysomelidae**

The grass feeding representatives of the leaf-beetle family feed on the blades of grasses as both larvae and adults. Taxonomy: Arnett, 1968; Barker, 1947; Horn, 1889; Blake, 1935, 1950; Chittenden, 1927.

*Anisostena bicolor* Smith.

AZ, NM. Probable grass feeder (1).

1. E.G. Riley, pers. comm.

*Anisostena nigrata* (Olivier).

AZ, NM. Feeds on Andropogon (1).

1. E. G. Riley, pers. comm.

*Anisostena perspicua* Horn.

AZ. On Sporobolus, Tridens, Bothriochloa (1).

1. UA records.

*Chaetocnema denticulata* (Illiger).

CO, NM, UT. (Toothed Flea Beetle). Feeds on wild grasses, corn, sorghum (1), Panicum and Digitaria (2).

1. Essig, 1926; 2. Beisler et al., 1977.

*Chaetocnema ectypa* Horn.

AZ, NM, NV, UT. (Desert Corn Flea Beetle). Feeds on Zea, Sorghum, Sorghastrum, Hordeum, Distichlis, Triticum and Sporobolus (1, 2).

1. Wildermuth, 1917; 2. Bibby, 1961.

*Chalepus walshi* (Crotch).

AZ, CO. Feeds on Bromus (1).

1. E. G. Riley, pers. comm.

*Diabrotica lemniscata* LeConte.

NM. Probable grass feeder.

*Diabrotica longicornis* (Say).

CO, NM. (Northern Corn Rootworm). Attacks Sorghum, Zea, Avena, Triticum (1). Reared on Agropyron, Eragrostis, Panicum and Elymus (2).

1. Webster, 1913; 2. Branson and Ortman, 1971.

*Diabrotica undecimpunctata* Mannerheim.

AZ, CO, NM, NV, UT. (Spotted Cucumber Beetle). Known grass hosts are Zea, Avena, Setaria, Triticum, Elymus, Phleum, Bromus, Panicum, Echinochloa (1), Bouteloua (2), Hordeum (3), Sorghum, Zizania, Cynodon and Dactylis (4).

1. Webster, 1913; 2. Watts, 1963; 3. Bibby, 1961; 4. Isely, 1929.

*Diabrotica virgifera* LeConte.

AZ, CO, UT. (Western Corn Rootworm). Feeds only on graminaceous plants including Eragrostis, Agropyron, Elymus, Hordeum, Triticum, Oryza, Secale, Panicum, Setaria (1), Zea, Coix, Tripsacum, Euchlaena (2).

1. Branson and Ortman, 1970; 2. Branson, 1971.

*Euryscopa vittata* LeConte.

AZ, NM. Reported on Bouteloua (1).

1. Watts, 1963.

*Lygistus streptophallus* Wilcox.

AZ. Collected on Bouteloua (1).

1. Wilcox, 1965.

*Myochrous denticollis* (Say).

AZ, NM. (Southern Corn Leaf Beetle). Feeds on wild grasses, Phleum and Zea (1) Sorghum and Cynodon (2).

1. Essig, 1926; 2. Kelly, 1915.

*Phyllotreta pusilla* Horn.

AZ, NM. (Western Black Flea Beetle). Feeds on broad-leaves and grasses (1), among which are Hordeum (2) and Bouteloua (3).

1. Metcalf et al., 1957; 2. Bibby, 1961; 3. Watts, 1963.

*Systema blanda* (Melsheimer).

AZ, CO, NM, NV, UT. (Striped Flea Beetle). Feeds on grasses, Zea, and Avena (1).

1. Essig, 1926.

*Uroplata uniformis* (Smith).

AZ. Found on Digitaria (1).

1. UA records.

**Curculionidae**

The larval stages of grass infesting weevils feed on the roots of range and lawn grasses. Taxonomy: Arnett, 1968; Vaurie, 1951, 1967; Kissinger, 1964.

*Brachyrhinus ovatus* (Linnaeus).

NM, UT, CO. (Strawberry Root Weevil). Feeds on roots of many plants including grasses, among them Poa, Zea, and Phleum (1).

1. Essig, 1926.

*Centrinogyna hispidula* Casey.

AZ. Collected on Bouteloua (1).

1. UA records.

*Epicaerus imbricatus* Say.

AZ, CO, NM, UT. (Imbricated Snout Beetle). Attacks many plants including corn and other grasses (1).

1. Essig, 1926.

*Sitona hispidulus* (Fabricius).

CO, NV, UT. (Clover Root Curculio). Feeds on clover, Poa, other wild grasses (1).

1. Essig, 1926.

- Sitona varians* Casey.  
NM. Larvae feed on grass roots (1). Reported on Bouteloua (2).  
1. Essig, 1926. 2. Watts, 1963.
- Sphenophorus aequalis* Gyllenhal.  
AZ, CO, NM, NV, UT. (Clay-colored Billbug). Reported hosts are Setaria, Alopecurus, Calamagrostis and sedges (1).  
1. Vaurie, 1951.
- Sphenophorus arizonensis* Horn.  
AZ, CO, NM. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus callosus* (Olivier).  
AZ, NM. (Curlew Bug). Reported hosts are Panicum, Zea, and Triticum (1).  
1. Vaurie, 1951.
- Sphenophorus caroli* Vaurie.  
AZ. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus cicatristriatus* Fahraeus.  
CO, NM, NV, UT. Collected in short grass (1). Damages bluegrass lawns (2).  
1. Vaurie, 1951; 2. NDA records.
- Sphenophorus coesifrons* Gyllenhal.  
AZ, NM. Reported hosts are Phleum, Oryza, and Zea (1).  
1. Vaurie, 1951.
- Sphenophorus compressirostris* (Say).  
NM. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus costipennis* Horn.  
CO, NV, UT. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus crenatus* (LeConte).  
AZ, CO, NM. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus gentilis* LeConte.  
NV, UT. Reported hosts are Zea and Cynodon (1).  
1. Vaurie, 1951.
- Sphenophorus graminis* Chittenden.  
NV, UT. (Grass Billbug). Feeds on roots of grasses (1). Reported on Distichlis (2).  
1. Essig, 1926; 2. Vaurie, 1951.
- Sphenophorus holosericus* Chittenden.  
AZ. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus imus* Gyllenhal.  
AZ. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus memnonius* Gyllenhal.  
AZ. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus mormon* Chittenden.  
AZ, CO, NV, UT. Feeds on Distichlis (1).  
1. Vaurie, 1951.
- Sphenophorus neomexicanus* Chittenden.  
CO, NM. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus nevadensis* Chittenden.  
NV. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus parvulus* Gyllenhal.  
CO, NM. (Blue-grass Billbug). Reported hosts are Poa, Triticum, Zea, Hordeum, Elymus, Phleum, Agrostis and Eragrostis (1, 2).  
1. Vaurie, 1951; 2. Satterthwait, 1919.
- Sphenophorus pertinax* (Olivier).  
UT, AZ. Reported hosts are Spartina and Zizaniopsis (1).  
1. Vaurie, 1951.
- Sphenophorus phoeniciensis* Chittenden.  
AZ, NM, NV. (Phoenix Billbug). Reported hosts are Sorghum, Avena, Triticum, Hordeum, Cynodon, Eragrostis, Poa, and Stenotaphrum (1).  
1. Vaurie, 1951.
- Sphenophorus rectus* (Say).  
AZ. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus robustus* Horn.  
UT. Reported on corn (1).  
1. Vaurie, 1951.
- Sphenophorus sayi* Gyllenhal.  
NM, NV, UT. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus serratipes* Chittenden.  
CO. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus simplex* LeConte.  
NV, UT. Reported hosts are Cynodon, Distichlis, and Spartina (1).  
1. Vaurie, 1951.
- Sphenophorus soltaui* Chittenden.  
CO. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus striatipennis* Chittenden.  
NV. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus subulatus* Chittenden.  
AZ, NM. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus tardus* Fall.  
AZ. Reported hosts are Cynodon, Poa, and Eragrostis (1).  
1. Vaurie, 1951.
- Sphenophorus terricola* Champion.  
AZ. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus venatus* (Say).  
NM (Y-Marked Billbug). Reported hosts are Triticum, Cynodon, Phleum (1).  
1. Vaurie, 1951.
- Sphenophorus vomerinus* (LeConte).  
AZ, CO, NM. Probable grass feeder (1).  
1. Vaurie, 1951.
- Sphenophorus zae* Walsh.  
CO. (Corn Billbug). Reported hosts are Poa, Phleum, and Zea (1).  
1. Vaurie, 1951.

### Elateridae

Wireworms are major pests of grains and range grasses. Larval development requires several years so relatively few adults have been identified with their larval stages and food habits. Much of the damage by wireworms is attributable to their attack on the germinating seed. Taxonomy: Arnett, 1968; Becker, 1956; Van Dyke, 1932; Glen, 1941, 1950; Glen et al., 1943.

- Aeolus amabilis* (LeConte).  
AZ, UT. Attacks Triticum and Zea (1).  
1. Blatchley, 1910.
- Aeolus mellilus* (Say).  
AZ, UT. (Flat Wireworm). Inhabits native grasslands (1).  
Attacks Triticum and Zea (2).  
1. Glen et al., 1943; 2. Beirne, 1971.
- Agriotes criddlei* Van Dyke.  
CO, UT. A pest of grains (1).  
1. Becker, 1956.
- Aphricus luteipennis* Fall.  
NM. Reported on Bouteloua (1).  
1. Watts, 1963.
- Ctenicera aeripennis* (Kirby).  
UT. (Prairie Grain Wireworm). Destructive on prairie and cultivated grains (1) Include Elymus, Triticum, Hordeum, Phleum (2).  
1. Glen et al., 1943. 2. Beirne, 1971.
- Ctenicera glauca* (Germar).  
NV, UT, CO. (Dryland Wireworm). Reported on Triticum, Zea, Poa, and Agropyron (1).  
1. Glen, 1950.
- Ctenicera inflata* (Say).  
AZ, NM, CO. (Inflated Wireworm). Collected sweeping grass (1), and reported to attack Triticum, Zea, Hordeum and Avena (2).  
1. Blatchley, 1910; 2. Essig, 1926.
- Ctenicera pruinina* (Horn).  
NV, UT. (Great Basin Wireworm). Attacks Triticum, "bunchgrass" and other grains (1).  
1. Lane, 1931.
- Hypolithus bicolor* Eschscholtz.  
CO, NM, UT. A pest of Triticum and other crops (1).  
1. Beirne, 1971.
- Melanotus castanipes* (Paykull).  
AZ, UT. Probable grass feeder (1).  
1. Quate and Thompson, 1967.
- Melanotus chiricahuae* Knull.  
AZ, NM. Probable grass feeder (1).  
1. Quate and Thompson, 1967.
- Melanotus communis* (Gyllenhal).  
AZ, CO. (Corn Wireworm). Found in meadows and pastures (1), a pest of Triticum and Zea (2).  
1. Osborn, 1931; 2. Pfadt, 1971.
- Melanotus concisus* Knull.  
AZ, NM. Probable grass feeder (1).  
1. Quate and Thompson, 1967.
- Melanotus cribricollis* Candeze.  
AZ. Probable grass feeder (1).  
1. Quate and Thompson, 1967.
- Melanotus decumans* (Erichson).  
CO, NM. Feeds on seeds and roots of grains (1).  
1. Quate and Thompson, 1967.
- Melanotus lanceatus* Quate.  
AZ. Probable grass feeder (1).  
1. Quate and Thompson, 1967.
- Melanotus longulus* (LeConte).  
AZ, NM, UT, CO. A pest of Zea and Triticum (1).  
1. Stone and Howland, 1944.
- Melanotus similis* (Kirby).  
AZ, CO, NM, UT. Feeds on seeds and roots of grains (1).  
1. Quate and Thompson, 1967.

## Meloidae

The adults of some blister beetles have been associated with grasses. In most cases, the beetles were probably feeding on grass pollen, but stomach samples have in some cases revealed the presence of green vegetative parts as well. Taxonomy: Pinto and Selander, 1970; Selander, 1960; Werner et al., 1966; Werner, 1945, 1954.

- Epicauta albolineata* (Duges).  
AZ. Reported on Aristida (1).  
1. Werner et al., 1966.
- Epicauta balli* Werner.  
AZ. Reported on Bouteloua and sweeping grass (1).  
1. Werner et al., 1966.
- Epicauta emarginata* Champion.  
AZ, NM. Collected in tall grass (1).  
1. Werner et al., 1966.
- Epicauta pardalis* LeConte.  
AZ, NM. (White Spotted Blister Beetle). Feeds on corn and grasses (1).  
1. Essig, 1926.
- Epicauta parva* (Haldeman).  
CO. Feeds on Bouteloua and Bromus (1).  
1. Lavigne, 1980.
- Epicauta senilis* Werner.  
AZ, NM. Reported on Sporobolus (1).  
1. Werner et al., 1966.
- Lytta nuttalli* Say.  
AZ, CO, NM, UT. (Nuttall Blister Beetle). Feeds on Avena and Hordeum (1).  
1. Selander, 1960.
- Lytta viridana* LeConte.  
AZ, CO, NM, UT. Feeds on Aristida, Bouteloua, Sporobolus and Stipa (1).  
1. Lavigne, 1980.
- Meloe angusticollis* Say.  
UT. Feeds on Elymus (1).  
1. Pinto and Selander, 1970.
- Meloe niger* Kirby.  
AZ, CO, NM, NV, UT. (Black Oil Beetle). Prefers Gramineae (1). Diet includes Bromus, Lolium, Avena, Distichlis, Hordeum, and Triticum (2).  
1. Mayer and Johansen, 1978; 2. Lavigne, 1980.
- Pyrota engelmanni* LeConte.  
CO. Feeds on Bouteloua and Vulpia (1).  
1. Lavigne, 1980.

## Mordellidae

Tumbling flower beetle adults are primarily pollen feeders. Two species have been reported on grass in our region. Taxonomy: Arnett, 1969; Liljebad, 1945.

- Mordellistena morula* LeConte.  
CO, NM. Reported on Bouteloua (1).  
1. Watts, 1963.
- Mordellistena pallens* Fall.  
NM. Reported on Bouteloua (1).  
1. Watts, 1963.

## Scarabaeidae

White grubs feed in duff, decaying vegetation and on plant roots. A few species do serious damage to sod, especially in the Rio Grande Valley. Taxonomy: Luginbill and Painter, 1953; Sim, 1928; Boving, 1942; Davis, 1918;

Vaurie, 1958, 1960; Saylor, 1940; Rosander and Werner, 1970.

*Diplotaxis haydeni* LeConte.

CO, NV. Feeds on Bouteloua and Aristida (1).

1. Lavigne, 1980.

*Phyllophaga anxia* (LeConte).

CO, NM, NV, UT. A pest of lawns, pastures, and meadows; also attacks Triticum and Avena (1).

1. Beirne, 1971.

*Phyllophaga cribrosa* (LeConte).

NM. Host: grass (1).

1. Luginbill and Painter, 1953.

*Phyllophaga fimbripes* (LeConte).

AZ, NM, CO. Feeds on Bouteloua (1).

1. Wiener and Capinera, 1980.

*Phyllophaga koehleriana* (Burmeister).

NM. Feeds on Bouteloua (1).

1. Daniels, 1966.

*Phyllophaga lanceolata* (Say).

CO, NV, NM. A serious pest of grasses, wheat (1), lawns and pastures (2).

1. Essig, 1926. 2. Bryson, 1939.

### Tenebrionidae

Darkling beetles and their larvae, called false wireworms, are omnivorous. Several species are serious pests of stored and planted grain. Many others seem to prefer dead and decaying grasses. They are most abundant in the desert and short-grass prairie regions. Taxonomy: Arnett, 1968; Blaisdell, 1909; Brown, 1971; LaRivers, 1943; Doyen, 1968, 1972.

*Asidopsis polita* (Say).

CO. Feeds on Bouteloua (1).

1. Kumar et al., 1976.

*Blapstinus substriatus* Champion.

CO, AZ, NM, NV, UT. Feeds on Stipa, Triticum, Avena, Zea and Hordeum (1).

1. Mail, 1937.

*Edrotes ventricosus* LeConte.

AZ, NV, UT. Feeds on Distichlis and Bromus (1).

1. LaRivers, 1947.

*Eleodes armata* LeConte.

AZ, NV, UT. Reported feeding on seeds of Hordeum (1).

1. Papp and Pierce, 1960.

*Eleodes extricata* (Say).

AZ, CO, NM, NV, UT. Reported feeding on Triticum (1, 2).

1. Swenk, 1909; 2. King, 1928.

*Eleodes gracilis* LeConte.

AZ, NM, NV. Reported to feed on Stipa and Bromus (1).

1. Kramm and Kramm, 1972.

*Eleodes grandicollis* Mannerheim.

AZ, NV. Reported feeding on Bromus and Stipa (1).

1. Kramm and Kramm, 1972.

*Eleodes hispilabris* (Say).

AZ, CO, NV, NM, UT. Reported to feed on Triticum, Zea (1), Poa (2), and Bouteloua (3).

1. King, 1928; 2. Haverfield, 1965; 3. Kumar et al., 1976.

*Eleodes humeralis* LeConte.

CO, NV, UT. At times injurious to crops (1).

1. Essig, 1926.

*Eleodes letcheri* Blaisdell.

NV. Attacks Triticum and Avena (1).

1. Hyslop, 1912.

*Eleodes nigrina* LeConte.

AZ, CO, NM, NV, UT. Attacks Triticum (1).

1. Hyslop, 1912.

*Eleodes obscura* Say.

AZ, CO, NM, NV, UT. Attacks Triticum (1).

1. Hyslop, 1912.

*Eleodes obsoleta* Say.

AZ, CO, NM, UT. Attacks Triticum (1).

1. Wade, 1921.

*Eleodes opaca* Say.

CO, NM, UT. (Plains False Wireworm). Feeds on native grasses (1), also attacks Triticum (2).

1. Essig, 1926; 2. Swenk, 1909.

*Eleodes pimeloides* Mannerheim.

CO, NV, UT, Attacks Triticum (1).

1. Hyslop, 1912.

*Eleodes suturalis* (Say).

CO, NM. Attacks Triticum, Sorghum, Zea and small grains (1); also Avena, Elymus and Setaria (2). Additional grasses in diet are Bromus, Alopecurus, Agropyron, Bouteloua and Panicum (3).

1. Calkins and Kirk, 1975; 2. Wade, 1923; 3. Calkins and Kirk, 1973.

*Eleodes tricostata* Say.

CO, NM, UT. Attacks native grasses, Triticum and Zea (1, 2).

1. McColloch, 1918; 2. Parks, 1931.

*Embaphion muricatum* (Say).

CO, NM. (The Grainseed Beetle). Eats grasses, weeds, corn, (1), also Triticum and Hordeum (2). Grasses in diet include Bromus, Agropyron, Andropogon, Setaria, Panicum, Stipa, Sorghastrum, Elymus, Alopecurus, Avena, Sorghum and Eragrostis (3).

1. Essig, 1926; 2. Wade and Boving, 1921; 3. Calkins and Kirk, 1974.

*Eusattus convexus* LeConte.

CO, NM. Eats Sporobolus (1).

1. Lavigne, 1980.

*Glyptasida sordida* (LeConte).

CO, UT. Eats Bouteloua (1).

1. Lavigne, 1980.

*Lobometopon fusiforme* (Casey).

AZ. Found on Heteropogon (1).

1. UA records.

## Diptera

### Agromyzidae

The larvae of this family mine the stems and leaves of plants. A few are known to be grass miners. Taxonomy: Frick, 1959; Cole, 1969.

*Agromyza barberi* Frick.

NM. Larvae mine grasses (1).

1. Frick, 1959.

*Agromyza niveipennis* Zetterstedt.

UT. Reported mining grasses including Secale, Hordeum, Triticum and Pyron (1).

1. Frick, 1959.

*Agromyza parvicornis* Loew.

UT. Larvae mine grasses (1).

1. Frick, 1959.



*Cerodontha dorsalis* (Loew).

AZ, CO, NV, UT. Larvae mine leaves of many grasses (1).

1. Frick, 1959.

*Phytobia inconspicua* (Malloch).

CO. Larvae mine Agropyron (1).

1. Cole, 1969.

*Pseudonapomyza atra* (Meigen).

NM. Larvae mine many grasses (1).

1. Frick, 1959.

*Pseudonapomyza lacteipennis* (Malloch).

NM, UT. Hosts are probably grasses (1).

1. Frick, 1959.

**Anthomyiidae**

The larvae of this family are mostly scavengers but the genus *Hylemya* are plant feeders. Some of these are grass seed or grass stem maggots. Taxonomy: Cole, 1969; Huckett, 1947, 1948, 1951, 1952, 1953.

*Hylemya cerealis* (Gillette).

CO, NM, UT. Bred from wheat (1).

1. Cole, 1969.

*Hylemya lobata* Hockett.

CO, UT. Probable grass feeder (1).

1. Hockett, 1971.

*Hylemya neomexicana* Malloch.

AZ, CO, NM. A pest of wheat (1).

1. Hockett, 1971.

*Hylemya nitidula* (Coquillett).

AZ, CO, NM. Probable grass feeder (1).

1. Hockett, 1971.

*Hylemya platyura* (Meigen).

AZ, NV, UT, CO. (Seed Corn Maggot). Attacks seeds of *Hordeum*, *Zea* and *Triticum* (1).

1. Essig, 1926.

**Bibionidae**

The larvae of March flies are usually scavengers but some species feed on grass roots. Taxonomy: Cole, 1969; Hardy, 1945, 1961.

*Bibio melanopilus* Hardy.

UT. Larvae numerous in roots of *Dactylis* (1).

1. Hardy, 1945.

*Dilophus sayi* (Hardy).

NV. Infests bermudagrass lawns (1).

1. NDA records.

**Cecidomyiidae**

The larvae of these midges form galls on many plants. Some infest the stems of grasses. Taxonomy: Cole, 1969; Gagne, 1966, 1973; Harris, 1964.

*Contarinia hallicola* Gagne.

NM. Infests *Andropogon* (1).

1. Watts and Bellotti, 1967.

*Contarinia sorghicola* (Coquillett).

NM. Attacks *Sorghum* (1).

1. Harris, 1964.

*Contarinia watti* Gagne.

NM. Infests *Andropogon* (1).

1. Watts and Bellotti, 1967.

*Lasioptera carbonitens* (Cockerell).

NM. Reared from grass (1).

1. Cole, 1969.

*Phytophaga destructor* (Say).

CO. (Hessian Fly). Localized wheat pest (1); also infests range grasses (2) including *Elymus*, and *Agropyron* (3, 4).

1. Cole, 1969; 2. McCulloch, 1923; 3, 4. Jones, 1938, 1939.

**Chloropidae**

The larvae of this family live in grasses and other plants and some are destructive to cereals. Most prefer dying or decaying grass tissue. Taxonomy: Cole, 1969; Sabrosky, 1935, 1936, 1940, 1941ab, 1948, 1950, 1967, 1980.

*Anthracophaga declinata* Becker.

CO. Larvae form galls on grasses (1), abundant in pastures (2).

1. Cole, 1969; 2. Wilbur and Sabrosky, 1936.

*Apallates coxendix* (Fitch).

AZ, CO, NM, UT. Attacks pasture grasses (1), *Triticum* (2) and *Bouteloua* (3).

1. Sabrosky, 1936; 2. Cole, 1969; 3. Watts, 1965.

*Apallates ochripes* (Sabrosky).

UT. Attacks decaying grasses (1).

1. Sabrosky, 1980.

*Biorbitella fronto-orbitalis* (Sabrosky).

AZ, NM, UT. Reported on *Sorghum* (1).

1. Bibby, 1961.

*Biorbitella hesperia* (Sabrosky).

UT, CO. Probable grass feeder.

*Biorbitella virgata* (Coquillett).

UT, CO. Probable grass feeder.

*Chlorops certimus* Adams.

UT, CO. Found on slough grasses (1) and pasture grasses (2).

1. Sabrosky, 1935; 2. Wilbur and Sabrosky, 1936.

*Chlorops crocotus* Loew.

CO. Probable grass feeder.

*Chlorops lituratus* Adams.

CO, UT. Probable grass feeder.

*Chlorops obscuricornis* Loew.

UT, CO. Probable grass feeder.

*Chlorops perflavus* Walker.

CO. Probable grass feeder.

*Chlorops rubicundus* Adams.

CO, UT. Probable grass feeder.

*Chlorops rufescens* Coquillett.

NM, UT. Probable grass feeder.

*Chlorops ruginosus* Becker.

CO. Probable grass feeder.

*Chlorops sordidellus* Becker.

CO, NM, NV, UT. Probable grass feeder.

*Dicraeus aberrans* Sabrosky.

NM. Host is reportedly *Elymus* (1).

1. Sabrosky, 1950.

*Dicraeus elongatus* Sabrosky.

AZ, NM. Host is probably *Elymus* (1).

1. Sabrosky, 1950.

*Dicraeus incongruus* Aldrich.

CO, UT. Found in pastures (1) host is *Elymus* (2).

1. Wilbur and Sabrosky, 1936; 2. Sabrosky, 1950.

*Diplotoxa messoria* (Fallen).

CO, UT. Probable grass feeder.

- Diplotoxa pulchripes* Loew.  
CO, NM. Found on pasture grasses, reported on Triticum (1) and Bouteloua (2).  
1. Sabrosky, 1935; 2. Watts, 1963.
- Diplotoxa recurva* (Adams).  
AZ, UT, CO. Probable grass feeder.
- Diplotoxa versicolor* (Loew).  
UT, CO. Probable grass feeder.
- Ectecephala albistylum* Macquart.  
CO, UT. Found on pasture grasses (1).  
1. Wilbur and Sabrosky, 1936.
- Ectecephala laticornis* Coquillett.  
AZ, CO. Probable grass feeder.
- Ectecephala sulcifrons* Coquillett.  
AZ. Probable grass feeder.
- Elachiptera angustistylum* Sabrosky.  
UT. Probable grass feeder.
- Elachiptera costata* (Loew).  
AZ, CO, UT. Reported on Triticum (1).  
1. Sabrosky, 1935.
- Elachiptera decipiens* (Loew).  
CO, UT. Probable grass feeder.
- Elachiptera erythropleura* Sabrosky.  
CO. Probable grass feeder.
- Elachiptera eunota* (Loew).  
UT, CO. Collected sweeping pasture and marsh grasses (1).  
1. Sabrosky, 1935.
- Elachiptera knowltoni* Sabrosky.  
CO, NV, UT. Probable grass feeder.
- Elachiptera nigriceps* (Loew).  
CO. Reported on Triticum (1).  
1. Sabrosky, 1935.
- Elachiptera vittata* Sabrosky.  
AZ, NV, UT. Probable grass feeder.
- Elliponeura debilis* Loew.  
NM. Found in pastures (1) on Eragrostis (2) and Bouteloua (3).  
1. Wilbur and Sabrosky, 1936; 2. Sabrosky, 1935; 3. Watts, 1965.
- Elliponeura diplotoxoides* Becker.  
CO. Probable grass feeder.
- Eribolus longulus* (Loew).  
CO. Reared from Triticum (1).  
1. Sabrosky, 1935.
- Eribolus nanus* (Zetterstedt).  
CO, UT. Infests grasses (1).  
1. Essig, 1926.
- Homaluroides melleus* (Loew).  
CO, UT. Probable grass feeder.
- Incertella bispina* (Malloch).  
CO. Collected sweeping slough grass (1).  
1. Sabrosky, 1935.
- Incertella incerta* (Becker).  
AZ. Reported in pastures (1).  
1. Wilbur and Sabrosky, 1936.
- Incertella minor* (Adams).  
AZ, NM, UT, CO. Infests pasture grasses (1); reared from Triticum (2); reported on Bouteloua (3).  
1. Wilbur and Sabrosky, 1936; 2. Sabrosky, 1935; 3. Watts, 1965.
- Incertella ovalis* (Adams).  
AZ. Probable grass feeder.
- Lasiosina similis* (Malloch).  
NM, CO. Probable grass feeder.
- Malloewia neglecta* (Becker).  
UT, NM, CO. Reported on Bouteloua (1).  
1. Watts, 1963.
- Malloewia nigripalpis* (Malloch).  
AZ, NM, CO. Reported on Bouteloua (1).  
1. Watts, 1965.
- Meromyza americana* Fitch.  
NM, UT, CO. (Wheatstem Maggot). Attacks cereal grains and a wide variety of native grasses (1).  
1. Hewitt et al., 1974.
- Meromyza pratorum* Meigen.  
UT, CO. Probable grass feeder.
- Meromyza saltatrix* (Linnaeus).  
UT, CO. Probable grass feeder.
- Oicella cinerea* (Loew).  
NM, CO. Infests pasture grasses (1).  
1. Wilbur and Sabrosky, 1936.
- Oicella parva* (Adams).  
CO, NM, UT. Infests pasture grasses (1), reported on Bouteloua (2).  
1. Wilbur and Sabrosky, 1936; 2. Watts, 1963.
- Oicella projecta* (Malloch).  
NM. Reported on Bouteloua (1).  
1. Watts, 1963.
- Oicella provocans* (Becker).  
UT. Probable grass feeder.
- Oicella punctifrons* (Becker).  
NM, UT. Reported on Bouteloua (1).  
1. Watts, 1963.
- Oscinella frit* (Linnaeus).  
NV, UT, CO. (Common Frit Fly). Attacks pasture grasses (1); reported on Agrostis (2) and Phalaris (3).  
1. Wilbur and Sabrosky, 1936; 2. Hewitt et al., 1974; 3. Allen and Pienkowski, 1974.
- Oscinella grandissima* Sabrosky.  
CO, NM. Probable grass feeder.
- Oscinella nitidissima* (Meigen).  
UT. Probable grass feeder.
- Pseudopachychaeta approximatonervis* (Zetterstedt).  
UT, CO. Probable grass feeder.
- Rhopalopterum criddlei* (Aldrich).  
UT. Probable grass feeder.
- Rhopalopterum soror* (Macquart).  
UT. Probable grass feeder.
- Rhopalopterum umbrosa* (Loew).  
UT. Infests pasture grasses (1).  
1. Wilbur and Sabrosky, 1936.
- Sacatonía graminivora* Sabrosky.  
NM. Reared from Sporobolus (1).  
1. Watts and Bellotti, 1967.

### Opomyzidae

The larvae of this small family occur in the stems of grasses. They are usually found in moist areas. Taxonomy: Cole, 1969; Vockeroth, 1961.

#### *Geomyza dolomata* Vockeroth.

CO, UT. Larvae feed on stems of many grasses (1).  
1. Curran, 1965.

#### *Geomyza vespertina* Vockeroth.

UT. Larvae feed on stems of many grasses (1).  
1. Curran, 1965.

### Tethinidae

These flies are associated with salt marshes and alkali areas; they are usually found in moist areas. Taxonomy: Cole, 1969; Melander, 1952.

*Pelomyia coronata* Loew.  
NM. Reported on *Bouteloua* (1).  
1. Watts, 1963.

## Dermaptera

### Forficulidae

Earwigs are omnivorous. One of our species is reported to include grass in the diet. Taxonomy: Townes, 1945; Helfer, 1972.

*Doru lineare* (Eschscholtz).  
AZ. (Linear Earwig). Abundant in rank grasses (1). Has a dietary preference for grass pollen (2).  
1. Essig, 1926; 2. Gangwere, 1961.

*Forficula auricularia* Linnaeus.  
AZ, CO, UT. (European Earwig). Injures *Triticum*, *Hordeum*, and *Elymus* (1).  
1. Crumb et al., 1941.

## Isoptera

### Termitidae

Although termites are thought of as wood feeders, several desert range species feed mainly on grasses. Taxonomy: Snyder, 1954; Weesner, 1965; Light, 1931.

*Amitermes emersoni* Light.  
AZ. Found in roots of dead *Cynodon* (1).  
1. Nutting, 1969.

*Gnathamitermes perplexus* (Banks).  
AZ, NV, NM. Feeds on all available grasses (1).  
1. Nutting et al., 1973.

*Gnathamitermes tubiformans* (Buckley).  
AZ, NM. (Tube-forming Desert Termite). Diet consists primarily of *Aristida*, *Buchloe* and *Bouteloua* but also feeds on *Muhlenbergia*, *Sporobolus*, *Chloris* and *Leptoloma* (1). Feeds on both roots and tops of grasses (2, 3).  
1. Allen et al., 1980; 2. Hewett et al., 1974; 3. Bodine and Ueckert, 1975.

*Tenuirostritermes tenuirostris* (Desneux).  
AZ. Cuttings of weathered grass are piled in the colony (1, 2).  
1. Weesner, 1965; 2. Nutting, 1970.

## Embioptera

### Anisembiidae

Webspinners feed mainly on dried grass. Taxonomy: Ross, 1940.

*Anisembia rubra* Ross.  
AZ. Usually found under stones in desert areas. Eats dry grass (1).  
1. Ross, 1940.

*Gynembia tarsalis* Ross.  
AZ. Usually under stones, but also in fields at bases of dry grass (1).  
1. Ross, 1940.

### Oligotomidae

Our representative of this family is introduced from Europe. Taxonomy: Ross, 1940.

*Oligotoma nigra* Hagen.  
AZ. Under stones on grassy hillsides. Eats dry grass (1).  
1. Ross, 1940.

## Hemiptera

### Alydidae

The members of this family adapted for grass-feeding have narrow, elongated bodies and well-developed scent glands. Our western species belong to the subfamily Micrellytrinae. Taxonomy: Fracker, 1918; Schaeffer, 1972; Slater and Baranowski, 1978.

*Darmistus subvittatus* Stal.  
AZ, CO, NM. Breeds on *Spartina* and other low ground grasses (1).  
1. Fracker, 1918.

*Protenor belfragei* Haglund.  
CO. A grass feeder (1); common in low meadows (2); on *Spartina*, also in association with *Stipa* and *Andropogon* (3).  
1. Schaeffer, 1972; 2. Fracker, 1918; 3. Hendrickson, 1930.

### Corimelaenidae

The negro bugs are usually associated with flowers; grass feeding species are exceptional. Two western species are

reported on grass. Taxonomy: McAtee and Malloch, 1933; Slater and Baranowski, 1978.

*Cydnoides ciliatus* Uhler.

CO, NM, NV, UT. Found buried in sand at the roots of grasses (1).

1. Hart, 1919.

*Galgupha atra* Amyot and Serville.

AZ, CO. Reported on *Hordeum* (1), *Agrostis* (2), on *Elymus* and *Spartina* (3).

1. Torre-Bueno, 1939; 2. Stoner, 1920; 3. Hendrickson, 1930.

### Cydnidae

Burrower bugs are found in soil feeding on plant roots. Host associations are known for only a very few. Three western species are reported on grass. Taxonomy: Froeschner, 1960; Slater and Baranowski, 1978.

*Amnestus spinifrons* (Say).

UT. On *Poa* in sandy areas (1); in association with *Andropogon* (2).

1. Stoner, 1920; 2. Hendrickson, 1930.

*Microporus obliquus* Uhler.

AZ, CO, NM, NV, UT. Feeds on roots of *Sporobolus* (1), also reported on *Bouteloua* (2).

1. Hart, 1919; 2. Watts, 1963.

*Sehirus cinctus* (Palisot).

CO, NM. General feeder includes grasses (1), reported on *Poa* (2) and in association with *Spartina* (3).

1. Blatchley, 1926; 2. Torre-Bueno, 1939; 3. Hendrickson, 1930.

### Lygaeidae

Most herbivorous lygaeids are seed-feeders and are usually hidden in the bases of grass clumps where fallen seeds are to be found. The Blissinae are exceptional in that they are sap-feeders on grasses. Taxonomy: Slater, 1964; Barber, 1937; Ashlock, 1958; Torre-Bueno, 1946; Slater and Baranowski, 1978; Sweet, 1977.

*Aphanus umbrosus* (Distant).

AZ, CO. Taken on *Bromus* and *Poa* (1); it hibernates in grass clumps (2); feeds on seeds of *Agropyron* and *Panicum* (3).

1. Walkden and Wilbur, 1944; 2. Froeschner, 1944; 3. Sweet, 1964.

*Blissus insularis* Barber.

AZ. (Southern Chinch Bug). Taken on *Stenotaphrum* (1), *Panicum*, *Oryza*, *Digitaria*, *Eremochloa*, *Cynodon* (2).

1. Leonard, 1966. 2. UA records.

*Blissus leucopterus* (Say).

CO. (The Chinch Bug). Native food plants are *Triplasia* and *Andropogon* (1). Also damages *Triticum*, *Sorghum*, *Cynodon*, *Setaria*, *Phleum*, *Poa*, *Digitaria*, *Zea*, *Secale* (2).

1. Leonard, 1966; 2. Luginbill, 1922.

*Blissus occiduus* Barber.

CO, NM. (Western Chinch Bug). Exclusively a grass feeder (1).

1. Barber, 1937.

*Blissus omani* Barber.

AZ. Collected on wild grasses (1), including *Bouteloua*, *Heteropogon*, *Andropogon*, *Sporobolus* (2).

1. Barber, 1937; 2. UA records.

*Blissus planarius* Barber.

CO. Collected on wild grasses (1).

1. Barber, 1937.

*Blissus yumanus* Drake.

AZ. A probable grass feeder (1).

1. Barber, 1937.

*Cnemodius mavortius* (Say).

CO. Associated with *Andropogon* (1); feeds on the fallen seeds (2).

1. Slater and Baranowski, 1978; 2. Sweet, 1964.

*Cryphula abortiva* Barber.

AZ. A probable grass feeder (1).

1. Sweet, 1964.

*Cryphula apicata* (Distant).

AZ. A probable grass feeder (1).

1. Sweet, 1964.

*Cryphula nitens* Barber.

AZ, UT. A probable grass feeder (1).

1. Sweet, 1964.

*Cryphula parallelogramma* Stal.

AZ, NM. A probable grass feeder (1).

1. Sweet, 1964.

*Cryphula trimaculata* (Distant).

CO. Found in litter beneath clumps of grass (1). Prefers to feed on seeds of *Panicum*, dragging the seeds to sheltered locations (2).

1. Slater and Baranowski, 1978; 2. Sweet, 1964.

*Emblethis vicarius* Horvath.

AZ, CO, NM, NV, UT. Taken on *Bouteloua* (1), and in association with *Andropogon*, *Bouteloua* and *Stipa* (2). It feeds on seeds of *Bromus*, *Andropogon* and sometimes the roots of *Eragrostis* (3).

1. Watts, 1963; 2. Hendrickson, 1930; 3. Sweet, 1964.

*Ischnodemus macer* Van Duzee.

AZ. A sap feeder on Gramineae (1).

1. Leonard, 1966.

*Malezonotus sodalicus* (Uhler).

CO, NV, UT. Found in great numbers in low grasses (1). It hibernates in clumps of *Andropogon* (2).

1. Van Duzee, 1914; 2. Froeschner, 1944.

*Neosuris castanea* Barber.

AZ, CO, UT. A seed eater, lives in clumps of grass, especially *Bouteloua* (1).

1. Sweet, 1977.

*Nysius raphanus* Howard.

AZ, NM, UT, CO. (False Chinch Bug). Taken on seeds of *Agropyron*, many other plants. (1).

1. Watts, 1963.

*Nysius tenellus* Barber.

AZ, CO, NM, NV, UT. Found on *Agropyron* (1).

1. Hewitt and Burleson, 1975.

*Perigenes constrictus* (Say).

CO. Feeds on seeds of *Agropyron*, many other plants (1).

1. Sweet, 1964.

*Peritrechus fraternus* Uhler.

CO, NM, UT. Found in grass clumps (1); reported on *Sporobolus* (2) and *Festuca* though partial to *Panicum* (3).

1. Froeschner, 1944; 2. Walkden and Wilbur, 1944; 3. Sweet, 1964.

*Phlegyas abbreviatus* (Uhler).

CO. Associated with *Andropogon* and *Sorghastrum* (1); feeds on seeds of grasses (2).

1. Hendrickson, 1930; Sweet, 1960.

*Phlegyas annulicrus* Stal.

AZ, NM, UT. Found on *Bouteloua* (1), *Sporobolus*, *Aristida*, *Digitaria*, *Bothriochloa*, *Heteropogon* and *Eragrostis* (2).

1. Watts, 1963; 2. UA records.

*Sisamnes clavigerus* (Uhler).

AZ, CO, NM. Found in tufts of grass (1), and in clumps of Andropogon (2). Feeds on seeds of Andropogon (3).

1. Blatchley, 1926; 2. Froeschner, 1944; 3. Sweet, 1964.

*Sphaerobius insignis* (Uhler).

CO, UT. An ant mimic found in clumps of Andropogon (1), and associated with Stipa and Andropogon (2). Feeds on seeds of Andropogon, Panicum and Paspalum (3).

1. Slater and Baranowski, 1978; 2. Hendrickson, 1930; 3. Sweet, 1964.

*Sphragisticus nebulosus* (Fallen).

CO. A general feeder on seeds, partial to Eragrostis, also reported on Zea (1).

1. Sweet, 1964.

*Valonetus puberulus* (Stal).

AZ, CO. Found in clumps of Andropogon (1).

1. Froeschner, 1944.

**Miridae**

Only a small portion of this large family are grass feeders, but those which do are among the most common and destructive grass insects on the western ranges. A few species feed only on living grasses, then switch to other plant hosts for completion of their development. Taxonomy: Slater and Branowski, 1978; Knight, 1968; Slater, 1954; Carvalho, 1957-60.

*Argyrocoris scurrilus* Van Duzee.

AZ, CO, NM, NV, UT. Reported on Bouteloua (1).

1. Watts, 1963.

*Capsus ater* (Linnaeus).

NV. Feeds on Poa, Agropyron, Phleum (1), Alopecurus, Festuca, Holcus, Secale, Triticum, Dactylis and Avena (2).

1. Knight, 1968; 2. Knight, 1941.

*Cyrtopeltocoris balli* Knight.

CO. Found on ground among grass (1).

1. Knight, 1968.

*Irbisia brachycerus* (Uhler).

CO, NM, UT, NV. Abundant in cultivated areas (1), a grass feeder with a life history similar to *Labops hesperius*; reported on Triticum, Hordeum and Avena (2).

1. Van Duzee, 1914; 2. Haws, 1963.

*Irbisia oreas* Bliven.

AZ, UT. Probable grass feeder (1).

1. M. Schwartz, pers. comm.

*Irbisia pacifica* (Uhler).

NV, UT. (Pacific Grass Bug). Found in large numbers on Elymus, also Hordeum, Avena, Triticum, Poa, Bromus and Phleum (1).

1. Haws, 1978.

*Irbisia serrata* Bliven.

AZ, CO, NV, NM, UT. Probable grass feeder (1).

1. M. Schwartz, pers. comm.

*Irbisia shulli* Knight.

UT. Probable grass feeder (1).

1. M. Schwartz, pers. comm.

*Irbisia solani* (Heidiman).

NV. Probable grass feeder (1).

1. M. Schwartz, pers. comm.

*Labops hesperius* Uhler.

CO, NV, UT. (Black Grassbug). Feeds on Phleum, Elymus, Agropyron, Bromus, Poa, Oryzopsis, Stipa, Hordeum, Al-

opecurus, Muhlenbergia, Melica, Dactylis, Phalaris, Festuca, Trisetum, Sitanion, Arrhenatherum (1), Koeleria, and Secale (2).

1. Haws, 1978; 2. Todd, 1964.

*Labops hirtus* Knight.

CO, UT, NV. Occurs in wet meadows where it causes severe damage; feeds readily on wheat (1).

1. Haws, 1978.

*Labops utahensis* Slater.

UT, NV. Life history and damage similar to *L. hesperius*. Found in subalpine meadows, most commonly on Elymus (1, 2).

1. Haws, 1978; 2. UNR records.

*Leptoterna dolabrata* (Linnaeus).

CO, NM. (Meadow plant bug). An introduced species which feeds on many grasses, especially Poa (1).

1. Slater and Baranowski, 1978.

*Leptoterna ferrugata* (Fallen).

CO, NV, UT. Feeds on seed heads of Agropyron (1).

1. Kumar et al., 1976.

*Litomiris debilis* (Uhler).

CO, NV. Grass feeding genus (1).

1. M. Schwartz, pers. comm.

*Litomiris punctatus* (Knight).

AZ. Grass feeding genus (1).

1. M. Schwartz, pers. comm.

*Litomiris rubicundus* (Uhler).

AZ, CO, NM. Reported on Bouteloua (1).

1. Watts, 1963.

*Lygus desertinus* Knight.

AZ, NV, UT. Has a wide host range which includes Elymus (1) and Triticum (2).

1. Knight, 1968; 2. DBT coll.

*Parthenicus boutelouae* Knight.

AZ. Reported on Bouteloua (1).

1. Knight, 1968.

*Porpomiris albescens* (Van Duzee).

AZ. Probable grass feeder (1).

1. M. Schwartz, pers. comm.

*Stenodema vicinum* (Provancher).

CO. On various grasses (1), on Hordeum (2).

1. Slater and Baranowski, 1978; 2. Gillette and Baker, 1895.

*Stenodema virens* (Linnaeus).

CO, NV, UT. Reported on Elymus (1).

1. Knight, 1968.

*Stenotus binotatus* (Fabricius).

CO, UT. (Timothy Grass Bug). A common species in meadows (1); Reported hosts are Alopecurus, Agropyron (2), Phleum, Dactylis (3), Triticum and Avena (4).

1. Slater and Baranowski, 1978; 2. Knight, 1941; 3. Knight, 1968; 4. Lugger, 1900.

*Teratocoris discolor* Uhler.

CO, NV, UT. Probable grass feeder (1).

1. M. Schwartz, pers. comm.

*Teratocoris saundersi* Douglas and Scott.

CO. Probable grass feeder (1).

1. M. Schwartz, pers. comm.

*Trigonotylus americanus* Carvalho.

NV. Swept from grass (1).

1. Knight, 1968.

*Trigonotylus pulcher* (Reuter).

CO. Probable grass feeder.

*Trigonotylus tarsalis* (Reuter).

CO. Widely distributed on *Spartina* (1).

1. Slater and Baranowski, 1978.

**Pentatomidae**

Most of the stink bugs feeding on grasses are polyphagous herbivores which switch hosts to take advantage of actively growing plants. Grasses are usually fed upon when the grain heads are in the milk stage. Taxonomy: Van Duzee, 1904; Torre-Bueno, 1939; Sailer, 1944; Sailer, 1952; Rolston et al., 1980; Rolston and McDonald, 1979; McDonald, 1974; Rolston, 1973, 1978; Ruckes, 1957.

*Aelia americana* Dallas.

AZ, CO. Reported on *Sitanion* (1).

1. NDA records.

*Chlorochroa granulosa* Uhler.

CO, NV, UT. (The Grain Bug). A severe pest in some years on *Triticum*, *Hordeum* and *Elymus* (1).

1. Caffrey and Barber, 1919.

*Chlorochroa sayi* Stal.

AZ, CO, NM, NV, UT. (Say's Stink Bug). Recorded on *Triticum* (1), *Hordeum* and *Elymus* (2). *Muhlenbergia* (3).

1. Pack and Knowlton, 1930; 2. Butler and Werner, 1960; 3. UA records.

*Coenus delius* (Say).

CO. Confirmed food plants are *Phleum*, *Poa* and *Setaria* (1).

1. Oetting and Yonke, 1971.

*Holcostethus limbolarius* (Stal.)

AZ, CO, UT. Food plants are *Bromus* and *Phleum* (1); also reported on *Triticum* (2), *Setaria* (3), and associated with *Andropogon* (4).

1. Oetting and Yonke, 1971; 2. Pack and Knowlton, 1930; 3. UA records; 4. Hendrickson, 1930.

*Hymenarcys aequalis* (Say).

CO. A seclusive species found on grasses; field hosts are *Bromus* and *Poa*. Lab specimens fed on *Phleum* and *Tricum* (1).

1. Oetting and Yonke, 1971.

*Mecidea minor* Ruckes.

AZ, CO, UT, NM. Hosts are grasses (1) especially *Bouteloua* (2, 3); also *Eragrostis*, *Sporobolus*, *Digitaria* and *Bothriochloa* (4).

1. Torre-Bueno, 1939; 2. Sailer, 1952; 3. Watts, 1963; 4. UA records.

*Mormidea lugens* (Fabricius).

CO. Reported hosts are *Poa*, *Setaria* (1), *Bromus* (2), *Sorghum* (3), *Phleum* and *Panicum* (4).

1. Esselbaugh, 1948; 2. Oetting and Yonke, 1971; 3. Beisler et al., 1977; 4. McPherson, 1974.

*Neottiglossa cavifrons* Stal.

AZ, UT. Known hosts are *Agrostis*, *Poa* (1) and *Bromus*; feeds on *Triticum* in Lab (2).

1. Esselbaugh, 1948; 2. Oetting and Yonke, 1971.

*Neottiglossa sulcifrons* Stal.

NM. Known hosts are *Poa*, *Agrostis* (1) and *Phleum* (2).

1. Esselbaugh, 1948; 2. Torre-Bueno, 1939.

*Neottiglossa undata* Say.

CO. Found on wild grasses (1), *Phleum* and *Poa* (2).

1. Torre-Bueno, 1939; 2. Stoner, 1920.

*Oebalus mexicanus* Sailer.

AZ. Grass feeding genus (1).

1. Sailer, 1944.

*Prionosoma podopioides* Uhler.

AZ, NM. Host plants are primarily monocots in desert areas. Reported on *Sitanion* (1).

1. NDA records.

*Rhytidilomia faceta* (Say).

AZ, CO, UT. Probable grass feeder (1); collected in a grassy meadow (2).

1. DBT; 2. Van Duzee, 1904.

*Rhytidilomia viridicata* (Walker).

CO. Grass feeding genus (1).

1. DBT.

*Thyanta pallidovirens* Stal.

AZ, CO, NM, NV, UT. (Red Shouldered Plantbug). Taken sweeping grass (1), on *Triticum* (2), *Bouteloua* (3), and *Bothriochloa*, *Sporobolus*, *Eragrostis*, *Elyoneurus*, *Setaria*, and *Heteropogon* (4).

1. Blatchley, 1934; 2. Pack and Knowlton, 1930; 3. Watts, 1963; 4. UA records.

**Rhopalidae**

Very little is known of the biology of the scentless plant bugs. Most species are found in weedy areas such as roadsides. A few species are reported on grass.

*Arhyssus lateralis* (Say).

AZ, CO, NM, NV, UT. Swept from tall grass (1), on *Bouteloua* (2).

1. Blatchley, 1934; 2. Watts, 1963.

*Arhyssus validus* (Uhler).

UT, CO. Reported on wild *Avena* (1).

1. Chopra, 1968.

*Liorhyssus hyalinus* (Fabricius).

CO, NM. (Hyaline Grass Bug). Reported on *Bouteloua* (1), on *Hordeum* (2).

1. Watts, 1963; 2. Gillette and Baker, 1895.

*Stictopleurus viridicatus* (Uhler).

NM, AZ, CO. Reported on *Bouteloua* (1).

1. Watts, 1963.

**Scutelleridae**

The grass feeding species of shield bugs are most often found in marshy areas or moist prairies. Taxonomy: Lattin, 1964; Torre-Bueno, 1939; Slater and Baranowski, 1978; Vojdani, 1961.

*Eurygaster alternatus* Say.

CO, UT. Found on grasses and sedges (1), on *Phleum* and *Poa* (2) on *Triticum* (3) and associated with *Andropogon* (4).

1. Torre-Bueno, 1939; 2. Stoner, 1920; 3. Pack and Knowlton, 1930; 4. Hendrickson, 1930.

*Eurygaster amerinda* Bliven.

AZ, CO, UT, NM. Recorded on *Triticum*, *Avena* and seed-grass fields (1).

1. Vojdani, 1961.

*Eurygaster minidoka* Bliven.

NV, UT. Biology as for *E. amerinda* (1).

1. Vojdani, 1961.

*Homaemus aeneifrons* Say.

AZ, CO, NM, NV, UT. Reported on swamp grasses (1), grasses in marshy places (2) and on *Sorghastrum* (3).

1. Torre-Bueno, 1939; 2. Froeschner, 1944; 3. Hendrickson, 1930.

***Homaemus bijugis* Uhler.**

AZ, CO. Found in prairies on grasses (1) recorded from Phleum and Triticum (2) and associated with Stipa and Andropogon (3).

1. Torre-Bueno, 1939; 2. Lattin, 1964; 3. Hendrickson, 1930.

***Homaemus parvulus* Germar.**

AZ, CO, NM, UT. Found on grass (1), on Phleum (2), Digitaria, Setaria, Heteropogon, Bouteloua and Sporobolus (3).

1. Torre-Bueno, 1939; 2. Froeschner, 1939; 3. UA records.

**Tingidae**

The vast majority of lacebugs are arboreal. One grass-feeding genus occurs in our region. Taxonomy: Drake and Ruhoff, 1965; Slater and Baranowski, 1978.

***Leptodictya nicholi* Drake.**

AZ. Grass feeding genus (1).

1. Drake and Ruhoff, 1965.

***Leptodictya plana* Heidemann.**

AZ, NM. Host plants are Gramineae (1).

1. Drake and Ruhoff, 1965.

**Homoptera****Acanaloniidae**

Acanaloniids are often taken in sweep samples of grass, but little is known or reported on their biology. Taxonomy: Doering, 1932; Dozier, 1926.

***Acanalonia bivittata* (Say).**

AZ. Taken sweeping grasslands (1, 2) and on prairies near woods (3).

1. Doering, 1932; 2. Dozier, 1926; 3. Hendrickson, 1929.

***Acanalonia fasciata* Metcalf.**

AZ. Collected on Andropogon, Eragrostis and Elyoneurus (1).

1. UA records.

**Aleyrodidae**

Whiteflies are usually associated with woody plants; one grass feeding species is reported in our area. The adults are active, but the larvae are sessile and scale-like, damaging the grass by sucking the sap from the blades. Taxonomy: Quaintance and Baker, 1913, 1914; Sampson, 1943; Drews and Sampson, 1940.

***Aleurocybotus graminicola* Quaintance.**

AZ. Severe infestation on Cynodon, also on Sorghum (1).

1. Bibby, 1959.

**Aphididae**

There are a number of grass-feeding aphids on the western ranges. Many species are two-hosted, using grass as a vernal host then switching to a woody plant as an autumnal host. A few aphids are root feeders. Taxonomy: Palmer, 1952; Hille Ris Lambers, 1966; Smith and Parron, 1978.

***Acyrtosiphon dirhodum* (Walker).**

AZ, CO, UT. A general feeder including many grasses (1); among them: Avena, Dactylis, Holcus, Hordeum, Poa, Phalaris, Oryza, Secale, Triticum (2), and Bromus (3).

1. Smith and Parron, 1978; 2. Patch, 1939; 3. Knowlton and Fronk, 1942.

***Acyrtosiphon palmerae* (Hille Ris Lambers).**

CO. Host plant: Elymus (1).

1. Smith and Parron, 1978.

***Amphorophora urtica* Essig.**

UT. Reported on grass (1).

1. Knowlton and Fronk, 1942.

***Anoecia corni* (Fabricius).**

CO, NV, UT. Feeds on roots of grasses (1), among them: Agropyron, Agrostis, Avena, Andropogon, Bromus, Dactylis, Digitaria, Echinochloa, Elymus, Lolium, Muhlenbergia,

Oryza, Panicum, Phleum, Setaria, Sorghum, Spartina, Zea and Triticum (2).

1. Smith and Parron, 1978; 2. Patch, 1939.

***Anoecia graminis* (Gillette and Palmer).**

CO. Feeds on roots of Hordeum and other grasses (1).

1. Smith and Parron, 1978.

***Anoecia setariae* (Gillette and Palmer).**

CO, UT. Feeds on stems and roots of Setaria (1).

1. Smith and Parron, 1978.

***Aphis farinosa* Gmelin.**

CO, NV, UT. Reported on Poa (1).

1. Williams, 1891.

***Aphis gossypii* Glover.**

AZ, CO, NM, NV, UT. (Cotton Aphid). Hosts include Avena and Zea (1).

1. Patch, 1939.

***Aphis medicaginis* Koch.**

AZ, CO, NM, NV, UT. (Cowpea Aphid). Reported on Cynodon (1), Zea, Triticum and other grasses (2).

1. Bibby, 1959; 2. Knowlton and Fronk, 1942.

***Aphis middletoni* Thomas.**

Reported feeding on roots of a yellow grass (1), and Zea (2).

1. Knowlton and Fronk, 1942; 2. Patch, 1939.

***Aphis nasturtii* Kaltentbach.**

CO, UT. (Buckthorn Aphid). Agropyron is one host (1).

1. Patch, 1939.

***Ceruaphis viburnicola* (Gillette).**

CO, NV, UT. Host: grasses (1).

1. Patch, 1939.

***Colopha ulmicola* (Fitch).**

CO, UT. (Elm Cockscomb Gall Aphid). Host plants include: Agrostis, Panicum, Eragrostis, Zea (1), Dactylis, Leersia (2), Aira, Deschampsia, Homalocenchrus, and Triticum (3).

1. Smith and Parron, 1978; 2. Knowlton and Fronk, 1942; 3. Patch, 1939.

***Forda formicaria* Heyden.**

CO. (Grain Aphid). Feeds on grass roots in ant nests (1). These grasses include: Agropyron, Bromus, Agrostis, Cynodon, Dactylis, Deschampsia, Elymus, Festuca, Holcus, Hordeum, Lolium, Melica, Phleum, Poa, Secale and Triticum (2).

1. Gillette, 1918; 2. Patch, 1939.

*Forda marginata* Koch.

AZ, CO, NM, NV, UT. Found in ant nests where they feed on roots of grasses including Poa, Cynodon, Festuca (1), Hordeum, Phleum, Avena, Agropyron, Bromus, Elymus, Triticum (2), Digitaria, Dactylis, Echinochloa, Eriocoma and Setaria (3).

1. Smith and Parron, 1978; 2. Gillette, 1918; 3. Patch, 1939.

*Geoica lucifuga* (Zehntner).

NM. Hosts listed are Panicum and Saccharum (1).

1. Patch, 1939.

*Geoica squamosa* Hart.

CO, UT. Feeds on roots of Phleum, Avena, Panicum, Echinochloa, Triticum (1), and Poa (2).

1. Smith and Parron, 1978; 2. Williams, 1891.

*Glabromyzus howardi* (Wilson).

CO, UT. Hosts: Poa and Panicularia (1).

1. Smith and Parron, 1978.

*Glabromyzus rhois* (Monell).

CO, NM, UT. Reported hosts are: Avena, Hordeum, Elymus, Echinochloa, Phleum, Stipa, Triticum (1).

1. Patch, 1939.

*Hyalopteroides humilis* (Walker).

AZ, NV, UT. Host plant: Dactylis (1).

1. Smith and Parron, 1978.

*Hyalopteroides pruni* (Geoffroy).

AZ, CO, NV, UT. Host grasses include Phalaris, Poa and Calamagrostis (1).

1. Patch, 1939.

*Hysteroneura setariae* (Thomas).

AZ, CO, UT. Reported on many grass hosts including Panicum, Setaria, Saccharum (1), Poa, Paspalum, Cynodon, Echinochloa, Sorghum, Sorghastrum and Eragrostis (2).

1. Smith and Parron, 1978; 2. Patch, 1939.

*Iziphya flabella* (Sanborn).

CO, UT. Hosts are reportedly grasses (1) such as Cynodon (2).

1. Smith and Parron, 1978; 2. Knowlton, 1952.

*Macrosiphum avenae* (Fabricius).

AZ, CO, NM, NV, UT. (English Grain Aphid). A variety of grasses serve as hosts including: Avena, Secale, Bromus, Triticum, Hordeum, Dactylis (1), Poa, Agrostis, Phalaris (2), Agropyron, Elymus, Festuca, Setaria (3), Holcus, Andropogon, Arrhenatherum, Digitaria, Eleusine, Zea, Euchlaena, Glyceria, Lolium, Oryza, Koeleria, Melica, Panicum, Phleum, Sorghum, Alopecurus, Ampelodesma, Eragrostis, Cynosurus, Syntherisma, and Miscanthus (4).

1. Smith and Parron, 1978; 2. Williams, 1891; 3. Knowlton and Fronk, 1942; 4. Patch, 1939.

*Macrosiphum rosae* (Linnaeus).

CO, NV, UT. (Rose Aphid). Common on grasses (1).

1. Hille Ris Lambers, 1966.

*Microlophium carnosum* (Buckton).

CO, NV, UT. Hosts include Avena and Triticum (1).

1. Patch, 1939.

*Myzus persicae* (Sulzer).

AZ, CO, NM, NV, UT. (Green Peach Aphid). Reported on Agropyron, Bromus, Zea (1), Poa, Secale, Setaria and Triticum (2), Sorghum and Cynodon (3).

1. Knowlton and Fronk, 1942; 2. Patch, 1939; 3. Bibby, 1959.

*Pemphigus betae* Doane.

CO, UT. (Beet Root Aphid). Host grasses are Agropyron, Distichlis, Hordeum and Triticum (1).

1. Smith and Parron, 1978.

*Prociphilus erigeronensis* (Thomas).

CO. Feeds on Agrostis, Danthonia, Poa, Muhlenbergia, Panicum, Spartina and Triticum (1).

1. Smith and Parron, 1978.

*Rhopalomyzus poae* (Gillette).

CO, NM, UT. Host plant: Poa (1).

1. Smith and Parron, 1978.

*Rhopalosiphum cerasifoliae* (Fitch).

CO, NM, UT. Host plants are grains and grasses (1).

1. Patch, 1939.

*Rhopalosiphum insertum* (Walker).

AZ, CO, NM, UT. Host races occur on Triticum and other grasses (1).

1. Smith and Parron, 1978.

*Rhopalosiphum maidis* (Fitch).

AZ, CO, NM, NV, UT. (Corn Leaf Aphid). Infests Poa, Dactylis, Zea (1), Setaria, Sorghum (2), Andropogon, Avena, Axonopus, Cenchrus, Cynodon, Digitaria, Echinochloa, Eleusine, Eragrostis, Eriochloa, Holcus, Hordeum, Miscanthus, Leptochloa, Poa, Muhlenbergia, Panicum, Paspalum, Pennisetum, Rottboellia, Polytrias, Saccharum, Sporobolus, Secale, Tripsacum (3), and Triticum (4).

1. Knowlton and Fronk, 1942; 2. Williams, 1891; 3. Patch, 1939; 4. Bibby, 1959.

**Cercopidae**

Spittle bugs are important grass pests in the tropics. Our western ranges have only a few species. Taxonomy: Doering, 1930; Metcalf, 1961; Hamilton, 1979.

*Lepyronia quadrangularis* (Say).

CO, UT. (Diamond Backed Spittlebug). Sometimes injurious; a general feeder including Andropogon, Phleum, Zea, Bromus, Triticum and Panicum (1).

1. Doering, 1942.

*Philaenarcys bilineata* (Say).

AZ, CO, NV, NM. Recorded on Setaria (1), Agropyron (2), and Bothriochloa (3).

1. Doering, 1942; 2. Hewitt and Burleson, 1975; 3. UA records.

*Philaenarcys killa* Hamilton.

AZ. Found on Calamovilfa (1).

1. Hamilton, 1979.

**Cicadellidae**

A great diversity of leafhoppers infest grasses in the western states. Damage to the plant is caused by removal of sap and cytoplasm and is called "hopperburn." They also transmit virus diseases to many cereals. Oman (1949) has noticed that the male genitalia of the grass feeding leafhoppers have a linear connective, while non-grass feeders have a Y-shaped connective. This characteristic has been used to infer host preferences of many species for which direct observations are not available. Taxonomy: Sleesman, 1929; Ball, 1937; Ball and Beamer, 1940; DeLong, 1948; Oman, 1949; Beirne, 1952; Young and Beirne, 1958; Young, 1959; Nielson, 1962; Blocker, 1967, 1970; Ross and Hamilton, 1970; Kramer, 1971abc; Johnson and Blocker, 1979; Sawbridge, 1975.



- Aceratagallia sanguinolenta* Provancher.  
UT. (Clover Leafhopper). Abundant on Festuca (1), also reported on Phleum, Dactylis, and Bromus (2).  
1. Quisenberry et al., 1979; 2. Hardee et al., 1963.
- Acinopterus acuminatus* Van Duzee.  
AZ, CO, UT. Abundant on grasses and forbs (1); on Festuca (2).  
1. DeLong, 1948; 2. Quisenberry et al., 1979.
- Agallia quadripunctata* (Provancher).  
CO, UT. A common species on grass (1, 2).  
1. DeLong, 1948; 2. Wolfe, 1955.
- Amblysellus dorsti* (Oman).  
AZ, CO, UT. Probable grass feeder (1).  
1. Kramer, 1971b.
- Amblysellus durus* (Beamer and Tuthill).  
AZ. Probable grass feeder (1).  
1. Kramer, 1971b.
- Amblysellus grez* (Oman).  
AZ, CO, NM, NV, UT. Feeds on Elymus, Hordeum (1) and Panicum (2).  
1. Wolfe, 1955; 2. Blocker et al., 1972.
- Amblysellus punctatus* (Osborn and Ball).  
CO. Probable grass feeder (1).  
1. Kramer, 1971b.
- Amblysellus valens* (Beamer and Tuthill).  
CO. Probable grass feeder (1).  
1. Kramer, 1971b.
- Amplicephalus nebulosus* (Ball).  
CO. Host is Calamagrostis (1).  
1. Kramer, 1971c.
- Amplicephalus osborni* (Van Duzee).  
CO. Found on swamp grasses (1).  
1. DeLong, 1948.
- Athysanella abdominalis* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella acuticauda* Baker.  
CO, NM, UT. Reported on Poa (1); common in pastures and prairies (2).  
1. Medler, 1942; 2. DeLong, 1948.
- Athysanella adunca* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella alsa* Ball and Beamer.  
NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella arcana* Ball and Beamer.  
AZ, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella ardua* Ball and Beamer.  
CO. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella argenteola* (Uhler).  
AZ, CO, NM. Found in native mixed grass pastures (1); occurs on Bouteloua and Buchloe (2).  
1. Blocker et al., 1972; 2. Osborn, 1939.
- Athysanella aridella* (Osborn).  
AZ, UT. Apparently restricted to Agropyron (1).  
Blocker et al., 1972.
- Athysanella attenuata* Baker.  
AZ, CO, NM, UT. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella bifida* Ball and Beamer.  
CO, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella blanda* Ball and Beamer.  
AZ, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella callida* Ball and Beamer.  
AZ, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella casa* Ball and Beamer.  
AZ, CO, NM, UT. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella clavata* Ball and Beamer.  
AZ, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella concava* Ball and Beamer.  
NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella contracta* Ball and Beamer.  
AZ, CO, NM. Found in native mixed grass pastures (1).  
1. Blocker et al., 1972.
- Athysanella curtippennis* (Gillette and Baker).  
AZ, CO, NM. Abundant on plains grasses (1).  
1. Osborn, 1939.
- Athysanella curvata* Ball and Beamer.  
CO. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella dentata* Ball and Beamer.  
CO. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella diversa* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella dubia* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella emarginata* Osborn.  
CO, NM. Reported in native mixed grass pastures (1).  
1. Blocker et al., 1972.
- Athysanella fredonia* Ball and Beamer.  
AZ, CO, NM, UT. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella furculata* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella gardenia* Osborn.  
CO. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella globosa* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella hamata* Ball and Beamer.  
CO, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella incerta* Ball and Beamer.  
CO. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella incongrua* Baker.  
CO, NM. Collected on Bouteloua (1).  
1. Watts, 1965.

- Athysanella kanabana* Ball and Beamer.  
AZ, NM, UT. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella ladella* Johnson.  
NM. Probable grass feeder (1).  
1. Johnson and Blocker, 1979.
- Athysanella laeta* Ball and Beamer.  
AZ, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella libera* Ball and Beamer.  
AZ, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella lunata* Ball and Beamer.  
NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella magdalena* Baker.  
AZ, CO, NM, UT. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella mansa* Johnson.  
NM. Probable grass feeder (1).  
1. Johnson and Blocker, 1979.
- Athysanella nacazarana* Osborn.  
AZ, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella nigriventralis* Ball and Beamer.  
NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella nimbata* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella obesa* Ball and Beamer.  
AZ, CO. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella obscura* Johnson.  
UT. Probable grass feeder (1).  
1. Johnson and Blocker, 1979.
- Athysanella occidentalis* Baker.  
AZ, CO, NM, UT. Has apparent preference for Agropyron (1).  
1. Blocker et al., 1972.
- Athysanella parca* Ball and Beamer.  
NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella playana* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella rata* Ball and Beamer.  
AZ, CO, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella recurvata* (Osborn).  
AZ, CO, NM, UT. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella redacta* Blocker.  
CO. Found on Andropogon (1).  
1. Blocker et al., 1979.
- Athysanella reticulata* (Osborn).  
UT. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella robusta* Baker.  
AZ, CO, UT. Feeds on the coarser prairie grasses (1).  
1. Osborn, 1939.
- Athysanella rotunda* Johnson.  
CO. Probable grass feeder (1).  
1. Johnson and Blocker, 1979.
- Athysanella rubicunda* Ball and Beamer.  
CO, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella sagittata* Ball and Beamer.  
AZ, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella sinuata* (Osborn).  
CO, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella skullana* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella spatulata* Ball and Beamer.  
AZ, CO, NM, UT. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella stylata* (Osborn).  
CO. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella tenera* Ball and Beamer.  
NV. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella terebrans* (Gillette and Baker).  
CO, UT. Abundant on plains grasses (1).  
1. Osborn, 1939.
- Athysanella texana* (Osborn).  
AZ, CO, UT. Found in pastures, does not have a specific grass preference (1).  
1. Blocker et al., 1979.
- Athysanella triodana* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella truncata* Ball and Beamer.  
NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella turgida* Ball and Beamer.  
AZ. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella uncinata* Ball and Beamer.  
AZ, NM. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella utahna* Osborn.  
AZ, UT. Common on grasses in alkaline areas (1).  
1. Wolfe, 1955.
- Athysanella wilburi* Ball and Beamer.  
CO. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Athysanella yumana* Osborn.  
AZ, UT. Probable grass feeder (1).  
1. Ball and Beamer, 1940.
- Auridius auratus* (Gillette and Baker).  
CO, NM. Probable grass feeder (1).  
1. Oman, 1949.
- Auridius exectus* DeLong.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Auridius helvus* (DeLong).  
UT. Probable grass feeder (1).  
1. Oman, 1949.
- Auridius ordinatus* (Ball).  
CO. Probable grass feeder (1).  
1. Oman, 1949.

- Balclutha abdominalis*** (Van Duzee).  
AZ, CO, UT. Feeds on Bromus, Dactylis, Elymus, Festuca, Agropyron, Alopecurus and Phalaris (1).  
1. Whitmore et al., 1981.
- Balclutha arctica*** Beirne.  
CO, NM, UT. Probable grass feeder (1).  
1. Blocker, 1967.
- Balclutha impicta*** (Van Duzee).  
AZ, CO, NM, UT. Found on grass (1).  
1. Wolfe, 1955.
- Balclutha incisa*** (Matsumura).  
AZ, NM. Reported on Andropogon, Agropyron and Panicum (1).  
1. Blocker, 1967.
- Balclutha neglecta*** (DeLong and Davidson).  
AZ, CO, NM, NV, UT. Found abundantly on Agropyron, Andropogon, Panicum (1), on the stems and leaves of Bouteloua (2) and Festuca (3).  
1. Blocker et al., 1972; 2. Watts, 1965; 3. Quisenberry et al., 1979.
- Balclutha punctata*** (Fabricius).  
AZ, CO, NM, NV, UT. Common throughout its range (1) on grass and weeds (2).  
1. Blocker, 1967; 2. Wolfe, 1955.
- Cabrulus hyalinus*** (Beamer).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Cabrulus tener*** (Beamer and Tuthill).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Carneocephala flaviceps*** (Riley).  
AZ, CO, NM, UT. (Yellowheaded Leafhopper). Food plants include: Cynodon (1), Poa, Avena, Triticum (2); and Festuca (3).  
1. Nielson and Toles, 1970; 2. Osborn, 1939; 3. Quisenberry et al., 1979.
- Carneocephala gillettei*** Ball.  
CO. Sporobolus is true host (1).  
1. Ball, 1936.
- Carneocephala nuda*** Nottinghamham.  
AZ, NM. Feeds on Cynodon (1).  
1. Nielson and Toles, 1970.
- Carneocephala triguttata*** Nottinghamham.  
AZ, NV, UT. Reported on Cynodon (1) and Distichlis (2).  
1. Nielson and Toles, 1970; Ball, 1936.
- Cazenus accuratus*** (Beamer).  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Cazenus funestus*** (Beamer).  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Cazenus furcillatus*** (Beamer and Tuthill).  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Cazenus merus*** (Beamer).  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Cazenus neomexicanus*** (Tuthill).  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Cazenus subitus*** (Beamer).  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Chlorotettix lusorius*** (Osborn and Beamer).  
AZ, UT, CO. Probable grass feeder (1).  
1. Oman, 1949.
- Chlorotettix occidentalis*** (DeLong).  
CO, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Chlorotettix spatulatus*** (Osborn and Ball).  
CO, NM. Reported on Andropogon, Panicum (1) and Festuca (2).  
1. Blocker et al., 1972; 2. Quisenberry et al., 1979.
- Chlorotettix stolatus*** Ball.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Chlorotettix tergatus*** Fitch.  
CO. Found in tall coarse grass and sedges (1).  
1. DeLong, 1948.
- Chlorotettix unicolor*** (Fitch).  
AZ, CO, UT. Found on meadow and marsh grasses (1, 2) and on Festuca (3).  
1. DeLong, 1948; 2. Wolfe, 1955; 3. Quisenberry et al., 1979.
- Ciminius harti*** (Ball).  
NM. Reported on Aristida (1) and Festuca (2).  
1. Mason and Yonke, 1971; 2. Quisenberry et al., 1979.
- Collodonus geminatus*** (Van Duzee).  
UT. Numerous on Agrostis (1).  
1. Osborn, 1912.
- Commellus comma*** (Van Duzee).  
CO. Feeds on Elymus (1).  
1. DeLong, 1948.
- Commellus planus*** Thomas.  
UT. Probable grass feeder (1).  
1. Oman, 1949.
- Commellus sexvittatus*** (Van Duzee).  
CO, UT. Shows a preference for Agropyron (1); also reported on Festuca (2).  
1. Blocker et al., 1972; 2. Osborn, 1912.
- Cuerna arida*** Oman and Beamer.  
AZ, NM. Reproductive host is Panicum (1).  
1. Nielson and May, 1975.
- Cuerna balli*** Oman and Beamer.  
AZ, NV, UT. Swept from grass, fed on Panicum in lab (1).  
1. Nielson and May, 1975.
- Cuerna costalis*** (Fabricius).  
NM. Oviposited in Setaria (1).  
1. Mason and Yonke, 1971.
- Dalbulus elimatus*** (Ball).  
AZ, NM. A vector of corn stunt virus (1). Prefers Zea and Tripsacum but moves to other hosts after harvest such as Triticum, Hordeum, and Bromus (2).  
1. Nielson, 1968; 2. Nault and DeLong, 1980.
- Dalbulus maidis*** (DeLong and Wolcott).  
AZ. A vector of corn stunt virus; feeds on Zea, Hordeum, Elymus, Sorghum, Triticum, Avena (1) and Tripsacum (2).  
1. Nielson, 1968; 2. Nault and DeLong, 1980.
- Deltocephalus balli*** Van Duzee.  
AZ, CO, NM. Reported on Agropyron, Andropogon, Avena, Triticum, Panicum and Setaria (1).  
1. Blocker et al., 1972.

- Deltocephalus castoreus* Ball.  
CO, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Deltocephalus comesus* DeLong and Severin.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Deltocephalus fuscinosus* Van Duzee.  
CO, NM, UT. Common on grasses and grains (1).  
1. Wolfe, 1955.
- Deltocephalus lineatifrons* Oman.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Deltocephalus minutus* Van Duzee.  
AZ, NM, CO. Probable grass feeder (1).  
1. Oman, 1949.
- Deltocephalus obesus* Osborn and Ball.  
AZ, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Deltocephalus punctatus* (Osborn and Ball).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Deltocephalus saladurus* Ball and DeLong.  
NV. Probable grass feeder (1).  
1. Oman, 1949.
- Deltocephalus vanduzeei* Gillette and Baker.  
CO. Found on grass (1).  
1. Wolfe, 1955.
- Dicyphonia cona* (Shaw).  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Dicyphonia minuta* Beamer.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dicyphonia ornata* (Baker).  
AZ, CO, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Dicyphonia plana* Beamer.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dicyphonia plura* Beamer.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura abnormis* (Walsh).  
AZ, CO, UT. Damages pastures (1).  
1. Fattig, 1955.
- Dikraneura absentia* DeLong and Caldwell.  
AZ, CO, UT. Usually on grass, weeds, lawns (1).  
1. Wolfe, 1955.
- Dikraneura arcta* DeLong and Caldwell.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura arizona* DeLong and Caldwell.  
AZ, CO, NM, UT. Common on grasses, a nuisance on lawns; feeds on Triticum, Hordeum, Elymus and Avena (1).  
1. Wolfe, 1955.
- Dikraneura communis* Gillette.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura latacephala* Beamer.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura lentana* DeLong.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura mali* (Provancher).  
CO. A common meadow and pasture species (1); taken in spring by sweeping grass (2).  
1. DeLong, 1948, 2. Medler, 1942.
- Dikraneura robusta* Lawson.  
CO, NM. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura rubica* DeLong and Caldwell.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura rufula* Gillette.  
UT. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura serrata* DeLong and Caldwell.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura termina* DeLong and Caldwell.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura torta* DeLong and Caldwell.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dikraneura unguolata* Beamer.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Diplocolenus configuratus* (Uhler).  
CO, UT. Abundant on wild grasses (1).  
1. Wolfe, 1955.
- Dorycephalus brevis* Beamer.  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Dorycephalus delongi* Knull.  
AZ, NM. Probable grass feeder (1).  
1. Oman, 1949.
- Dorycephalus platyrhynchus* Osborn.  
CO. Overwinters in clumps of Elymus (1); feeds only on Elymus (2).  
1. Ball, 1932; 2. Oman, 1949.
- Dorycephalus sinuatus* Beamer.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Dorycephalus vanduzeei* Osborn and Ball.  
CO. Occurs on Sporobolus and Aristida (1).  
1. DeLong, 1948.
- Draeculacephala angulifera* (Walker).  
CO, UT. Abundant in Cynodon (1); usually found in low grassy meadows (2).  
1. Fattig, 1955; 2. Wolfe, 1955.
- Draeculacephala antica* (Walker).  
AZ, CO, NM, UT. Definite food hosts are Elymus and Leersia; also reported on Bromus, Zea, Spartina, Setaria and Tripsacum (1); also Avena and Hordeum (2).  
1. Mason and Yonke, 1971; 2. Wolfe, 1955.
- Draeculacephala crassicornis* Van Duzee.  
CO, UT. A montane species (1); feeds on Hordeum and wide variety of grasses; eggs overwinter on Bromus (2).  
1. Ball, 1927; 2. Swenson and Kamm, 1975.
- Draeculacephala minerva* Ball.  
AZ, NM, NV, UT. (Grass Sharpshooter). A pest of grains including Avena, Sorghum, Triticum, Hordeum, Cynodon and Zea (1).  
1. Nielson, 1968.

- Draeculacephala mollipes* (Say).  
CO. (Watercress Sharpshooter). Reported on grass (1).  
1. Gillette and Baker, 1895.
- Draeculacephala noveboracensis* (Fitch).  
CO, UT. Feeds on Calamagrostis (1), Spartina (2); Found mainly on grasses in low ground (3).  
1. DeLong, 1965; 2. Young, 1959, 3. Wolfe, 1955.
- Draeculacephala portola* Ball.  
CO, NM, UT. Observed feeding on Elymus, Echinochloa, Muhlenbergia, Phalaris, Leersia, Setaria, Tripsacum and Zea (1); also reported on Bouteloua (2), and marsh grasses (3).  
1. Mason and Yonke, 1971; 2. Watts, 1963; 3. DeLong, 1965.
- Draeculacephala producta* (Walker).  
AZ, CO. Prefers grass in swampy ground (1).  
1. Wolfe, 1955.
- Flexamia abbreviata* (Osborn and Beamer).  
CO, AZ, NM. Reported on Bouteloua (1).  
1. Young and Beirne, 1958.
- Flexamia areolata* (Ball).  
AZ. Occurs in sandy prairies on Panicum (1); damages pastures (2); found on Festuca (3).  
1. DeLong, 1948; 2. Fattig, 1955. 3. Quisenberry et al., 1979.
- Flexamia decora* Beamer and Tuthill.  
CO, UT. Probable grass feeder (1).  
1. DeLong, 1965.
- Flexamia doeringae* (Beamer and Tuthill).  
AZ, CO. Probable grass feeder (1).  
1. DeLong, 1965.
- Flexamia flexulosa* (Ball).  
AZ, CO. Reported in native mixed grass pasture (1).  
1. Blocker et al., 1972.
- Flexamia grammica* (Ball).  
CO. Abundant on sand prairies (1).  
1. DeLong, 1948.
- Flexamia inflata* (Osborn and Ball).  
CO, UT. A common grass feeding species of meadows, prairies (1) and fescue pastures (2). Damages Avena (3).  
1. DeLong, 1948; 2. Quisenberry et al., 1979; 3. Fattig, 1955.
- Flexamia modica* Beamer and Tuthill.  
NM. Probable grass feeder (1).  
1. DeLong, 1965.
- Flexamia pectinata* (Osborn and Ball).  
CO. Probable grass feeder (1).  
1. Young and Beirne, 1958.
- Flexamia prairiana* DeLong.  
AZ. Reportedly common in tall grass prairies (1).  
1. Blocker and Reed, 1976.
- Flexamia reflexa* (Osborn and Ball).  
CO. Reported in fescue pastures (1).  
1. Quisenberry et al., 1979.
- Flexamia ritana* Beamer.  
AZ. Probable grass feeder (1).  
1. Young and Beirne, 1958.
- Flexamia stylata* (Ball).  
AZ. Probable grass feeder (1).  
1. Young and Beirne, 1958.
- Forcipata citrinella* (Zetterstedt).  
CO, UT. Probable grass feeder (1).  
1. DeLong, 1948.
- Forcipata fieberi* Low.  
UT. Probable grass feeder (1).  
1. DeLong, 1948.
- Gillettella atropunctata* (Gillette).  
AZ, CO, NM. Found in native, mixed grass pastures (1); prefers short grasses (2).  
1. Blocker et al., 1972; 2. DeLong, 1948.
- Gillettella fasciata* Ball and Beamer.  
AZ, CO, NM. Probable grass feeder (1).  
1. Oman, 1949.
- Gillettella labiata* (Gillette).  
AZ, CO, NM. A common widespread species which varies in color with type of soil (1).  
1. Ball and Beamer, 1940.
- Giprus cinerosus* (Van Duzee).  
UT. Probable grass feeder (1).  
1. Oman, 1949.
- Giprus siskiyou* (Oman).  
NV. Reported on Stipa, Poa and Sitanion (1).  
1. Sawbridge, 1975.
- Giprus vastitatus* Sawbridge.  
NV. Probable grass feeder (1).  
1. Sawbridge, 1975.
- Graminella mohri* (DeLong).  
CO. Probable grass feeder (1).  
1. DeLong, 1965.
- Graminella nigrifrons* (Forbes).  
CO, NM. (Black Faced Leafhopper). A distinct pest in grasslands, it prefers Festuca (1), Setaria and Panicum (2). A vector of corn stunt virus, it overwinters on Triticum, Avena and Elymus (3).  
1. Kerr, 1957; 2. Osborn, 1939; 3. Boyd and Pitre, 1968.
- Graminella sonora* Ball.  
AZ, NM, UT. (Lesser Lawn Leafhopper). A vector of corn stunt virus; reproductive hosts are: Agropyron, Agrostis, Alopecurus, Avena, Bouteloua, Bromus, Cynodon, Dactylis, Festuca, Hordeum, Lolium, Oryza, Pennisetum, Phalaris, Saccharum, Poa, Secale, Sorghum, Triticum and Zea (1). Andropogon and Panicum (2).  
1. Gustin and Stoner, 1968; 2. Blocker et al., 1972.
- Gypona bimaculata* Spangberg.  
AZ, CO. Occurs on a wide variety of grasses (1).  
1. Osborn, 1912.
- Hebecephalus adversus* Beamer and Tuthill.  
UT. Probable grass feeder (1).  
1. Oman, 1949.
- Hebecephalus callidus* (Ball).  
UT. Collected on grass (1).  
1. Wolfe, 1955.
- Hebecephalus irritus* Beamer.  
NV. Probable grass feeder (1).  
1. Oman, 1949.
- Hebecephalus occidentalis* Beamer and Tuthill.  
CO, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Hebecephalus rostratus* Beamer and Tuthill.  
AZ, CO. Reported on Agropyron (1).  
1. Blocker et al., 1972.
- Hebecephalus sexmaculatus* (Gillette and Baker).  
UT. Probable grass feeder (1).  
1. Oman, 1949.

- Hebecephalus signatifrons* (Van Duzee).  
AZ, CO, NM, UT. Associated with *Setaria* and *Panicum* (1).  
1. DeLong, 1948.
- Hebecephalus vinculatus* (Ball).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Hebexa incognita* Oman.  
UT. Probable grass feeder (1).  
1. Oman, 1949.
- Hecullus balli* (Beamer).  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Hecullus bracteatus* (Ball).  
AZ, CO. Probable grass feeder (1).  
1. Oman, 1949.
- Helochara communis* Fitch.  
AZ, CO, NM, NV, UT. (Bog Leafhopper). Feeds on marsh grasses (1); also on *Triticum*, *Elymus* (2), *Oryzopsis* (3).  
1. DeLong, 1948; 2. Wolfe, 1955; 3. Kumar et al., 1976.
- Kinonia elongata* Ball.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus aridus* Oman.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus aurarius* (Knull).  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus canyonensis* Knull.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus convergens* (DeLong).  
CO, NM. Reported on *Bouteloua* (1).  
1. Watts, 1965.
- Laeviccephalus exiguus* Knull.  
CO, NM. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus harrisi* Ross and Hamilton.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus longus* Knull.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus melsheimeri* (Fitch).  
CO. Occurs in dry uplands and prairies (1), reported on *Zea* (2).  
1. DeLong, 1948; 2. Fattig, 1955.
- Laeviccephalus monticola* (Gillette and Baker).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus obivius* Knull.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus omani* (Knull).  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus opalinus* Ross and Hamilton.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus parvulus* (Gillette).  
CO, UT. Common in native mixed grass pastures (1).  
1. Blocker et al., 1972.
- Laeviccephalus paulus* Knull.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus poudris* Tuthill.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus pupus* (Van Duzee).  
UT. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus salarius* Knull.  
UT. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus siclus* DeLong and Davidson.  
UT. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus sylvestris* (Osborn and Ball).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus tritus* Beamer and Tuthill.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus unicoloratus* (Gillette and Baker).  
CO. Large numbers found in tall grass prairie (1). Common on *Andropogon* (2).  
1. Blocker and Reed, 1976; 2. Whitcomb et al., 1972.
- Laeviccephalus vafer* Knull.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Laeviccephalus vannus* Knull.  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Latalus sayi* (Fitch).  
CO. Occurs in abundance in all types of grassland (1); found on *Poa*, *Phleum*, *Bromus*, *Dactylis*, *Andropogon* (2) and *Festuca* (3).  
1. Osborn, 1939; 2. Hardee et al., 1963; 3. Quisenberry et al., 1979.
- Latalus uncinatus* Beamer and Tuthill.  
AZ, NM. Probable grass feeder (1).  
1. Oman, 1949.
- Lemellus bimaculatus* (Gillette and Baker).  
CO, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Limotettix atricapillis* (Boheman).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Limotettix parallelus* (Van Duzee).  
CO, UT. Occurs on marsh grasses (1).  
1. DeLong, 1948.
- Limotettix striolus* (Fallen).  
UT. Found in swamps and marshes (1); occurs on *Andropogon* and *Panicum* (2).  
1. DeLong, 1948; 2. Blocker et al., 1972.
- Limotettix uneolus* (Ball).  
CO, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Limotettix utahnus* (Lawson).  
UT. Occurs on marsh grasses (1).  
1. DeLong, 1948.
- Lonatura ariza* Kramer.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.

- Lonatura delicata* Beamer.  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Lonatura delongi* Kramer.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Lonatura melina* DeLong.  
CO, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Lonatura noctivaga* Ball.  
CO, UT. Probable grass feeder (1).  
Oman, 1949.
- Lonatura punctifrons* Beamer.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Lonatura salsura* Ball.  
CO, NM, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Lonatura teretis* Beamer.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Macrosteles divisus* (Uhler).  
CO, UT, NV. Collected on Bromus (1).  
1. UA records.
- Macrosteles fascifrons* (Stal.).  
AZ, CO, NM, NV, UT. (Aster Leafhopper). Habitat is grasslands of all types, a crop pest and vector of blue dwarf of oats. Recorded hosts are: Avena, Triticum, Hordeum, Elymus (1), Agropyron, Andropogon, Panicum (2), Phleum, Dactylis, Sorghum (3), Festuca (4), Bromus, Alopecurus, Phalaris (5) and Bouteloua (6).  
1. Nielson, 1968; 2. Blocker et al., 1972; 3. Hardee et al., 1963; 4. Quisenberry et al., 1979; 5. Whitmore et al., 1981; 6. Watts, 1965.
- Macrosteles variatus* (Fallen).  
CO, NM, UT. Found on grasses (1).  
1. Osborn, 1939.
- Memnonia acuta* Beamer.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Memnonia albolinea* Ball.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Memnonia consobrina* Ball.  
AZ, CO. Reported on Agropyron and Panicum (1).  
1. Blocker et al., 1972.
- Memnonia fossitia* Ball.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Memnonia fraterna* Ball.  
AZ, CO. Immatures and adults hide in soil beneath overhanging leaves of grass clumps (1).  
1. Ball, 1937.
- Mexara atascasa* (Ball).  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Mocuellus caprillus* (Ross and Hamilton).  
CO. A grassland species common in the northern prairies (1).  
1. Ross and Hamilton, 1970.
- Momoria rufoscutellata* (Baker).  
AZ, UT. Collected on grasses (1).  
1. Blocker, 1970.
- Palus bilineatus* (Gillette and Baker).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Palus paludosus* (Ball).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Parabolocratius attenuatus* Shaw.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Parabolocratius brunneus* Ball.  
CO, NM. Occurs in native, mixed grass pastures (1).  
1. Blocker et al., 1972.
- Parabolocratius continuus* DeLong.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Parabolocratius fenestrellus* Ball.  
AZ. Males can be swept from grass but females and nymphs are found in the debris under the margins of grass clumps (1).  
1. Ball, 1937.
- Parabolocratius major* Osborn.  
CO. Taken in Calamagrostis meadows (1).  
1. DeLong, 1948.
- Parabolocratius montanus* Ball.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Parabolocratius nigrofasciatus* Beamer.  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Parabolocratius nimbosus* Ball.  
AZ, NM. Found in debris beneath grass clumps (1).  
1. Ball, 1937.
- Parabolocratius viridis* (Uhler).  
AZ, CO, NM, NV, UT. Feeds on grasses in swampy meadows, also Avena (1), Stipa (2) and Agropyron (3).  
1. Wolfe, 1955; 2. Medler, 1942; 3. Blocker et al., 1972.
- Paraphlepsius irroratus* (Say).  
CO, UT. Quite common in grasslands, pastures, meadows, wheatfields (1); hosts include: Festuca (2), Agropyron, Andropogon and Panicum (3).  
1. Osborn, 1939; 2. Quisenberry et al., 1979; 3. Blocker et al., 1972.
- Pasaremus concentricus* (Van Duzee).  
CO, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Pazu balli* Beamer.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Peconus scriptanus* (Oman).  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Penestirellus catalinus* Beamer and Tuthill.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Penestragania hualpaiana* (Knull).  
AZ. Probable grass feeder (1).  
1. Blocker, 1970.
- Penestragania robusta* (Uhler).  
AZ, NM, NV. Collected on Hilaria, Bromus, Bouteloua, Cynodon, Eremochloa and Paspalum (1).  
1. Blocker, 1970.
- Pinumius areatus* (Stal.).  
CO, UT. Probable grass feeder (1).  
1. Oman, 1949.

- Plesiomatta mollicula* (Fowler).  
AZ. Probable grass feeder (1).  
1. DeLong, 1948.
- Polyamia caperata* (Ball).  
CO. Reported in tall grass prairies (1) and fescue pastures (2); on Andropogon (3).  
1. Blocker and Reed, 1976; 2. Quisenberry et al., 1979; 3. DeLong, 1948.
- Polyamia incerta* Beamer and Tuthill.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Polyamia multicella* Beamer and Tuthill.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Polyamia ritana* Beamer and Tuthill.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Polyamia sabina* Beamer and Tuthill.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Polyamia santana* Beamer and Tuthill.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Polyamia satur* (Ball).  
CO. Found on Agropyron and mixed grass native pastures (1).  
1. Blocker et al., 1972.
- Polyamia singularis* Beamer and Tuthill.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Polyamia tantilla* Beamer and Tuthill.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Polyamia texana* (DeLong).  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Polyamia yavapai* (Tuthill).  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Psammotettix affinis* (Gillette and Baker).  
CO, UT. (Kindred Leafhopper). Very abundant on Poa (1); also on meadow grasses (2).  
1. Osborn, 1912; 2. Wolfe, 1955.
- Psammotettix alienus* Dahlbom.  
CO. Reported on Andropogon (1), Bromus, Dactylis, Festuca, Agropyron, Elymus, Alopecurus, and Phalaris (2).  
1. Blocker et al., 1972; 2. Whitmore et al., 1981.
- Psammotettix attenuens* DeLong and Davidson.  
UT. Probable grass feeder (1).  
1. DeLong, 1965.
- Psammotettix knullae* Greene.  
CO. Probable grass feeder (1).  
1. DeLong, 1965.
- Psammotettix lividellus* (Zetterstedt).  
CO, UT. Very abundant in fescue pastures (1). Hosts are Bromus, Dactylis, Festuca, Agropyron, Elymus, Alopecurus and Phalaris (2).  
1. Quisenberry et al., 1979; 2. Whitcomb et al., 1981.
- Psammotettix shoshone* DeLong and Davidson.  
NV. Probable grass feeder (1).  
1. DeLong, 1965.
- Psammotettix striatus* (Linnaeus).  
CO, UT. A very common grass leafhopper (1), most abundant on Poa (2).  
1. DeLong, 1948; 2. Osborn, 1939.
- Quontus misellus* (Ball).  
CO, UT. Occurs on grasses (1).  
1. DeLong, 1948.
- Quontus occidentalis* DeLong.  
CO. Probable grass feeder (1).  
1. DeLong, 1965.
- Remadosus magnus* (Osborn and Ball).  
CO. A common inhabitant of wet prairies on Spartina (1).  
1. DeLong, 1948.
- Rosenus pagosus* (Beamer).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Sanctanus balli* Beamer.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Scaphytopius cinereus* (Osborn and Ball).  
AZ, NM. Found in fescue pastures (1); mixed native grass pastures (2); on Andropogon and Bouteloua (3).  
1. Quisenberry et al., 1979; 2. Blocker et al., 1972; 3. Osborn, 1939.
- Sorhoanus bidentatus* (DeLong and Davidson).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Sorhoanus caricis* (Gillette and Baker).  
CO. Probable grass feeder (1).  
1. Oman, 1949.
- Sorhoanus debilis* (Uhler).  
CO, UT. Probable grass feeder (1).  
1. Oman, 1949.
- Sorhoanus flavovirens* (Gillette and Baker).  
CO, UT. Probable grass feeder (1).
- Sorhoanus uhleri* (Oman).  
UT, CO. Probable grass feeder (1).  
1. Oman, 1949.
- Stirellus beameri* Ball.  
AZ. Probable grass feeder (1).  
1. Oman, 1949.
- Stirellus bicolor* (Van Duzee).  
AZ, CO, NM. A common species of meadows (1) and tall grass prairies (2). Most abundant on Andropogon but also found on Cynodon (3), Festuca (4), Triticum (5), Panicum, Paspalum and Dactylis (6).  
1. DeLong, 1948; 2. Blocker and Reed, 1976; 3. Slesman, 1929; 4. Quisenberry et al., 1979; 5. Osborn, 1939; 6. Whitcomb et al., 1972.
- Streptanus relativus* (Gillette and Baker).  
CO. Collected on grass (1).  
1. Gillette and Baker, 1895.
- Telusus blandus* (Gillette).  
AZ, CO. Probable grass feeder (1).  
1. Oman, 1949.
- Telusus vagus* (Beamer and Tuthill).  
NM. Probable grass feeder (1).  
1. Oman, 1949.
- Texananus latipex* DeLong.  
AZ, CO, NM, NV, UT. Feeds on Cynodon, Distichlis, and other grasses (1).  
1. DeLong and Severin, 1945.



*Texananus pergradus* DeLong.

AZ, CO, NM, UT. Occurs on *Cynodon* and other weeds; a vector of aster yellows (1).

1. DeLong and Severin, 1945.

*Texananus spatulatus* Van Duzee.

AZ, CO, NM, NV, UT. Occurs on weeds and grasses (1).

1. DeLong and Severin, 1945.

*Unoka gillettei* (Metcalf).

AZ, CO, NM. Probable grass feeder (1).

1. Oman, 1949.

*Xerophloea majesta* Lawson.

NM. Reported on tall grass prairie (1).

1. Blocker and Reed, 1976.

*Xerophloea major* Baker.

CO. Probable grass feeder.

*Xerophloea peltata* (Uhler).

AZ, CO, NM, NV, UT. Commonly collected in pastures; no apparent host preference other than grass (1).

1. Blocker et al., 1972.

*Xerophloea robusta* Lawson.

AZ, NM. Probable grass feeder (1).

1. Nielson, 1962.

*Xerophloea viridis* (Fabricius).

AZ, CO, NM, NV, UT. (Green Flat-headed Leafhopper). Swarms in large numbers (1), feeds on short grasses: *Aristida* (2), and *Cynodon* (3).

1. Lawson, 1931; 2. DeLong, 1948; 3. Fattig, 1955.

**Cixiidae**

The known habits of cixiid species indicate that the nymphs feed on grass roots, but the adults feed on the leaves of forbs and woody plants. Eggs are deposited in soil crevices. Taxonomy: Swezey, 1904; Dozier, 1926; Kramer, 1977, 1979, 1981.

*Cixius nervosus* (Linnaeus).

CO. Associated with *Spartina* (1).

1. Hendrickson, 1929.

*Cixius stigmatus* Say.

AZ, CO, NM, UT. Found on meadow grasses (1); associated with *Spartina* (2).

1. Dozier, 1926; 2. Hendrickson, 1929.

*Myndus impiger* Ball.

CO, NM. Probable grass feeder (1).

1. Dozier, 1926.

*Myndus sordidipennis* Stal.

CO. Probable grass feeder (1).

1. Dozier, 1926.

*Myndus viridis* Ball.

AZ, CO. Food plant is grass (1).

1. Swezey, 1904.

*Oecleus borealis* Van Duzee.

UT. Taken sweeping grass in pinelands (1).

1. Dozier, 1926.

*Oecleus campestris* Ball.

CO, NM. Reported on *Bouteloua* (1).

1. Watts, 1963.

*Oecleus natatorius* Ball.

AZ. Collected in clumps of grass in wash (1).

1. Kramer, 1977.

*Oecleus perpictus* Van Duzee.

AZ. Collected on *Muhlenbergia* (1).

1. Kramer, 1977.

**Delphacidae**

Grass feeding delphacids belong mostly to the genus *Delphacodes*. They feed in the crown of the plant and deposit their eggs into the leaf sheaths. They have been implicated in the transmission of plant viruses. Taxonomy: Swezey, 1904; Dozier, 1926.

*Delphacodes basivitta* Van Duzee.

CO. Moderately abundant on *Sorghum* (1).

1. Beisler et al., 1977.

*Delphacodes campestris* Van Duzee.

AZ, CO, NM, NV. This species will not survive on non-grass hosts. It has been bred on *Poa*, *Agropyron*, *Agrostis*, *Alopecurus*, *Zea*, *Schizachyrium*, *Arrhenatherum*, *Pleum*, *Avena*, *Bouteloua*, *Cynodon*, *Eragrostis*, *Echinochloa*, *Festuca*, *Hordeum*, *Stipa*, *Panicum*, *Phalaris*, *Saccharum*, *Oryza*, *Secale*, *Setaria*, *Sorghastrum*, *Sorghum*, and *Triticum* (1). Also reported on *Bromus*, *Dactylis* and *Elymus* (2).

1. Stoner and Gustin, 1980; 2. Whitmore et al., 1981.

*Delphacodes consimilis* Van Duzee.

CO, NV. Probable grass feeder (1).

1. Swezey, 1904.

*Delphacodes gillettei* (Van Duzee).

CO, NV, UT. Food plants are grasses in damp places (1).

1. Swezey, 1904.

*Delphacodes indistincta* Crawford.

CO. Probable grass feeder, 1904.

*Delphacodes lutulenta* (Van Duzee).

CO. Food plants are June grasses in low places (1).

1. Swezey, 1904.

*Delphacodes magna* (Crawford).

CO. Probable grass feeder (1).

1. Swezey, 1904.

*Delphacodes neocclusa* Muir and Giffard.

CO. Probable grass feeder (1).

1. Swezey, 1904.

*Delphacodes nigradorsum* (Crawford).

CO. Probable grass feeder (1).

1. Swezey, 1904.

*Delphacodes nigrigaster* (Crawford).

CO. Probable grass feeder (1).

1. Swezey, 1904.

*Delphacodes oclusa* (Van Duzee).

CO, NV. Food plants are grasses in damp places (1).

1. Swezey, 1904.

*Delphacodes osborni* (Van Duzee).

CO. Food plants are June grass in dry meadows (1).

1. Swezey, 1904.

*Delphacodes pacifica* Crawford.

AZ. Probable grass feeder (1).

1. Swezey, 1904.

*Delphacodes pellucida* (Fabricius).

CO, NV. Food plants are grasses (1).

1. Swezey, 1904.

*Pissonotus aphidioides* Van Duzee.

AZ, CO. Food plants are grasses in low meadows (1).

**Diaspididae**

Only a few armored scales attack grasses. They feed on both the roots and blades of grasses, most often in the leaf

axils near the ground. Taxonomy: Ferris, 1937-42; McKenzie, 1956.

*Chortinaspis frankliniana* Ferris.

NM. Reported on Hilaria (1).

1. Ferris, 1937-42.

*Chortinaspis graminella* (Cockerell).

AZ, CO, NM. Reported most commonly on Bouteloua, but also on Monanthochloe (1).

1. Ferris, 1937-42.

*Odonaspis ruthae* Kotinsky.

AZ. (Bermuda Grass Scale). Reported on Cynodon (1); also on Chloris, Cenchrus, Eremochloa, Axonopus, Setaria, Rhynchelytrum, Panicum, Sporobolus and Stenotaphrum (2).

1. Roney, 1949; 2. Dekle, 1965.

*Situlaspis yuccae* (Cockerell).

AZ, NM. A broad host range includes grass (1).

1. Ferris, 1937-42.

### Fulgoridae

Only one species of fulgorid is reported on grass in our area. Adults and nymphs of planthoppers are sap-feeders. Taxonomy: Dozier, 1926; Ball, 1933, Swezey, 1904; Kramer, 1978.

*Cyrpoptus vanduzeei* Ball.

AZ, NM. Found on bunches of Muhlenbergia (1).

1. Ball, 1933.

### Issidae

Two genera of issids are grass feeders in our area. They are found in the crown of the plant and are sap-feeders. Taxonomy: Doering, 1940; Ball, 1935ab.

*Bruchomorpha abrupta* Ball.

NM. Probable grass feeder (1).

1. Ball, 1935b.

*Bruchomorpha beameri* Doering.

AZ. Probable grass feeder (1).

1. Doering, 1940.

*Bruchomorpha bunnii* Doering.

AZ, NM. Probable grass feeder (1).

1. Doering, 1940.

*Bruchomorpha decorata* Metcalf.

AZ. Restricted to Chaetochloa (1).

1. Ball, 1935b.

*Bruchomorpha extensa* Ball.

AZ, NM, UT. Probable grass feeder (1).

1. Ball, 1935b.

*Bruchomorpha mormo* Kirkaldy.

AZ. Probable grass feeder (1).

1. Doering, 1940.

*Bruchomorpha oculata* Newman.

AZ, CO, NM, NV, UT. Food plants are grasses in low damp places (1). Abundant in bluegrass pastures (2); also found in Stipa-Andropogon associates (3).

1. Swezey, 1904; 2. Osborn, 1939; 3. Hendrickson, 1929.

*Bruchomorpha pallidipes* Stal.

CO. Probable grass feeder (1).

1. Doering, 1940.

*Bruchomorpha rosea* Doering.

AZ, NM.

1. Doering, 1940.

*Bruchomorpha rugosa* Metcalf.

AZ. Taken on range grasses (1).

1. Ball, 1935b.

*Bruchomorpha suturalis* Melichar.

AZ, CO, NM. Probable grass feeder (1).

1. Doering, 1940.

*Bruchomorpha tristis* Stal.

AZ, CO. Found at high elevations (1).

1. Ball, 1935b.

*Bruchomorpha triunata* Ball.

AZ. Taken sweeping range grasses (1).

1. Ball, 1935b.

*Papagona papoosa* Ball.

AZ. Taken on Muhlenbergia (1).

1. Ball, 1935b.

*Papagona succinea* Ball.

AZ. Taken on Triodia (1).

1. Ball, 1935a.

### Margarodidae

Margarodids are globular scale insects which feed on the roots of plants. They are called ground-pearls and are known to cause severe damage to sod. In addition to one native and one introduced species, there are as yet undescribed species of grass margarodids in the West. Taxonomy: Morrison, 1928; McDaniel, 1965, 1966.

*Margarodes hiemalis* (Cockerell).

AZ, NM. Infests roots of grasses (1).

1. MacGillivray, 1921.

*Margarodes meridionalis* Morrison.

AZ. (The Gound Pearl). Infests roots of Cynodon, Eremochloa, Stenotaphrum and Aristida (1).

1. Kouskalekas and Self, 1973.

### Membracidae

One polyphagous treehopper is reported on grass in our area. Taxonomy: Caldwell, 1949; Kopp and Yonke, 1979.

*Spissistilus festinus* (Say).

AZ, CO, NM, NV, UT. (Three-cornered Alfalfa hopper). Hibernates in grass clumps; its feeding scars girdle the stems. Known hosts are Cynodon, Avena, Sorghum, Triticum, Erigeron and Hordeum (1).

1. Kopp and Yonke, 1973.

### Ortheziidae

One grass ensign scale occurs in our area. It feeds on the culms and blades of wild grasses. Taxonomy: MacGillivray, 1921, Morrison, 1925.

*Orthezia graminis* Cockerell.

NM. Infests culms and blades of grasses (1).

1. Essig, 1958.

### Pseudococcidae

Many species of mealybug infest grasses. They feed mainly on the blades, but sometimes the roots of the plants. Adults and nymphs are active and are sapfeeders. Taxonomy: Ferris, 1950, 1953; McKenzie, 1967.

*Antonina boutelouae* Parrott.

AZ. Found on Bouteloua (1).

1. Ferris, 1950.

*Antonina graminis* (Maskell).

AZ, NM. (Rhodesgrass Mealybug). Known as the rhodesgrass mealybug. Infests 74 spp. of grass in the genera: Sorghum, Cynodon, Chloris, Parapholis, Stenotaphrum, Buchloe, Sporobolus, Bouteloua, Dactyloctenium, Eleusine, Leptochloa, Trichloris, Cenchrus, Dactylis, Eragrostis, Festuca, Pappophorum, Vaseochloa, Tridens, Hilaria,

Phalaris, Andropogon, Sorghastrum, Elyoneurus, Trachypogon, Echinochloa, Digitaria, Eremochloa, Panicum, Pennisetum, Paspalum, Rhychelytrum and Setaria (1).

1. Chada and Wood, 1960.

*Antonina nortoni* Parrott.

AZ, NM. Appears as white cottony sac at base of plant. Infests Bouteloua, Aristida and Eragrostis (1).

1. McKenzie, 1967.

*Chnaurococcus trifolii* (Forbes).

CO, NM. Found on roots of grasses (1).

1. MacGillivray, 1921.

*Cryptoripersia salina* (Ehrhorn).

AZ, UT. (Felt Sac Mealybug). Infests Agropyron, Bromus, Elymus, Stipa, Distichlis, Sitanion and Danthonia (1).

1. McKenzie, 1967.

*Cryptoripersia trichura* (Cockerell).

AZ, NM. Found on roots of grass (1).

1. MacGillivray, 1921.

*Discococcus hopi* Ferris.

AZ. (Hopi Mealybug). Reported on Stipa (1) and Oryzopsis (2).

1. McKenzie, 1967; 2. Ferris, 1953.

*Distichlococcus alkalinus* (Cockerell).

NM. Host: Distichlis (1).

1. Ferris, 1950.

*Distichlococcus californicus* (Ehrhorn).

UT. Hosts are Elymus, Oryzopsis (1) and Festuca (2).

1. McKenzie, 1967; 2. Ferris, 1953.

*Distichlococcus fontanus* Ferris.

NM. Host is Distichlis (1).

1. Ferris, 1950.

*Dysmicoccus roseotinctus* (Cockerell and Cockerell).

NM. Found on roots of grass (1).

1. Ferris, 1953.

*Dysmicoccus salmonaceus* (Cockerell).

CO, NM. Found on roots of grass (1).

1. Ferris, 1950.

*Heterococcus arenae* Ferris.

NM. (Sand Mealybug). Infests grasses including Poa, Stipa, Agropyron, Aristida and Elymus (1).

1. McKenzie, 1967.

*Heterococcus tuttlei* Miller and McKenzie.

AZ. Damages seed crops of Cynodon, also reported on Sorghum (1).

1. Miller and McKenzie, 1970.

*Humococcus hilariae* (Ferris).

NM. Occurs beneath the sheathing bases of Hilaria (1).

1. McKenzie, 1967.

*Humococcus muhlenbergiae* Ferris.

NM. Found on Muhlenbergia (1).

1. Ferris, 1953.

*Humococcus porterae* (Cockerell).

NM. Infests roots of grass (1).

1. MacGillivray, 1921.

*Misericoccus arenarius* (Doane and Steinweden).

UT. Reported on Bromus, Hordeum, Lolium and Stipa (1).

1. McKenzie, 1967.

*Phenacoccus helianthi* (Cockerell).

AZ, CO, NM, NV. (Sunflower Mealybug). A polyphagous species reported on Bouteloua and other grasses (1).

1. McKenzie, 1967.

*Phenacoccus solani* Ferris.

CO, NM, UT. (Solanum Mealybug). A general feeder reported on Bouteloua (1).

1. McKenzie, 1967.

*Rhizococcus leucosomus* (Cockerell).

CO, AZ, NM. Found on roots of Phleum (1).

1. Ferris, 1953.

*Stemmatomerinx decorata* Ferris.

NM, NV. Occurs on upper side of leaves of Distichlis (1).

1. McKenzie, 1967.

*Tridiscus sporoboli* (Cockerell).

NM. Found on Sporobolus (1).

1. MacGillivray, 1921.

*Trionymus americanus* (Cockerell).

UT. (American Grass Mealybug). Reported on Elymus and lawns (1).

1. McKenzie, 1967.

*Trionymus hypolithus* Shotwell.

CO. Probable grass feeder (1).

1. McKenzie, 1967.

*Trionymus utahensis* (Cockerell).

UT. (Utah Grass Mealybug). Reported on Elymus, Ammophila, Avena, Bromus, Cynodon, Sorghum and Triticum (1).

1. McKenzie, 1967.

*Trionymus violascens* Cockerell.

CO. Found on Agropyron (1).

1. Ferris, 1950.

## Hymenoptera

### Cephalidae

The stem sawfly bores in the stems of grasses. Taxonomy: Krombein et al., 1979; Wallace and McNeal, 1966.

*Cephus cinctus* Norton.

CO, NM, NV, UT. (Wheat Stem Sawfly). A grass feeder and pest of grains. Its hosts are Elymus, Triticum, Agropyron, Hordeum, Bromus, Phleum, Festuca, Stipa, Deschampsia, Calamagrostis, Secale, Beckmannia and Calamovilfa (1, 2).

### Eurytomidae

The eurytomids have variable habits. In our region the larvae of three genera infest the stems of grasses. Taxonomy: Krombein et al., 1979; Phillips and Emery, 1920; Bugbee, 1966.

*Cathalaria opuntiae* Burks.

AZ, NM, NV. Host: Hilaria (1).

1. Krombein et al., 1979.

*Eurytomocharis eragrostidis* Howard.

NM. Frequently in Bouteloua, Muhlenbergia and Hilaria (1). Additional hosts: Agropyron, Agrostis, Andropogon, Sporobolus, Eragrostis, and Oryzopsis (2).

1. Watts and Bellotti, 1967; 2. Krombein et al., 1979.

*Eurytomocharis pascuorum* Bugbee.

NM. Mostly in Bouteloua but also in Hilaria (1). Additional hosts: Stipa and Eragrostis (1).

1. Watts and Bellotti, 1967; 2. Krombein et al., 1979.

*Eurytomocharis planitiae* Bugbee.

NM. Hosts are species of Bouteloua (1, 2).

1. Watts and Bellotti, 1967; 2. Krombein et al., 1979.

*Eurytomocharis sporoboli* Bugbee.

NM. Hosts are species of Sporobolus, but also on Bouteloua (1).

1. Watts and Bellotti, 1967.

*Harmolita agropyrocola* Phillips and Emery.

UT. Hosts are species of Agropyron (1).

1. Krombein et al., 1979.

*Harmolita elymi* (French).

AZ, CO, NM, NV, UT. Hosts: Elymus (1).

1. Krombein et al., 1979.

*Harmolita flavicoxa* Phillips.

NM. Host: Elymus (1).

1. Krombein et al., 1979.

*Harmolita gillettei* Phillips and Emery.

CO. Probable grass feeder (1).

1. Phillips and Emery, 1919.

*Harmolita grandis* (Riley).

AZ, UT. (Wheat Strawworm). Attacks Triticum, other cereals (1).

1. Krombein et al., 1979.

*Harmolita hesperus* Phillips and Emery.

UT. Host: Elymus (1).

1. Krombein et al., 1979.

*Harmolita hordei* (Harris).

CO. (Barley Jointworm). Host: Hordeum (1).

1. Krombein et al., 1979.

*Harmolita longula* (Dalman).

UT. Host: Dactylis (1).

1. Krombein et al., 1979.

*Harmolita montana* (Ashmead).

CO. Probable grass feeder (1).

1. Phillips and Emery, 1919.

*Harmolita occidentalis* Phillips and Emery.

NM. Host: Agropyron (1).

1. Krombein et al., 1979.

*Harmolita poophila* (Phillips and Emery).

CO. Host: Poa (1).

1. Krombein et al., 1979.

*Harmolita rufipes* Phillips and Emery.

NM, UT. Host: Elymus (1).

1. Krombein et al., 1979.

*Harmolita secale* (Fitch).

UT. Hosts: Secale and Elymus (1).

1. Krombein et al., 1979.

*Harmolita tritici* (Fitch).

UT. (Wheat Jointworm). Hosts: Triticum and other cereals (1).

1. Krombein et al., 1979.

*Harmolita utahensis* Phillips.

UT. Reported on Triticum (1).

1. Krombein et al., 1979.

*Harmolita vaginicola* (Doane).

CO, UT. Hosts: Triticum, other cereals (1).

1. Krombein et al., 1979.

*Harmolita websteri* (Howard).

CO, UT. Hosts: Secale, Elymus (1).

1. Krombein et al., 1979.

## Formicidae

Ants are eusocial insects which vary greatly in foraging behavior. Included in this list are the seed harvesters. Taxonomy: Gregg, 1963, 1958; Cole, 1937, 1942, 1955ab, 1954, 1955; Creighton 1930, 1950; Wheeler and Creighton, 1934; Smith, 1947.

*Novomessor cockerelli* (Andre).

AZ, NM. Actively collected seeds of Setaria (1) and Sorghum (2).

1. Davidson, 1977; 2. Whitford, 1976.

*Pheidole barbata* Wheeler.

AZ. Probable harvester of grass seed.

*Pheidole bicarinata* Mayr.

AZ, CO. Probable harvester of grass seed.

*Pheidole californica* Mayr.

AZ, NV, UT. Probable harvester of grass seed.

*Pheidole cerebrosiior* Wheeler.

AZ. Probable harvester of grass seed.

*Pheidole ceres* Wheeler.

AZ, CO. Seeds of Muhlenbergia, Panicum, Poa and Sporobolus are foods (1).

1. Gregg, 1963.

*Pheidole clydei* Gregg.

NM. Habitat is short grass prairie (1).

1. Gregg, 1963.

*Pheidole cockerelli* Wheeler.

AZ, CO, NM. Habitat is short grass prairie (1).

1. Gregg, 1963.

*Pheidole crassicornis* Wheeler.

AZ. Probable harvester of grass seed.

*Pheidole desertorum* Wheeler.

AZ, NM, NV, UT. Actively harvested seeds of Setaria (1).

1. Davidson, 1977.

*Pheidole gilvescens* Wheeler.

AZ. Probable harvester of grass seed.

*Pheidole grundmanni* Smith.

UT. Probable harvester of grass seed.

*Pheidole hyatti* Emery.

CO. Probable harvester of grass seed.

*Pheidole micula* Wheeler.

AZ. Probable harvester of grass seed.

*Pheidole militica* Wheeler.

AZ, NM. Harvests seeds of Bouteloua and Erioneuron (1).

1. Whitford, 1981.

*Pheidole pilifera* (Roger).

CO, UT. Probable harvester of grass seed.

*Pheidole rhea* Wheeler.

AZ. Probable harvester of grass seed.

*Pheidole rugulosa* Gregg.

AZ. Harvests seeds of Bouteloua and Erioneuron (1).

1. Whitford, 1981.

*Pheidole sciara* Cole.

NM. Probable harvester of grass seed.

*Pheidole sciophila* Wheeler.

AZ, NM. Probable harvester of grass seed.

*Pheidole senex* Gregg.

CO. Probable harvester of grass seed.

- Pheidole sitarches* Wheeler.  
NM. Probable harvester of grass seed.
- Pheidole spadonia* Wheeler.  
AZ. Probable harvester of grass seed.
- Pheidole subdentata* Pergande.  
AZ. Probable harvester of grass seed.
- Pheidole tepicana* Pergande.  
AZ. Probable harvester of grass seed.
- Pheidole vallicola* Wheeler.  
AZ. Probable harvester of grass seed.
- Pheidole virago* Wheeler.  
AZ. Probable harvester of grass seed.
- Pheidole xerophila* Wheeler.  
AZ, NM. Harvests seeds of *Bouteloua* and *Erioneuron* (1).  
1. Whitford, 1981.
- Pogonomyrmex anergismus* Cole.  
NM. Probable harvester of grass seed.
- Pogonomyrmex apache* Wheeler.  
AZ, NM. Probable harvester of grass seed.
- Pogonomyrmex barbatus* (Smith).  
AZ, CO, NM, UT. (Red Harvester Ant). Probable harvester of grass seed.
- Pogonomyrmex bicolor* Cole.  
AZ. Probable harvester of grass seed.
- Pogonomyrmex brevispinosus* Cole.  
NV. Probable harvester of grass seed.
- Pogonomyrmex californicus* (Buckley).  
AZ, NM, NV, UT. (California Harvester Ant). Actively harvested seeds of *Setaria* (1).  
1. Davidson, 1977.
- Pogonomyrmex desertorum* Wheeler.  
AZ, NM. Harvests seeds of *Erioneuron* (1).  
1. Whitford and Kay, 1974.
- Pogonomyrmex huachucanus* Wheeler.  
AZ. Probable harvester of grass seed.
- Pogonomyrmex imberbiculus* Wheeler.  
AZ, NM, NV. Reported on *Bouteloua* (1).  
1. Watts, 1963.
- Pogonomyrmex magnacanthus* Cole.  
AZ, NV. Actively harvested seeds of *Setaria* (1).  
1. Davidson, 1977.
- Pogonomyrmex occidentalis* (Cresson).  
AZ, CO, NM, NV, UT. (Western Harvester Ant). Eats seeds and leaf parts in grass lands especially *Sporobolus*; also *Aristida*, *Buchloe*, *Bouteloua*, *Stipa*, *Elymus*, *Dactylis*, *Tragopogon* and *Agropyron* (1).  
1. Rogers, 1974.
- Pogonomyrmex owyheei* Cole.  
NV, UT. Harvests seeds of *Sitanion* (1).  
1. Landeen et al., 1979.
- Pogonomyrmex pima* Wheeler.  
AZ. Harvests *Panicum*, Also *Setaria* (1) and *Sorghum* (2).  
1. Davidson, 1977; 2. Whitford, 1976.
- Pogonomyrmex rugosus* Emery.  
AZ, NV, NM. Harvests *Panicum*, also *Setaria* (1) and *Sorghum* (2).  
1. Davidson, 1977; 2. Whitford, 1976.
- Pogonomyrmex salinus* Olsen.  
NV. Probable harvester of grass seed.
- Pogonomyrmex subdentatus* Mayr.  
NV. Probable harvester of grass seed.
- Pogonomyrmex subnitidus* Emery.  
NV. Probable harvester of grass seed.
- Solenopsis aurea* Wheeler.  
AZ, NM. Probable harvester of grass seed.
- Solenopsis geminata* (Fabricius).  
AZ. (Fire Ant). Granivorous, also partially predatory (1).  
1. Cole, 1934.
- Solenopsis huachucana* Wheeler.  
AZ. Probable harvester of grass seed.
- Solenopsis krockowi* Wheeler.  
NM. Probable harvester of grass seed.
- Solenopsis molesta* (Say).  
AZ, NM, UT. (Thief Ant). Probable harvester of grass seed.
- Solenopsis salina* Wheeler.  
CO. Probable harvester of grass seed.
- Solenopsis trunctorum* Forel.  
CO. Probable harvester of grass seed.
- Solenopsis xyloni* McCook.  
AZ, NM, CO. (Southern Fire Ant). Actively harvested seeds of *Setaria* (1).  
1. Davidson, 1977.
- Veromessor andrei* (Mayr).  
AZ, NV. Granaries often overflow with seeds of *Hordeum* (1).  
1. Cole, 1934.
- Veromessor lariversi* Smith.  
NV. Probable harvester of grass seed (1).  
1. Creighton, 1953.
- Veromessor pergandei* (Andre).  
AZ, NV. Sometimes associated with *Bromus* (1). Actively harvested seeds of *Setaria* (2).  
1. Cole, 1934; 2. Davidson, 1977.

### Tenthredinidae

The larvae of most tenthredinid sawflies occur on woody plants. One genus in our area contains grass feeding species. Taxonomy: Krombein et al., 1979; Ross, 1945.

- Pachynematus extensicornis* (Norton).  
CO. (Grass Sawfly). Hosts: *Triticum*, other Gramineae (1).  
1. Krombein et al., 1979.
- Pachynematus obductus* (Hartig).  
CO, NV. Host: Gramineae (1).  
1. Krombein et al., 1979.
- Pachynematus setator* Ross.  
UT. Hosts: *Festuca* (1).  
1. Kamm, 1975.
- Pachynematus sporax* Ross.  
UT. Host: *Triticum* (1).  
1. Krombein et al., 1979.

## Lepidoptera

### Amatidae

These day flying moths are often found hanging on their host plants. The larvae of a few species feed on coarse native grasses. Taxonomy: Holland, 1903; Nye, 1980.

### *Cisseps fulvicollis* Hubner.

CO, NM, UT. (Yellow collared Scape Moth). Larvae feed on coarse native grasses (1).  
1. Holland, 1903.

*Ctenucha cressonana* Grote.

CO. Grass feeder (1).

1. Holland, 1903.

*Ctenucha venosa* Walker.

AZ, CO, NM. Larvae feed on coarse native grasses (1).

1. Holland, 1903.

**Arctiidae**

The larvae of only a few polyphagous species feed on grasses. On occasion, these common species are destructive. Taxonomy: Holland, 1903; Nye, 1980.

*Apantesis blakei* Grote.CO. Known to feed on *Aristida*, *Bromus*, *Bouteloua*, *Agropyron*, *Sporobolus* (1) and *Triticum* (2).*Apantesis nevadensis* Grote and Robinson.

(Nevada Tiger-Moth). Larvae do severe damage to range grasses (1).

1. USDA, 1977.

*Estigmene acrea* (Drury).

AZ, CO, NV, UT. (Salt Marsh Caterpillar). General feeder reported on grasses and corn (1).

1. Essig, 1926.

*Pyrrhactia isabella* Smith.AZ, CO, UT. (Banded Woolly Bear). Food plants are plantain, grasses and weeds (1), reported on *Agropyron* (2).

1. Essig, 1926; 2. USU records.

**Cosmopterygidae**

Only one species of this microlepidopteran family is reported on grass in our area. The larvae feed on the grain heads and cause serious damage to grain sorghum. Taxonomy: Hodges, 1978.

*Pyroderces rileyi* (Walsingham).AZ, NM. (Pink Scavenger Moth). Larvae are scavengers on plants including *Sorghum* and *Zea* (1).

1. Hodges, 1978.

**Elachistidae**

All of the members of this small family are believed to be grass feeders. The larvae mine the blades and culms of wild grasses. Taxonomy: Braun, 1948.

*Cosmiotes herbigrada* (Braun).

CO, UT. A grass feeder (1).

1. Braun, 1948.

*Elachista adempta* Braun.

CO, UT. A grass feeder (1).

1. Braun, 1948.

*Elachista albella* (Chambers).

AZ, CO. A grass feeder (1).

1. Braun, 1948.

*Elachista cana* Braun.

CO. A grass feeder (1).

1. Braun, 1948.

*Elachista leucofrons* Braun.CO, NM. Larval hosts are *Elymus* and *Hystrix* (1).

1. Braun, 1948.

*Elachista sincera* Braun.

UT. A grass feeder (1).

1. Braun, 1948.

*Elachista synopla* Braun.

UT. A grass feeder (1).

1. Braun, 1948.

**Gelechiidae**

One species of this family is reported on grass. It is best known for its damage to stored grain, but it also infests the kernels of standing grain. Taxonomy: Holland, 1903.

*Sitotroga cerealella* (Olivier).AZ, CO, NM, NV, UT. (Angoumois Grain Moth). Attacks heads of standing grain including *Triticum*, *Hordeum*, *Zea*, and *Sorghum* (1).

1. Essig, 1926.

**Geometridae**

One inch-worm species is reported to have a grass host in our region. Taxonomy: Holland, 1903; Nye, 1979.

*Cingilia catenaria* (Drury).

CO. (The Chair-streak Moth). Host is reportedly grass (1).

1. Tietz, 1972.

**Hesperiidae**

The skipper larvae of the nominate subfamily are all grass or sedge feeders. They feed on the crown of the plant. Taxonomy: Howe, 1975; Brown, 1957; MacNeil, 1964; Freeman, 1973.

*Adopaeoides prittwitzi* (Plotz).

AZ. A grass feeder (1).

1. R. Bailowitz (pers. comm.).

*Amblyscirtes aenus* Edwards.

AZ, CO, NM, UT. (Bronze Roadside Skipper). Prefers dry and stony habitats (1).

1. Brown, 1957.

*Amblyscirtes cassus* Edwards.

AZ, NM. Probable grass feeder (1).

1. Howe, 1975.

*Amblyscirtes eos* (Edwards).

AZ, CO, NM. (Eos Roadside Skipper). Probable grass feeder (1).

1. Howe, 1975.

*Amblyscirtes exoteria* (Herrich-Schaeffer).

AZ, NM. Probable grass feeder (1).

1. Howe, 1975.

*Amblyscirtes fimbriata* (Plotz).

AZ. Food plant is a grass (1).

1. Howe, 1975.

*Amblyscirtes nereus* (Edwards).

AZ, NM. Probable grass feeder (1).

1. Howe, 1975.

*Amblyscirtes nysa* (Edwards).AZ, NM. (Nysa Roadside Skipper). Food plants include *Digitaria*, *Setaria*, *Stenotaphrum*, and *Echinochloa* (1).

1. Howe, 1975.

*Amblyscirtes oslari* (Skinner).

AZ, CO, NM. (Oslar's Roadside Skipper). Found in dry streambeds or canyons (1).

1. Brown, 1957.

*Amblyscirtes phylace* (Edwards).

AZ, CO, NM. (Phylace Roadside Skipper). Inhabits grassy mountain meadows (1).

1. Brown, 1957.

*Amblyscirtes prenda* Evans.

AZ. Probable grass feeder (1).

1. Howe, 1975.

- Amblyscirtes simius* Edwards.  
AZ, CO, NM. (Simius Roadside Skipper). Larval foodplant is *Bouteloua* (1).  
1. Howe, 1975.
- Amblyscirtes texanae* Bell.  
AZ, NM. (Texas Roadside Skipper). Probable grass feeder (1).  
1. Howe, 1975.
- Amblyscirtes vialis* (Edwards).  
AZ, CO, NM, UT. (Roadside Skipper). Foodplants are *Poa*, *Avena*, and *Agrostis*; also reared on *Cynodon* (1).  
1. Howe, 1975.
- Ancyloxypha arene* (Edwards).  
AZ, NM. (Tropical Least Skipper). Probable grass feeder (1).  
1. Howe, 1975.
- Ancyloxypha numitor* (Fabricius).  
CO, NM. (Least Skipper). Reported larval foodplants are *Poa*, *Zizania*, *Zizaniopsis* and other grasses of wet places (1).  
1. Howe, 1975.
- Atalopedes campestris* (Boisduval).  
AZ, CO, NM, NV, UT. Feeds upon a variety of grasses including *Cynodon*, *Stenotaphrum*, *Digitaria* and *Distichlis* (1, 2).  
1. Essig, 1926; 2. Howe, 1975.
- Atrytone arogos* (Boisduval and LeConte).  
CO, NM. (Arogos Skipper). Foodplants are *Andropogon* and *Panicum* (1).  
1. Howe, 1975.
- Atrytone delaware* (Edwards).  
CO, NM. The larval foodplants are *Andropogon*, *Panicum* and *Erianthus* (1).  
1. Howe, 1975.
- Atrytonopsis cestus* (Edwards).  
AZ. Probable grass feeder (1).  
1. Howe, 1975.
- Atrytonopsis deva* (Edwards).  
AZ, CO, NM. (Deva Skipper). Found along streams crossing hot plains and prairies (1).  
1. Brown, 1957
- Atrytonopsis hianna* (Scudder).  
CO, NM. Larval foodplant is *Andropogon* (1). Found on hot, dry plains (2).  
1. Howe, 1975; 2. Brown, 1957.
- Atrytonopsis lunus* (Edwards).  
AZ, NM. Probable grass feeder (1).  
1. Howe, 1975.
- Atrytonopsis ovinia* (Hewitson).  
AZ, NM. Probable grass feeder (1).  
1. Howe, 1975.
- Atrytonopsis python* (Edwards).  
AZ, NM, NV. Probable grass feeder (1).  
1. Howe, 1975.
- Atrytonopsis turneri* Freeman.  
CO, NM. Probable grass feeder (1).  
1. Howe, 1975.
- Atrytonopsis vierecki* (Skinner).  
AZ, CO, NM, UT. (Viereck's Skipper). Found on prairies along permanent streams (1).  
1. Brown, 1957.
- Copaeodes aurantiaca* (Hewitson).  
AZ, CO, NM, NV, UT. (Orange Skipperling). Preferred larval foodplant is *Cynodon* (1).  
1. Howe, 1975.
- Euphyes bimacula* (Grote and Robinson).  
CO, NM. Probable grass feeder.
- Euphyes vestris* (Boisduval).  
AZ, CO, NM, NV. (Dun Skipper). Foodplants include sedges and grasses. Reported on *Tridens* (1).  
1. Howe, 1975.
- Hesperia comma* (Linnaeus).  
AZ, CO, NM, NV, UT. Larval food plants include *Stipa*, *Poa*, *Festuca*, *Bromus*, *Lolium* (1), and *Phleum* (2). Females observed ovipositing on *Bouteloua* and *Andropogon* (3).  
1. Howe, 1975; 2. MacNeil, 1964; 3. Scott, 1975.
- Hesperia juba* (Scudder).  
AZ, CO, NM, NV, UT. (Juba Skipper). Food plant is a perennial bunchgrass (1).  
1. Howe, 1975.
- Hesperia leonardus* Harris.  
CO. (Leonard's Skipper). Preferred foodplants are *Agrostis*, *Panicum* and *Eragrostis* (1).  
1. Howe, 1975.
- Hesperia lindseyi* Holland.  
NV. Food plants are *Festuca* and *Danthonia*. Where these are close-cropped by grazing the larvae construct partly subterranean shelters (1).  
1. Howe, 1975.
- Hesperia meriamae* MacNeil.  
NV. Foodplants are *Andropogon* (1) and *Festuca* (2).  
1. Howe, 1975; 2. MacNeil, 1964.
- Hesperia nevada* (Scudder).  
AZ, CO, NM, NV, UT. (Nevada Skipper). *Stipa* is the preferred foodplant (1).  
1. MacNeil, 1964.
- Hesperia ottoe* Edwards.  
CO. (Ottoe's Skipper). The larval foodplant is *Leptoloma* (1).  
1. Howe, 1975.
- Hesperia pahaska* Leussler.  
AZ, CO, NM, NV, UT. (Pahaska Skipper). Foodplants are *Bouteloua* and *Tridens* (1).  
1. Howe, 1975.
- Hesperia pawnee* Dodge.  
CO. (Pawnee Skipper).  
Feeds on perennial bunchgrasses (1).  
1. Howe, 1975.
- Hesperia uncas* Edwards.  
AZ, CO, NM, NV, UT. (Uncas Skipper). Found in dry grasslands (1). The food plants are *Bouteloua* and *Stipa* (2).  
1. Brown, 1957; 2. MacNeil, 1964.
- Hesperia viridis* (Edwards).  
AZ, CO, NM. (Green Skipper). Native food plant is thought to be *Bouteloua* (1), the larvae have been reared on *Lolium* (2).  
1. MacNeil, 1964; 2. Howe, 1975.
- Hesperia woodgatei* (Williams).  
AZ, NM. Larvae are found on perennial bunchgrasses (1).  
1. Howe, 1975.
- Hylephila phyleus* (Drury)  
AZ, NM, NV, UT. The larvae feed on a wide variety of grasses including *Agrostis*, *Cynodon*, *Stenotaphrum*, *Digitaria* and *Poa* (1).  
1. Howe, 1975.

- Lerema accius* (Smith).  
AZ. (Clouded Skipper). Larval foodplants are Erianthus, Stenotaphrum and Echinochloa (1).  
1. Howe, 1975.
- Lerodea arabus* (Edwards).  
AZ. Probable grass feeder (1).  
1. Howe, 1975.
- Lerodea eufala* (Edwards).  
AZ, NV, UT. (Eufala Skipper). Foodplants are Sorghum, Stenotaphrum (1), and Poa (2).  
1. Howe, 1975; 2. Klots, 1951.
- Nastra julia* (Freeman).  
AZ. (Julia's Skipper). Reared from Stenotaphrum (1).  
1. Howe, 1975.
- Nastra neamathla* (Skinner and Williams).  
AZ, NM. (Neamathla Skipper). Probable grass feeder (1).  
1. Howe, 1975.
- Oarisma edwardsii* (Barnes).  
AZ, CO, NM. (Edwards Skipperling). Feeds on soft grasses such as Poa (1, 2).  
1. Brown, 1957; 2. Klots, 1951.
- Oarisma garita* (Reakirt).  
AZ, CO, NM, UT. (Garita Skipperling). Feeds on soft grasses such as Poa (1, 2).  
1. Brown, 1957; 2. Klots, 1951.
- Oarisma powesheik* Parker.  
CO. (Powesheik Skipperling). A plains species (1).  
1. Brown, 1957.
- Ochlodes snowi* (Edwards).  
AZ, CO, NM. (Snow's Skipper). Found in open fields at higher elevations 7-9000 feet (1).  
1. Brown, 1957.
- Ochlodes sylvanoides* (Boisduval).  
AZ, CO, NV, UT. Found along grassy banks of streams, the foodplants of the larvae being grasses (1, 2, 3).  
1. Brown, 1957; 2. Essig, 1926; 3. Howe, 1975.
- Paratrytone melane* (Edwards).  
AZ. Several grasses are used by the larvae (1).  
1. Howe, 1975.
- Piruna microsticta* (Godman).  
AZ. Probable grass feeder (1).  
1. R. Bailowitz, pers. comm.
- Piruna pirus* (Edwards).  
AZ, CO, NM, UT. (Pirus Skipperling). Probable grass feeder (1).  
1. R. Bailowitz, pers. comm.
- Piruna polingii* (Barnes).  
AZ, NM. Probable grass feeder (1).  
1. R. Bailowitz, pers. comm.
- Poanes hobomok* (Harris).  
CO, NM. (Hobomok Skipper). Larval food is grass (1).  
1. Howe, 1975.
- Poanes taxiles* (Edwards).  
AZ, CO, NM, UT. (Taxiles Skipper). Probable grass feeder (1).  
1. Howe, 1975.
- Poanes zabulon* (Boisduval and LeConte).  
NM. (Zabulon Skipper). Larval food plants are Tridens and Eragrostis (1).  
1. Howe, 1975.
- Polites coras* (Cramer).  
AZ, CO. Reared on grasses (1).  
1. Howe, 1975.
- Polites draco* (Edwards).  
AZ, CO, NM, NV, UT. (Draco Skipper). Occurs in grassy meadows (1).  
1. Brown, 1957.
- Polites mystic* (Edwards).  
CO. (Long Dash). Found in moist meadows where it feeds on Agropyron, Poa, Echinochloa and Phleum (1).  
1. Howe, 1975.
- Polites origenes* (Fabricius).  
CO, NM. Found at mouths of canyons (1) they feed on Tridens (2).  
1. Howe, 1975.
- Polites sabuleti* (Boisduval).  
AZ, CO, NM, NV, UT. (Sand-hill Skipper). Feeds on several lawn grasses including Cynodon and Digitaria (1).  
1. Howe, 1975.
- Polites sonora* (Scudder).  
AZ, CO, NV, UT. (Sonora Skipper). Festuca is the suspected food plant (1).  
1. Howe, 1975.
- Polites themistocles* (Latreille).  
AZ, CO, NM, UT. (Tawny-edged Skipper). Food plants include Agropyron, Panicum, Echinochloa and Phleum (1).  
1. Howe, 1975.
- Stinga morrisoni* (Edwards).  
AZ, CO, NM. (Morrison's Skipper). Probable grass feeder (1).  
1. R. Bailowitz, pers. comm.
- Yvretta carus* (Edwards).  
AZ, NM. Probable grass feeder (1).  
1. R. Bailowitz, pers. comm.
- Yvretta rhesus* (Edwards).  
AZ, CO, NM. (Rhesus Skipper). Probable grass feeder (1).  
1. R. Bailowitz, pers. comm.

## Noctuidae

The noctuids are represented primarily by polyphagous species which prefer grasses. Some larvae are called cutworms because they cut the plant by feeding only at the base of the stem, toppling the plant. Others are called armyworms because their infestations march en masse through and into fields of grain. Taxonomy: Holland, 1903; Rings, 1977, Hardwick, 1970, 1965; Walkden, 1950; Crumb, 1956; Godfrey, 1972; Heinrich, 1956; Todd and Poole, 1980.

### *Agroperina dubitans* (Walker).

CO, UT. Food plants are grasses (1), reported on Poa (2).  
1. Crumb, 1956; 2. Crawford and Harwood, 1959.

### *Agroperina helva* (Grote).

CO, NM. Found in sod (1).  
1. Crumb, 1956.

### *Agrotis ipsilon* (Hufnagel).

AZ, CO, NV, UT. (Black Cutworm). Feeds on grasses and weeds (1).  
1. Rings, 1977.

### *Agrotis orthogonia* Morrison.

AZ, CO, NM, NV, UT. (Pale Western Cutworm). Reported on wheat and wild grasses (1) also Hordeum, Agropyron and Bromus (2).  
1. Essig, 1926; 2. Walkden, 1950.

### *Agrotis vancouverensis* Grote.

CO. Larvae have been collected on wheat (1). A general feeder (2).  
1. Cook, 1930; 2. Essig, 1926.



*Nephelodes minians* Guenee.  
CO. (Bronzed Cutworm). Reported to feed on Elymus, Phleum, Poa, Hordeum, Triticum, Zea, and Bromus (1).  
1. Godfrey, 1972.

*Oligia fractilinea* (Grote).  
AZ, CO, NV, UT. Feeds on corn and other grasses (1).  
1. Crumb, 1956.

*Oligia indirecta* (Grote).  
CO, NV, UT. Bores in grasses and sedges (1).  
1. Crumb, 1956.

*Peridroma saucia* (Hubner).  
AZ, CO, NV, UT. (Variegated Cutworm). A very general feeder (1).  
1. Crumb, 1956.

*Polia lilacina* (Harvey).  
AZ, CO, NM, NV, UT. Feeds on seed heads of Phleum and Eragrostis (1).  
1. Godfrey, 1972.

*Polia liquida* (Grote).  
CO. Feeds on grasses and Aster (1).  
1. Crumb, 1956.

*Polia prodeniformis* (Smith).  
AZ, NM. Eats several grasses (1).  
1. Godfrey, 1972.

*Polia radix* (Walker).  
NM. Feeds on willow, grass and clover (1).  
1. Godfrey, 1972.

*Protorthodes incincta* (Morrison).  
CO, NM. Attacks barley and wheat (1).  
1. Godfrey, 1972.

*Pseudaletia unipuncta* (Haworth).  
AZ, CO, NM, NV, UT. (Armyworm). Known grass hosts are Agrostis, Poa, Dactylis, Avena, Hordeum, Zea, Phleum, Setaria, Elymus, Sorghum, Cynodon, Agropyron and Festuca (1).  
1. Godfrey, 1972.

*Pseudanarta flava* Grote.  
CO, NM, NV, UT. Feeds on grass (1).  
1. Crumb, 1956.

*Rhynchagrotis exsertistigma* (Morrison).  
NV, UT. Feeds on various grasses (1).  
1. Crumb, 1956.

*Septis alia* (Guenee).  
CO, UT. Food plants are grasses (1).  
1. Crumb, 1956.

*Septis finitima* (Guenee).  
NV. Reported on Triticum, Bromus, Phleum, Zea, and Zizania (1).  
1. Crumb, 1956.

*Septis lignicolora* (Guenee).  
AZ, CO. Tunnels Agropyron and other grasses (1).  
1. Crumb, 1956.

*Septis occidens* (Grote).  
CO, NV, UT. Food plants are grasses (1).  
1. Crumb, 1956.

*Sideridis rosea* (Harvey).  
CO, UT. Feeds on grass and dandelion (1).  
1. Godfrey, 1972.

*Simyra henrici* (Grote).  
AZ, CO, UT. Feeds on grass, other plants (1).  
1. Crumb, 1956.

*Spodoptera frugiperda* (Abbott and Smith).  
AZ, CO, NM, NV. (Fall Armyworm). Prefers cereals and grasses, but will attack other plants (1). Reported on Triticum, Poa (2), Agrostis, Cynodon and Cenchrus (3).  
1. Crumb, 1956; 2. Essig, 1926; 3. Walkden, 1950.

*Xylena nupera* (Lintner).  
CO, UT. A general feeder including grasses (1).  
1. Crumb, 1956.

*Zosteropoda hirtipes* Grote.  
CO. General feeder including grasses (1).  
1. Godfrey, 1972.

### Pyrilidae

Nearly all grass feeding snout-moth larvae belong to the subfamily Crambinae. Most are known as sod webworms because of the silken webs constructed by the larval infestations. Taxonomy: Klots, 1940, 1942; Bleszynski, 1959; Munroe, 1976.

*Agriphila plumbifimbriella* Dyar.  
NM. Reported on Agrostis (1) and on mixed grasses in glades (2).  
1. Crawford, 1971; 2. Crawford and Harwood, 1959.

*Agriphila vulgivagella* Clemens.  
CO, UT. (Black-headed Sod Webworm). Reported on Poa and Andropogon (1) and pasture grasses (2).  
1. Miller, 1940; 2. Ainslie, 1922.

*Chilo loftini* Dyar.  
AZ. Reported damaging Sorghum and Triticum (1).  
1. Bibby, 1961.

*Chrysoteuchia topiaria* (Zeller).  
CO, NV, UT. Feeds on crowns of Poa, Festuca and Dactylis (1).  
1. Crawford and Harwood, 1964.

*Crambus browerellus* Klotts.  
CO. Probable grass feeder (1).  
1. Ainslie, 1922b.

*Crambus caliginosellus* Clemens.  
CO. Probable grass feeder (1).  
1. Ainslie, 1922b.

*Crambus coloradellus* Fernald.  
NM. Probable grass feeder (1).  
1. Ainslie, 1922b.

*Crambus cyrilellus* Klots.  
AZ, NM. Probable grass feeder (1).  
1. Ainslie, 1922b.

*Crambus dimidiatellus* Grote.  
AZ, NM. Probable grass feeder (1).  
1. Ainslie, 1922b.

*Crambus dumetellus* Hubner.  
CO. Probable grass feeder (1).  
1. Ainslie, 1922b.

*Crambus harpipterus* Dyar.  
NM. Occurs in mixed grasses (1).  
1. Crawford, 1971.

*Crambus hemiochrellus* Zeller.  
AZ, NM. Feeds on Poa (1).  
1. Ainslie, 1918.

*Crambus hortuellus* Hubner.  
AZ. Probable grass feeder (1).  
1. Ainslie, 1922b.

*Crambus innotatellus* Walker.  
CO. Probable grass feeder (1).  
1. Ainslie, 1922.

- Agrotis venerabilis* Walker.  
AZ, CO, NM, NV, UT. Larvae are abundant in cereal crops (1) including wheat (2) and oats (3), but most abundant in pastures with *Hordeum* (3).  
1. Walkden, 1950; 2. Crumb, 1956; 3. Cook, 1930.
- Aletia oxygala* (Grote).  
CO, UT. Feeds on various grasses and sedges (1). Reported on *Dactylis* (2).  
1. Crumb, 1956; 2. Godfrey, 1972.
- Amathes c-nigrum* (Linnaeus).  
AZ, CO, NM, NV, UT. (Spotted Cutworm). A general feeder (1) common in pasture grasses (2) bluegrass and lawns (3).  
1. Walkden, 1950; 2. Crumb, 1956; 3. Crawford and Harwood, 1959.
- Amathes flavotincta* (Smith).  
UT. Essentially a grass-feeding species (1).  
1. Crumb, 1956.
- Anagrapha falcifera* (Kirby).  
CO, UT. (Celery Looper). Attacks many plants including grasses (1).  
1. Rings, 1977.
- Caenurgina crassiuscula* (Haworth).  
AZ, CO, NM, UT. Feeds on clover, lupine and grasses (1).  
1. Crumb, 1956.
- Chytonix divesta* (Grote).  
AZ, NV, UT. Feeds on grasses (1).  
1. Crumb, 1956.
- Crymodes burgessi* (Morrison).  
AZ. Bores in the crowns of *Andropogon* and *Poa* (1).  
1. Walkden, 1950.
- Crymodes devastator* (Brace).  
NV, UT, CO. (Glassy Cutworm). A subterranean, sod-feeding species (1), damages small grains, grasses and corn (2). Reported on *Elymus* and *Poa* (3).  
1. Crumb, 1956; 2. Rings, 1977; 3. Crawford and Harwood, 1959.
- Dargida procincta* (Grote).  
CO, NV, UT. (Olive Green Cutworm). Feeds on various grasses, sedges, wheat and *Agropyron* (1); also attacks lawns (2).  
1. Crumb, 1956; 2. Crawford and Harwood, 1959.
- Euxoa auxiliaris* (Grote).  
AZ, CO, NM, NV, UT. (Army Cutworm). Attacks native grasses, weeds and crops (1). Reported on *Agropyron*, *Agrostis*, *Triticum* (2), *Hordeum*, *Bouteloua*, *Avena*, *Eragrostis*, *Elymus* and *Phleum* (3).  
1. Essig, 1926; 2. Rings, 1977; 3. Burton et al., 1980.
- Euxoa detersa* (Walker).  
CO, NV. Attacks corn and other grasses (1).  
1. Walkden, 1950.
- Euxoa messoria* (Harris).  
AZ, CO, NM, NV, UT. (Dark Sided Cutworm). Larvae attack wild grasses, weeds, crops (1). Reported on *Agrostis* and *Poa* (2).  
1. Essig, 1926; 2. Crawford and Harwood, 1959.
- Euxoa niveilinea* (Grote).  
CO, NM. Attacks wheat and corn (1).  
1. Walkden, 1950.
- Euxoa pallipennis* (Smith).  
CO, NV, UT. Larvae reported in wheat and in roadside vegetation (1).  
1. Walkden, 1950.
- Euxoa quadridentata* Grote and Robinson.  
CO, UT. Reared from wheat (1).  
1. Cook, 1930.
- Faronta diffusa* (Walker).  
AZ, NM, UT. (Wheathead Armyworm). Feeds almost exclusively on grasses and is especially destructive to wheat, oats, and rye (1). Reported also on *Andropogon* (2), *Elymus*, *Andropyron*, *Bromus*, *Hordeum*, *Echinochloa*, *Calamagrostis*, *Setaria*, *Sorghastrum*, *Sorghum* and *Dactylis* (3).  
1. Walkden, 1950; 2. Watts and Bellotti, 1967; 3. Godfrey, 1972.
- Faronta rubripennis* (Grote and Robinson).  
AZ. Reared from *Digitaria* (1).  
1. Godfrey, 1972.
- Faronta tetera* (Smith).  
AZ, CO, UT. Reared from *Digitaria* and *Dactylis* (1).  
1. Godfrey, 1972.
- Feltia ducens* Walker.  
CO, UT. (Dingy Cutworm). Attacks many crops and grasses (1), wheat (2), *Eragrostis* and lawns (3).  
1. Rings, 1977; 2. Cook, 1930; 3. Crawford and Harwood, 1959.
- Feltia subterranea* (Fabricius).  
AZ, CO, NV. (Granulate Cutworm). Attacks cereal crops (1).  
1. Essig, 1926.
- Heliothis phloxiphaga* Grote and Robinson.  
AZ, CO, NM, NV, UT. A general feeder (1). Phlox, Alfalfa, corn and grasses are larval hosts (2).  
1. Hardwick, 1965; 2. Cook, 1930.
- Lacinipolia olivacea* (Morrison).  
CO. Feeds on clover, grass and herbs (1).  
1. Crumb, 1956.
- Lacinipolia renigera* (Stephens).  
AZ, CO, NM, NV, UT. (Bristly Cutworm). A general feeder including grasses (1).  
1. Godfrey, 1972.
- Leucania commoides* Guenee.  
NM, UT. Feeds on *Dactylis* (1).  
1. Godfrey, 1972.
- Leucania farcta* (Grote).  
NV, UT. Feeds on various grasses including *Dactylis* and *Elymus* (1).  
1. Crumb, 1956.
- Leucania insueta* Guenee.  
AZ. Reported hosts are *Bromus*, *Agropyron*, and *Dactylis* (1).  
1. Godfrey, 1972.
- Leucania latiuscula* Herrich-Schaeffer.  
AZ, NM. Reported hosts are *Dactylis*, *Syntherisma*, *Zea*, *Sorghum*, *Avena*, *Hordeum*, and *Cynodon* (1).  
1. Godfrey, 1972.
- Leucania phragmatidicola* Guenee.  
CO, NM, AZ. Host grasses are *Poa*, *Elymus* (1), *Bromus*, *Agropyron* and *Dactylis* (2).  
1. Crumb, 1956; 2. Godfrey, 1972.
- Luperina stipata* (Morrison).  
CO. Hosts are various grasses including *Avena*, *Setaria*, *Zea* and *Phleum* but prefers *Spartina* (1).  
1. Crumb, 1956.
- Neleucania bicolorata* (Grote).  
AZ, CO, NM. Reported to feed on *Bromus*, *Dactylis*, *Agropyron* and *Digitaria* (1).  
1. Godfrey, 1972.

*Crambus johnsoni* Klots.

AZ, NM. Probable grass feeder (1).

1. Ainslie, 1922b.

*Crambus laqueatellus* Clemens.

CO. Reported on Triticum, small grains, and other grasses (1).

1. Ainslie, 1922a.

*Crambus leachellus* (Zincken).

AZ, CO, UT. Numerous on Cynodon (1).

1. UA records.

*Crambus luteolellus* Clemens.

CO. Probable grass feeder (1).

1. Ainslie, 1922b.

*Crambus mutabilis* Clemens.

CO. Feeds on Poa, Elymus, Zea, Triticum, Phleum, Hordeum, and Digitaria (1). Also Bromus (2).

1. Ainslie, 1923a; 2. Miller, 1940.

*Crambus pascuellus* (Linnaeus).

CO. Common in grassy meadows (1); damages Agrostis (2).

1. Klots, 1942; 2. Crawford and Harwood, 1959.

*Crambus polingi* Kearfott.

AZ. Probable grass feeder (1).

1. Ainslie, 1922b.

*Crambus praefectellus* Zincken.

CO. (Silver Striped Webworm). Reported on Poa, Phleum, Setaria, Zea, Elymus, Avena, and Triticum (1).

1. Ainslie, 1923.

*Crambus ruricolellus* Zeller.

AZ, CO, UT. Probable grass feeder (1).

1. Ainslie, 1922b.

*Crambus sargentellus* Klots.

AZ, NM. Probable grass feeder (1).

1. Ainslie, 1922b.

*Crambus sperryellus* Klots.

AZ, NV. Attacks Poa, Agrostis (1) and Cynodon (2).

1. Bohart, 1940; 2. NDA records.

*Crambus unistriatellus* Packard.

CO. Probable grass feeder (1).

Klots, 1942.

*Crambus whitmerellus* Klots.

CO, UT. Probable grass feeder (1).

1. Klots, 1942.

*Elasmopalus lignosellus* (Zeller).

AZ, NM. Attacks Sorghum (1), Cynodon, Zea, and Triticum (2).

1. Bibby, 1961; 2. Heinrich, 1956.

*Euchromius ocellus* (Haworth).

NM. Probable grass feeder.

*Loxostege rantisalis* (Guenee).

AZ, CO, NM, UT. (Garden Webworm). Feeds on weeds, grasses and grains (1).

1. Essig, 1926.

*Nascia acutella* (Walker).

CO. Larvae probably feed on marsh grasses (1).

1. Munroe, 1976.

*Pediasia dorsipunctella* Kearfoot.

NM. Attacks Agrostis (1).

1. Crawford and Harwood, 1959.

*Pediasia teterella* Zincken.

AZ, CO, NM. (Bluegrass Webworm). Reported on Poa, Sorghum, Triticum, Elymus, Setaria, Dactylis, Zea, Phleum and Digitaria (1).

1. Ainslie, 1930.

*Pediasia trisecta* Walker.

CO, NM, UT. (Larger Sod Webworm). Reported on Poa, Dactylis, Phleum, Zea, Digitaria, Avena, Triticum, Elymus and Hordeum (1).

1. Ainslie, 1927.

*Tehama bonifatella* Hulst.

NM. Damages blades of Poa and agrostis (1).

1. Bohart, 1940.

**Saturniidae**

The range caterpillar is a gregarious species extremely destructive to sod in New Mexico and parts of Colorado. They are ravenous feeders and consume large quantities of grass. A related species is found in Arizona. Taxonomy: Ferguson, 1972.

*Hemileuca hualapai* (Neumoegen).

AZ. Foodplant is Bouteloua (1).

1. Ferguson, 1972.

*Hemileuca oliviae* Cockerell.

CO, NM. (Range Caterpillar). A severe range pest in northern New Mexico and southern Colorado. Prefers Blue Grama (*Bouteloua*) but feeds on 40 spp. of grass in the genera Bromus, Agropyron, Andropogon, Buchloe and Distichlis (1).

1. Watts and Everest, 1976.

**Satyridae**

The larvae of many satyrids are grass feeders. They are found in alpine meadows and wooded areas. The larvae feed on the crown and some build silken tents in bunchgrasses as pupation chambers. Taxonomy: Emmel, 1969; Davenport, 1941; Howe, 1975.

*Cercyonis meadii* (Edwards).

AZ, CO, NM, UT. (Mead's Satyr). Food plant: grasses (1).

1. Howe, 1975.

*Cercyonis oetus* (Boisduval).

AZ, CO, NM, NV, UT. Hosts are various grasses including Poa (1).

*Cercyonis pegala* (Fabricius).

AZ, CO, NM, NV, UT. (Southern Wood Nymph). Hosts are various grasses including Poa (1).

1. Howe, 1975.

*Coenonympha ampelos* Edwards.

NV, UT. Probable grass feeder (1).

1. Davenport, 1941.

*Coenonympha haydeni* (Edwards).

CO. (Haydens Ringlet). Probable grass feeder (1).

1. Davenport, 1941.

*Coenonympha ochracea* Edwards.

AZ, CO, NM, NV, UT. (Ochre Ringlet).

Probable grass feeder (1).

1. Davenport, 1941.

*Cyllopsis pertepida dorothea* (Nabokov).

AZ, CO, NM, NV, UT.

Probable grass feeder (1).

1. Howe, 1975.

*Cyllopsis pyracmon* (Butler).

AZ, CO, NM. Probable grass feeder (1).

1. Howe, 1975.

*Erebia callias* Edwards.

CO, UT. Probable grass feeder (1).

1. Brown, 1957.

*Erebia epipsodea* Butler.

CO, NM, UT. (Common Alpine). Larvae feed on thick-bladed grass in wet meadows. They pupate in a tent made by tying several blades of grass together with silk (1).

1. Howe, 1975.

*Erebia magdalena* Strecker.

CO, UT. (Strecker's Alpine). Probable grass feeder (1).

1. Brown, 1957.

*Erebia theano* (Tauscher).

CO. (Theano Alpine). Found in dry grass openings in pine forest (1).

1. Brown, 1957.

*Euptychia cymela* (Cramer).

CO. Various grasses are used as larval food (1).

1. Howe, 1975.

*Euptychia rubricata* Edwards.

AZ, NM. (Red Satyr). Laboratory specimens fed on *Cynodon* and *Stenotaphrum* (1).

1. Ehrlich, 1961.

*Gyrocheilus patrobas* (Hewitson).

AZ, NM. Probable grass feeder (1).

1. Howe, 1975.

*Neominois ridingsii* (Edwards).

AZ, CO, NM, NV, UT. Larvae feed on grasses, pupate underground (1).

1. Dornfeld, 1980.

*Oeneis alberta* Elwes.

AZ, CO, NM, UT. (Albertan Arctic). Larvae feed on *Festuca* (1).

1. Howe, 1975.

*Oeneis chryxus* (Doubleday and Hewitson).

CO, NM, NV, UT. (Chryxus Arctic). Larvae feed on mountain grasses (1).

1. Howe, 1975.

*Oeneis melissa* (Fabricius).

CO, NM, UT. (Melissa Arctic). Larvae feed on alpine grasses (1).

1. Howe, 1975.

*Oeneis polixenes* (Fabricius).

CO, NM. (Fabrician Arctic). Larvae feed on alpine grasses (1).

1. Howe, 1975.

*Oeneis taygete* Geyer.

CO, UT. (White-veined Arctic). Probable grass feeder (1).

1. Brown, 1957.

*Oeneis uhleri* (Reakirt).

CO, NM, (Uhler's Arctic). Larvae feed on grasses (1).

1. Howe, 1975.

*Parmacera allyni* Miller.

AZ. Probable grass feeder (1).

1. Howe, 1975.

## Orthoptera

### Acrididae

The grasshopper family contains many destructive range insects. Grass feeding species have mandibles specially adapted for grazing. The molar and incisor areas of their mandibles are flattened and grooved for grinding and masticating the abrasive, silicified blade tissue of grasses. Taxonomy: Ball et al., 1942; LaRivers, 1948; Henderson, 1932; Alexander, 1941; Barnum, 1964; Helfer, 1972; Gurney and Brooks, 1959.

*Acantherus piperatus* Scudder.

AZ, NM. (Slender Range Grasshopper). Found in tall grasses (1).

1. Ball et al., 1942.

*Achurum sumichrasti* Saussure.

AZ, NM. (Sumichrast's Toothpick Grasshopper). A graminivore (1). Feeds on *Andropogon*, *Eragrostis*, *Muhlenbergia* and *Sporobolus* (2).

1. Isely, 1944; 2. Ball et al., 1942.

*Acrolophitis variegatus* Bruner.

CO, NM. (Smooth-crested Grasshopper). Feeds on *Leptoloma* (1).

1. Joern, 1979.

*Aerochoreutes carlinianus* (Thomas).

CO, NV, UT. (Carlinian Snapper Grasshopper). A grass feeder that prefers *Agropyron* (1).

1. Criddle, 1933.

*Aeropedellus clavatus* (Thomas).

AZ, CO, NM. (Club-horned Grasshopper). 97% of diet is grass (1). Feeds on *Bromus*, *Agropyron*, *Bouteloua*, *Muhlenbergia*, *Phleum*, *Koeleria*, *Poa*, *Deschampsia*, *Kobresia*,

*Trisetum*, *Danthonia*, *Sitanion*, *Festuca* and *Stipa* (1).

1. Ueckert, 1968; 2. Alexander and Hilliard, 1964.

*Ageneotettix deorum* (Scudder).

AZ, CO, NM, NV, UT. (White Whisker Grasshopper). A grass feeder (1); reported grass hosts are *Bouteloua*, *Hordeum*, *Hilaria* (2), *Oryzopsis* (3), *Sporobolus*, *Buchloe*, *Scleropogon*, *Leptoloma* (4), *Agropyron*, *Calamovilfa*, *Festuca*, *Stipa* (5) *Bromus*, *Andropogon*, *Phalaris*, *Phleum*, *Panicum* (6) and *Poa* (7).

1. Anderson, 1964; 2. Ball et al., 1942; 3. Barnum, 1964; 4. Joern, 1979; 5. Ueckert and Hansen, 1971; 6. Chu and Knudson, 1970; 7. CSU records.

*Amblytropidea mysteca* Saussure.

AZ, NM. Feeds on grasses (1).

1. Ball et al., 1941.

*Amphitornus coloradus* (Thomas).

AZ, CO, NV, NM, UT. (Striped Slant-faced Grasshopper). A grass feeder (1). Closely associated with *Bouteloua*, *Stipa*, *Sporobolus*, and *Koeleria* (2). Also feeds on *Agropyron*, *Aristida*, *Calamovilfa* (3), *Oryzopsis*, *Distichlis* and *Elymus* (4), *Poa*, *Bromus*, and *Andropogon* (5).

1. Anderson, 1964; 2. Criddle, 1933; 3. Ueckert and Hansen, 1971; 4. Barnum, 1964; 5. CSU records.

*Arphia conspersa* Scudder.

AZ, NM, NV, CO, UT. (Speckled Rangeland Grasshopper). A mixed feeder, but prefers grass (1). Reported hosts are *Stipa*, *Bromus*, *Agropyron*, *Bouteloua*, *Oryzopsis*, *Sporobolus* (2), *Andropogon*, *Calamovilfa*, *Festuca* (3), *Poa* (4), and *Koeleria* (5).

1. Isely, 1944; 2. Kumar et al., 1976; 3. Ueckert and Hansen, 1971; 4. Lambley et al., 1972; 5. CSU records.

*Arphia pseudonietana* (Thomas).

AZ, CO, NM, NV, UT. (Red Winged Grasshopper). Restricted largely to grasses (1). Feeds on Buchloe, Hilaria, Leptoloma (2), Bouteloua, Stipa, Agropyron, Sporobolus, Aristida (3), Calamovilfa (4), Poa and Koeleria (5).

1. Gangwere, 1961; 2. Joern, 1979; 3. Kumar et al., 1976; 4. Ueckert and Hansen, 1971; 5. CSU records.

*Arphia xanthoptera* Burmeister.

NM. A graminivore (1).

1. Isely, 1944.

*Aulocara ellioti* (Thomas).

AZ, CO, NM, NV, UT. (Elliott Grasshopper). Destructively common in short grass areas (1), prefers Agropyron, Poa, and Bouteloua (2), also feeds on Stipa, Bromus and Andropogon (3).

1. Anderson, 1964; 2. Pfadt, 1949; 3. CSU records.

*Boopedon nubilum* (Say).

AZ, CO, NM. (Black Males Grasshopper). A graminivore (1); reported to feed on Buchloe, Leptoloma, Setaria and Scleropogon (1). Taken on Andropogon, Aristida, Bouteloua, Sorghum, and Echinochloa (3).

1. Isely, 1944; 2. Joern, 1979; 3. Ball et al., 1942.

*Bradynotes obesa* (Thomas).

AZ, NV, UT. A mixed feeder, diet includes Festuca and Stipa (1).

1. Banfill and Brusven, 1973.

*Bruneria brunnea* (Thomas).

CO, UT. (Bruner's Grasshopper). Found on sedges and grasses (1).

1. Helfer, 1972.

*Bruneria shastana* (Scudder).

NV. Probable grass feeder.

*Camnula pellucida* (Scudder).

AZ, CO, NM, NV, UT. (Clear Winged Grasshopper). A mixed feeder that prefers grass (1). Reported to feed on Poa (2), Agropyron, Triticum, Bouteloua, Stipa (3) and Festuca (4). Oviposits in Puccinella (5).

1. Isely, 1944; 2. Anderson, 1964; 3. Pickford, 1963; 4. Putnam, 1962; 5. Shotwell, 1941.

*Chloealtis brachyptera* (Scudder).

UT, NV. Feeds exclusively on grass (1). Prefers Bromus (2), but also feeds on Poa, Sporobolus and Agropyron (3).

1. Gangwere, 1961; 2. Lambley et al., 1972; Banfill and Brusven, 1973.

*Chloealtis conspersa* Harris.

CO, UT. (Sprinkled Grasshopper). A grass feeder (1, 2). Eats Poa (3).

1. Criddle, 1933; 2. Gangwere, 1961; 3. CSU records.

*Chorthippus curtipennis* (Harris).

AZ, CO, NM, NV, UT. (Marsh Meadow Grasshopper). A grass feeder (1), found in high mountain meadows (2). Feeds on Andropogon, Stipa, Festuca and Poa (3).

1. Criddle, 1933; 2. LaRivers, 1948; 3. CSU records.

*Chortophaga viridifasciata* (DeGeer).

AZ, CO, NM, NV, UT. (Green Striped Grasshopper). Prefers grass (1); reported to feed on Agropyron and Bouteloua (2), but Bromus is preferred. Also feeds on Poa, Digitaria and Setaria (3).

1. Gangwere, 1961; 2. Kumar et al., 1976; 3. Lambley et al., 1972.

*Circotettix rabula* Rehn and Hebard.

AZ, CO, NM, UT. (Wrangler Grasshopper). Diet is 14% grasses including Stipa, Bouteloua, Muhlenbergia, Koeleria, Poa, and Danthonia (1).

1. Ueckert, 1968.

*Circotettix undulatus* (Thomas).

NV. (Undulant Winged Grasshopper). A mixed feeder that prefers grass (1).

1. Hewitt and Barr, 1967.

*Conozoa carinata* Rehn.

AZ. Feeds on many plants including grasses (1).

1. Ball et al., 1942.

*Conozoa sulcifrons* (Scudder).

AZ, NV, UT. Occurs in cultivated areas (1).

1. Helfer, 1972.

*Conozoa wallula* (Scudder).

NV, UT. Occurs in sparse grass areas (1); feeds on Bromus, Agropyron, and Phleum (2).

1. Helfer, 1972; 2. Banfill and Brusven, 1973.

*Cordillacris crenulata* (Bruner).

AZ, CO, NM, UT. (Crenulated Grasshopper). Hinders reseeding of range grasses (1). Feeds on Bouteloua (2), Buchloe, Leptoloma (3), Aristida and Sporobolus (4).

1. Ball et al., 1942; 2. Helfer, 1972; 3. Joern, 1979; 4. Kumar et al., 1976.

*Cordillacris occipitalis* (Thomas).

AZ, CO, NM, NV. A grass feeder (1), feeds on Bromus (2), Oryzopsis, Koeleria (3), Agropyron, Aristida, Bouteloua, Sporobolus (4), Calamovilfa and Stipa (5).

1. Criddle, 1933; 2. Barnum, 1964; 3. LaRivers, 1948; 4. Kumar et al., 1976; 5. Ueckert and Hansen, 1971.

*Cratypedes neglectus* (Thomas).

CO, NM, NV, UT. (Fronotal Range Grasshopper). Feeds on range grasses and grain crops (1). Common in grassy hills and prairies (2).

1. Ball et al., 1942; 2. Helfer, 1972.

*Dactylotum bicolor* Charpentier.

AZ, CO, NM. (Rainbow Grasshopper). Feeds on Bouteloua and Sporobolus (1).

1. Joern, 1979.

*Derotmema haydenii* (Thomas).

AZ, CO, NM, NV, UT. (Hayden's Grasshopper). Feeds on Aristida, Bouteloua, Sporobolus (1) and Poa (2).

1. Kumar et al., 1976; 2. CSU records.

*Derotmema piute* Rehn.

NV. Probable grass feeder.

*Dicromorpha viridis* (Scudder).

NM. (Short-winged Green Grasshopper). A graminivore (1); feeds on Phalaris and Sporobolus (2).

1. Isely, 1944; 2. Lambley et al., 1972.

*Dissosteira carolina* (Linnaeus).

AZ, CO, NM, NV, UT. (Carolina Grasshopper). A grass feeder (1); reported hosts are Bromus, Poa and Sporobolus (2).

1. Gangwere, 1961; 2. Branfill and Brusven, 1973.

*Dissosteira longipennis* (Thomas).

CO, NM. (High Plains Grasshopper). Reported to feed on Bouteloua, Buchloe, Hordeum, Zea, Triticum, Setaria, Sorghum, and Phragmites (1).

1. Wakeland, 1958.

*Dissosteira pictipennis* Bruner.

NV. Common in areas of scanty grass (1).

1. Helfer, 1972.

*Dissosteira spurcata* (Saussure).

NV, UT. (Pale-winged Grasshopper). Common in range areas (1).

1. Helfer, 1972.

- Drepanopterna femoratum*** (Scudder).  
AZ, CO, NM. (White Cross Grasshopper). A grass feeder (1), destructive to ranges in the Great Plains (2). Feeds on *Sporobolus*, *Bouteloua*, *Buchloe*, *Leptoloma* and *Scleropogon* (3); also *Agropyron* (4).  
1. Anderson, 1964; 2. Helfer, 1972; 3. Joern, 1979; 4. CSU records.
- Encoptolophus pallidus*** Bruner.  
AZ, NV. Reported as damaging ranges (1).  
1. Ball et al., 1942.
- Encoptolophus parvus*** Scudder.  
NM. Probable grass feeder.
- Encoptolophus sordidus*** (Burmeister).  
AZ, CO, NM. (Dusky Grasshopper). Feeds mostly on range grasses (1), including *Agropyron*, *Bouteloua* (2), and *Poa* (3).  
1. Ball et al., 1942; 2. Kumar et al., 1976; 3. CSU records.
- Encoptolophus subgracilis*** Caudell.  
AZ, CO, NM, NV, UT. Feeds mostly on grass (1).  
1. Ball et al., 1942.
- Eremiacris acris*** Rehn and Hebard.  
AZ, CO, NM, NV. (Desert Toothpick Grasshopper). Found in knee-high grass (1), feeds on *Hilaria*, *Bouteloua*, *Sporobolus*, *Aristida* (2), *Distichlis* and *Oryzopsis* (3).  
1. Helfer, 1972; 2. Ball et al., 1942; 3. LaRivers, 1948.
- Eremiacris virgata*** (Scudder).  
AZ, CO, NM. Associated with *Hilaria* (1).  
1. Ball et al., 1942.
- Eritettix simplex*** (Scudder).  
CO. (Velvet-striped Grasshopper). A grass feeder (1); reported to feed on *Aristida*, *Bouteloua*, *Bromus*, *Sporobolus*, *Oryzopsis* (2), *Agropyron*, *Calamovilfa*, *Festuca* and *Stipa* (3). *Poa* and *Bouteloua* are preferred (4).  
1. Criddle, 1933; 2. Kumar et al., 1976; 3. Ueckert and Hansen, 1971; 4. Lambley et al., 1972.
- Eritettix variabilis*** Bruner.  
AZ, CO, NM. Common on grasslands (1), feeds on *Muhlenbergia*, *Hilaria*, *Bouteloua* (2) and *Buchloe* (3).  
1. Helfer, 1972; 2. Ball et al., 1942; 3. Joern, 1979.
- Hadrotettix trifasciatus*** (Say).  
AZ, CO, NM, NV, UT. (Three Banded Range Grasshopper). Feeds on *Agropyron* (1), *Bouteloua*, *Distichlis*, *Eragrostis*, *Hilaria*, *Hordeum* and *Leptochloa* (2). Prefers *Bromus* (3).  
1. Kumar et al., 1976; 2. Nerney, 1960; 3. Lambley et al., 1972.
- Heliaula rufa*** (Scudder).  
AZ, CO, NM, UT. (Rufous Grasshopper). Feeds on *Buchloe* (1), *Aristida* and *Bouteloua* (2).  
1. Joern, 1979; 2. Kumar et al., 1976.
- Hippiscus rugosus*** (Scudder).  
AZ, CO, NM, UT. (Wrinkled Grasshopper). Common in grassy areas in open woods (1). Feeds almost entirely on range grasses (2). Hosts include *Bromus*, *Agropyron*, *Bouteloua*, *Oryzopsis*, *Andropogon*, *Setaria* and *Poa* (3).  
1. Helfer, 1972; 2. Ball et al., 1942; 3. Lambley et al., 1972.
- Horesidotes cinereus*** Scudder.  
AZ. (Ash-gray Range Grasshopper). Feeds mainly on grass (1).  
1. Ball et al., 1942.
- Leprus cyaneus*** (Cockerell).  
AZ, CO, NM. (Cockerell's Blue-winged Grasshopper). A mixed feeder, but prefers grasses (1). Feeds on *Bouteloua*, *Buchloe*, *Eragrostis*, *Leptoloma* and *Scleropogon* (2).  
1. Isely, 1944; 2. Joern, 1979.
- Leprus glaucipennis*** Scudder.  
NV. (Scudder's Blue-winged Grasshopper). Probable grass feeder.
- Leprus interior*** Bruner.  
AZ, NV, UT. Feeds on *Panicum* and *Distichlis* (1).  
1. Ball et al., 1942.
- Leprus intermedius*** (Saussure).  
NV. Probable grass feeder.
- Leprus robustus*** Hebard.  
AZ, CO, NM. (Robust Blue-winged Grasshopper). Extremely destructive to range grasses (1); also found in desert grasslands (2).  
1. Ball et al., 1942; 2. Helfer, 1972.
- Leprus wheeleri*** (Thomas).  
NM, NV. (Wheeler's Blue-winged Grasshopper). Probable grass feeder.
- Leptysmia hebardii*** Rehn.  
AZ, NV. A grass feeder (1).  
1. Isely, 1944.
- Melanoplus alpinus*** Scudder.  
CO. A grass feeder (1). Reported to feed on *Festuca* and *Stipa* (2).  
1. Brooks, 1958; 2. Banfill and Brusven, 1973.
- Melanoplus angustipennis*** (Dodge).  
AZ, CO, UT. (Narrow-winged Spurthroat Grasshopper). A mixed feeder that prefers grass (1); feeds on *Agropyron*, *Andropogon*, *Bouteloua*, *Calamovilfa*, *Sporobolus* and *Stipa* (2).  
1. Criddle, 1933; 2. Ueckert and Hansen, 1971.
- Melanoplus aridus*** (Scudder).  
NV. A widespread polyphagous species, sometimes destructive (1).  
1. Helfer, 1972.
- Melanoplus arizonae*** Scudder.  
AZ, CO, NM. (Arizona Spurthroat Grasshopper). Reported to feed on *Buchloe* (1).  
1. Joern, 1979.
- Melanoplus bivittatus*** (Say).  
AZ, CO, NM, NV, UT. (Two-striped Grasshopper). A polyphagous species, reported to feed on: *Agropyron*, *Hordeum* (1), *Poa* (2), *Andropogon*, *Bromus*, *Dactylis*, *Phalaris*, *Festuca*, *Panicum*, *Phleum*, *Elymus* (3), *Sporobolus*, *Triticum*, and *Secale* (4).  
1. Shotwell, 1941; 2. Banfill and Brusven, 1973; 3. Chu and Knutson, 1970; 4. CSU records..
- Melanoplus borealis*** (Fieber).  
AZ, CO, NM, UT. (Northern Spurthroat Grasshopper). Associated with *Muhlenbergia*, *Bromus*, *Agrostis*, and *Calamagrostis* (1).  
1. Criddle, 1933.
- Melanoplus bruneri*** Scudder.  
AZ, NM, NV. An important pest of rangeland (1).  
1. Helfer, 1972.
- Melanoplus complanatipes*** Scudder.  
AZ, NV, UT. Reported on *Oryzopsis* (1).  
1. Barnum, 1964.
- Melanoplus confusus*** Scudder.  
AZ, CO, NM, NV, UT. (Little Pasture Spurthroat Grasshopper). Common in pastures overrun with coarse grass (1), eats mostly grass especially *Andropogon* (2). Also on *Agropyron*, *Bouteloua*, *Calamovilfa* and *Stipa* (3).  
1. Helfer, 1972; 2. Criddle, 1933; 3. Ueckert and Hansen, 1971.

*Melanoplus cuneatus* Scudder.

AZ, NM. (Wedge-shaped Spur-throat Grasshopper). Feeds on Bouteloua, Eragrostis, Hilaria, Hordeum and Leptochloa (1).

1. Nerney, 1960.

*Melanoplus devastator* Scudder.

AZ, NV, UT. (Devastating Grasshopper). A mixed feeder, diet includes Bromus and Hordeum (1).

1. Middlekauf, 1958.

*Melanoplus differentialis* (Thomas).

AZ, CO, NM, UT. (Differential Grasshopper). A mixed feeder (1), among plants fed upon are: Andropogon, Sporobolus, Zea, Cynodon, Sorghum, Buchloe, Dactylis, Festuca, Phalaris, Phleum and Panicum (3).

1. Isely, 1944; 2. Shotwell, 1941; 3. Chu and Knutson, 1970.

*Melanoplus femurrubrum* (DeGeer).

AZ, CO, NM, NV, UT. (Red Legged Grasshopper). A destructive species (1); reported hosts are: Bouteloua, Agropyron, Bromus, Dactylis, Phalaris, Panicum, Festuca, Phleum and Elymus (4).

1. Helfer, 1972; 2. Kumar et al., 1976; 3. Banfill and Brusven, 1973; 4. Chu and Knutson, 1970.

*Melanoplus flavidus* Scudder.

AZ, CO, NM, NV, UT. (Yellowish Spur-throat Grasshopper). Eats mostly grass (1).

1. Criddle, 1933.

*Melanoplus foedus* Scudder.

AZ, CO, NM, NV, UT. Chosen food plants are grasses (1). Feeds on Bouteloua, Agropyron, Sporobolus (2), Bromus, Phleum and Tragopogon (3), Calamovilfa and Stipa (4).

1. Criddle, 1933; 2. Kumar et al., 1976; 3. Banfill and Brusven, 1973; 4. Ueckert and Hansen, 1971.

*Melanoplus franciscanus* Scudder.

AZ, NM. Feeds on Bouteloua and Muhlenbergia (1).

1. Ball et al., 1942.

*Melanoplus gladstoni* Scudder.

AZ, CO, NM, NV, UT. (Gladstone's Spur-throat Grasshopper). A grass feeder (1); hosts are Bouteloua, Sporobolus (2), Stipa, Agropyron and Bromus (3).

1. Criddle, 1933; 2. Joern, 1979; 3. Kumar et al., 1976.

*Melanoplus glaucipes* (Scudder).

CO, NM. (Glaucous-legged-spur-throat Grasshopper). Reported to feed on Bouteloua (1).

1. Joern, 1979.

*Melanoplus infantilis* Scudder.

CO. (Tiny Spur-throated Grasshopper). Primarily a grass feeder (1); known grass hosts are Bouteloua, Stipa and Agropyron (2).

1. Anderson, 1964; 2. CSU records.

*Melanoplus kennicottii* Scudder.

CO, NM. (Kennicott's Spur-throat Grasshopper). A grass feeder (1).

1. Criddle, 1933.

*Melanoplus lakinus* Scudder.

AZ, CO, NM. Oviposits in clumps of Heteropogon (1); feeds on Bouteloua and Eragrostis (2).

1. Ball et al., 1942; 2. Joern, 1979.

*Melanoplus occidentalis* (Thomas).

AZ, CO, NM, NV, UT. A mixed feeder, widely distributed in grassland areas (1). Feeds on Bouteloua, Aristida (2), and Agropyron (3).

1. Helfer, 1972; 2. Kumar et al., 1976; 3. CSU records.

*Melanoplus pinaleno* Hebard.

AZ. Reported on Muhlenbergia (1).

1. Ball et al., 1942.

*Melanoplus regalis* Dodge.

AZ, CO, NM. Reported to feed on Hilaria and Bouteloua (1).

1. Ball et al., 1942.

*Melanoplus rugglesi* Gurney.

NV, UT. Reported on Triticum (1).

1. NDA records.

*Melanoplus sanguinipes* (Fabricius).

AZ, CO, NM, NV, UT. (Migratory Grasshopper). A polyphagous species reported to feed on Poa (1), Bouteloua, Hordeum, Eragrostis, Leptochloa, Hilaria (2), Sporobolus, Agropyron, Oryzopsis, Aristida, Stipa (3), Triticum, Zea, Bromus (4), Andropogon, Elymus, Phalaris, Dactylis, Phleum and Festuca (5).

1. Parker et al., 1955; 2. Nerney, 1960; 3. Kumar et al., 1976; 4. CSU records; 5. Chu and Knutson, 1970.

*Melanoplus snowi* Scudder.

AZ. Associated with Muhlenbergia (1).

1. Ball et al., 1942.

*Mermiria maculipennis* Bruner.

AZ, NM. (Mermiria Grasshopper). Feeds on prairie grasses, but prefers Sorghum and Cynodon (1). Also feeds on Stipa, Agropyron, Bouteloua, Calamovilfa (2), Sporobolus, Elymus, Avena, Secale (5).

1. Isely, 1944; 2. Ueckert and Hansen, 1971; 3. Ball et al., 1942; 4. Lambley et al., 1972; 4. CSU records.

*Mermiria neomexicana* (Thomas).

AZ, CO, NM. A graminivore (1), collected on Muhlenbergia and Bouteloua (2), prefers Bromus (3).

1. Isely, 1944; 2. Ball et al., 1942; 3. Lambley et al., 1972.

*Mermiria texana* Bruner.

AZ, CO, NM. A graminivore (1).

1. Isely, 1944.

*Metator nevadensis* (Bruner).

AZ, NV. Found in meadows (1); a grass feeder that prefers Agropyron (2).

1. Helfer, 1972; 2. Criddle, 1933.

*Metator pardalinus* (Saussure).

AZ, CO, NM. (Pard Grasshopper). A grass feeder, it prefers Agropyron (1). Injurious to wheat and other grain crops (2), other hosts are Andropogon and Stipa (3).

1. Criddle, 1933; 2. Ball et al., 1942; 3. CSU records.

*Morseiella flaviventris* (Bruner).

AZ. (Yellow-bellied Grasshopper). Destructively common on range grasses (1). Feeds on Aristida, Bouteloua, Cynodon, Andropogon and Sporobolus (2).

1. Helfer, 1972; 2. Ball et al., 1942.

*Neopodismopsis abdominalis* (Thomas).

AZ, CO, NM, UT. (Thomas' Grasshopper). A grass feeder (1), found in lush grass (2).

1. Criddle, 1933; 2. Ball et al., 1942.

*Oedaleonotus borcki* (Stal).

AZ, NV. Usually found in grass (1).

1. Helfer, 1972.

*Oedaleonotus enigma* (Scudder).

AZ, NV. (Valley Grasshopper). A common grassland species (1).

1. Middlekauf, 1958.

- Oedaleonotus orientis*** Hebard.  
NV. Probable grass feeder.
- Opeia atascosa*** Hebard.  
AZ. Feeds on Bouteloua and Elyoneurus (1).  
1. Ball et al., 1942.
- Opeia obscura*** (Thomas).  
AZ, CO, NM, NV, UT. (Obscure Grasshopper). A grass feeder (1), common on range grasses and grain crops (2). Feeds on Agropyron (3), Buchloe, Leptoloma (4), Bouteloua, Sporobolus, Aristida, Muhlenbergia, Cynodon, Distichlis (5), prefers Bromus (6).  
1. Anderson, 1964; 2. Helfer, 1972; 3. Criddle, 1933; 4. Joern, 1979; 5. Ball et al., 1942; 6. Lambley et al., 1972.
- Orphulella compta*** Scudder.  
AZ, NV, UT. (Green Desert Grasshopper). Destructive to Hordeum (1). Common on Cynodon, Distichlis and Sporobolus (2).  
1. Helfer, 1972; 2. Ball et al., 1942.
- Orphulella pelidna*** (Burmeister).  
AZ, CO, NV, UT. A graminivore (1), associated with Distichlis (2, 3).  
1. Isely, 1944; 2. LaRivers, 1948; 3. Ball et al., 1942.
- Orphulella speciosa*** (Scudder).  
CO, NM. A graminivore (1, 2). Feeds on Phleum, Agropyron, Andropogon, Bromus, Bouteloua, Elymus, Festuca, Dactylis, Phalaris, and Panicum (3).  
1. Gangwere, 1961; 2. Isely, 1944; 3. Chu and Knutson, 1970.
- Parapomala pallida*** (Bruner).  
AZ, NM, NV. Feeds on Oryzopsis (1), Elymus, Bromus, Hilaria and Distichlis (2).  
1. Barnum, 1964; 2. Ball et al., 1942.
- Parapomala wyomingensis*** (Thomas).  
AZ, CO, NM, NV, UT. (Wyoming Toothpick Grasshopper). Found on grass in light places (1). A graminivore (2). Feeds on Andropogon, Aristida, Agropyron, Bouteloua, Stipa, Oryzopsis, and Sporobolus (3).  
1. Helfer, 1972; 2. Isely, 1944; 3. Ball et al., 1942.
- Pardalophora apiculata*** (Harris).  
CO. (Coral-winged Grasshopper). A strict grass feeder, on Agropyron, Andropogon, Stipa, Bouteloua, Calamovilfa, Sporobolus and Festuca (1).  
1. Ueckert and Hansen, 1971.
- Pardalophora haldemani*** (Scudder).  
CO, NM, UT. (Haldeman's Grasshopper). Found in dry areas (1), prefers grass (2).  
1. Helfer, 1972; 2. Gangwere, 1961.
- Pardalophora saussurei*** (Scudder).  
NM. (Saussure's Grasshopper). A graminivore (1).  
1. Isely, 1944.
- Pedioscirtites nevadensis*** Thomas.  
AZ, NV. (Nevada Grasshopper). Feeds on Bouteloua (1).  
1. Ball et al., 1942.
- Philbostroma quadrimaculatum*** (Thomas).  
AZ, CO, NM, NV, UT. (Four-spotted Grasshopper). Numerous on short grass ranges (1). Feeds on Bouteloua, Sporobolus (2), Buchloe, Muhlenbergia, Scleropogon, and Leptoloma (3).  
1. Helfer, 1972; 2. Kumar et al., 1976; 3. Joern, 1979.
- Phoetaliotes nebrascensis*** (Thomas).  
AZ, CO, NM, NV, UT. (Large-headed Grasshopper). Found in grasslands and prairies (1). Feeds on Sporobolus, Stipa, Bouteloua (2), Buchloe, Panicum, Eragrostis, Muhlenbergia (3), Poa (4), Agropyron, Andropogon, Festuca, Bromus, Phleum and Phalaris (5).  
1. Helfer, 1972; 2. Kumar et al., 1976; 3. Joern, 1979; 4. Banfill and Brusven, 1973; 5. Chu and Knutson, 1970.
- Platylactista aztecus*** (Saussure).  
AZ, NM. (Aztec Range Grasshopper). Destructive in desert grasslands (1).  
1. Ball et al., 1942.
- Prorocorypha snowi*** Rehn.  
AZ. (Snow's Toothpick Grasshopper). Lives in tall grass (1), feeds on Andropogon, Aristida and Elyoneurus (2).  
1. Helfer, 1972; 2. Ball et al., 1942.
- Pseudopomala brachyptera*** (Scudder).  
NV, UT. (Short-winged Toothpick Grasshopper). Feeds exclusively on grass (1).  
1. Gangwere, 1961.
- Psoloessa delicatula*** (Scudder).  
AZ, CO, NM, NV. (Brown-spotted Range Grasshopper). A common grassland species (1), feeds on Stipa, Bromus, Aristida, Agropyron, Sporobolus, Muhlenbergia (2), Festuca (3), and associated with Oryzopsis (4).  
1. Helfer, 1972; 2. Kumar et al., 1976; 3. CSU records; 4. Barnum, 1964.
- Psoloessa texana*** Scudder.  
AZ, CO, NM. A graminivore (1), feeds on Buchloe, Bouteloua, Sporobolus, Leptoloma, Muhlenbergia, Eragrostis and Scleropogon (2).  
1. Isely, 1944; 2. Joern, 1979.
- Schistocerca emarginata*** Scudder.  
AZ, CO, NM, UT. (Spotted Bird Grasshopper). A polyphagous species reported to feed on Bouteloua (1).  
1. Ball et al., 1942.
- Spharagemon collare*** (Scudder).  
AZ, CO, NM, NV, UT. (Mottled Sand Grasshopper). A mixed feeder that prefers grass (1). Reported to feed on Agropyron, Stipa, Andropogon, Bouteloua, Calmofilfa, Sporobolus, Buchloe and Festuca (1).  
1. Isely, 1944, 2. Ueckert and Hansen, 1971.
- Spharagemon equale*** (Say).  
CO, NM, UT. Feeds partly on grasses, known hosts are Sporobolus, Bouteloua and Aristida (1).  
1. Kumar et al., 1976.
- Syrbula admirabilis*** (Uhler).  
NM. A graminivore (1).  
1. Isely, 1944.
- Syrbula fuscovittata*** Thomas.  
AZ, CO, NM. (Brown-winged Slant-faced Grasshopper). Food consists entirely of grass (1). Eats Bouteloua, Buchloe and Leptoloma (2).  
1. Ball et al., 1942; 2. Joern, 1979.
- Trachyrachys aspersa*** Scudder.  
CO. Feeds on Bouteloua and Sporobolus (1).  
1. Kumar et al., 1976.
- Trachyrachys coronata*** Scudder.  
AZ, CO, NM. (Crowned Grasshopper). Taken in short grass (1).  
1. Ball et al., 1942.



*Trachyrachys kiowa* (Thomas).

AZ, CO, NM, NV, UT. (Kowa Range Grasshopper). A common grass feeder (1). Feeds on Bouteloua (2), Sporobolus (3), Stipa, Agropyron (4), Buchloe, Leptoloma, Scleropogon, Setaria (5), and Poa (6).

1. Anderson, 1964; 2. Ball et al., 1942; 3. Kumar et al., 1976; 4. Ueckert and Hansen, 1971; 5. Joern, 1979; 6. CSU records.

*Trachyrachys mexicana* (Saussure).

AZ, NM. (Mexican Banded Wing Grasshopper). Common and destructive in grassland (1). Reported to feed on Bouteloua (2).

1. Ball et al., 1942; 2. Otte and Joern, 1977.

*Trepidulus rosaceus* Scudder.

AZ, NV, UT. Common on desert flats (1), feeds on Bouteloua (2).

1. Helfer, 1972; 2. Otte and Joern, 1977.

*Trimerotropis californica* Bruner.

AZ. Reported to feed on Bouteloua (1).

1. Otte and Joern, 1977.

*Trimerotropis citrina* Scudder.

AZ, NM. (Citrus-winged Grasshopper). A mixed feeder that prefers grass (1).

1. Isely, 1944.

*Trimerotropis fontana* Thomas.

AZ, CO, NV, UT. Commonly found on Elymus (1).

1. Barnum, 1964.

*Trimerotropis gracilis* (Thomas).

AZ, Co, NM, NV, UT. (Thomas' Slender Grasshopper). A grass feeder (1).

1. Criddle, 1933.

*Trimerotropis laticincta* Saussure.

CO, NM, NV. (Great Plains Grasshopper). Eats mostly Agropyron (1).

1. Criddle, 1933.

*Trimerotropis pallidipennis* (Burmeister).

AZ, CO, NM, NV, UT. (Pallid-winged Grasshopper). Eats mostly grass (1), damages barley and corn (2). Feeds on Hilaria, Bouteloua, Eragrostis, Leptoloma, Buchloe (3), Phleum, Agropyron (4), Sorghum and Bromus (5).

1. Criddle, 1933; 2. Ball et al., 1942; 3. Joern, 1979; 4. Banfill and Brusven, 1973; 5. CSU records.

*Trimerotropis strenua* McNeill.

CO, NM, NV, UT. (Strenuous Grasshopper). Feeds on Oryzopsis (1).

1. LaRivers, 1948.

*Trimerotropis suffusa* Scudder.

AZ, CO, NM, NV, UT. A montane species, a mixed feeder reported to feed on Festuca (1).

1. Banfill and Brusven, 1973.

*Tropidolophus formosus* (Say).

AZ, CO, NM. Feeds on Bouteloua (1).

1. Kumar et al., 1976.

*Xanthippus affricus* Scudder.

AZ. Probable grass feeder.

*Xanthippus calthulus* Saussure.

NV. Probable grass feeder.

*Xanthippus corallipes* Haldeman.

AZ, CO, NM, NV, UT. (Red Shanked Grasshopper). Diet is 86% grass (1), includes Poa, Festuca, Danthonia, Agropyron, Stipa, Muhlenbergia, Koeleria, Sitanion (2), Boute-

loua, Aristida, Bromus (3), Sporobolus (4), Stipa, Paspalum, Andropogon and Calamovilfa (5). Hides in clumps of Oryzopsis (6).

1. Ueckert, 1968; 2. Ueckert, 1968; 3. Kumar et al., 1976; 4. Ball et al., 1942; 5. Ueckert and Hansen, 1971; 6. Barnum, 1964.

*Xanthippus lateritus* Saussure.

NV. (Nevada Red-winged Grasshopper). Common in desert of Nevada, a probable grass feeder.

*Xanthippus montanus* (Thomas).

AZ, NV, UT. Found in sandy areas with light grass (1).

1. Ball et al., 1942.

*Xanthippus stigmaticus* (Scudder).

NV. Probable grass feeder.

*Xanthippus vitellinus* Saussure.

NV. Probable grass feeder.

**Dectiidae**

The Mormon cricket is one of our most destructive range pests. It is polyphagous, but prefers tender young grasses and forbs. During massive outbreaks, all range vegetation may be destroyed. Taxonomy: Tinkham, 1944; Helfer, 1972; Rentz and Birchim, 1968.

*Anabrus simplex* Haldeman.

AZ, CO, NM, NV, UT. (Mormon Cricket). Very destructive to rangeland (1, 2). Reported to feed on the following grasses: Koeleria, Poa, Festuca, Phleum, Stipa, Muhlenbergia, Bouteloua, Danthonia (3), Bromus, Agropyron, Elymus, Hordeum, Panicum, Triticum, Oryzopsis, Sitanion, Sorghum, Polypogon, Melica, Agrostis, Deschampsia, Beckmannia, Dactylis, Buchloe, Calamagrostis, Puccinellia, and Setaria (4).

1. Wakeland, 1959; 2. Young, 1978; 3. Ueckert and Hansen, 1970; 4. Swain, 1944.

**Gryllidae**

Crickets are omnivorous and sometimes destructive to grasses. Taxonomy: Helfer, 1972; Chopard, 1967; Alexander and Thomas, 1959.

*Gryllus alogus* Rehn.

NM. Probable grass feeder.

*Gryllus armatus* Scudder.

AZ, NV, UT. Feeds on common grasses and weeds (1).

1. LaRivers, 1948.

*Gryllus pennsylvanicus* Burmeister.

CO. An omnivorous species, but includes grass in the diet (1).

1. Blatchley, 1920.

*Gryllus personatus* Uhler.

CO. Probable grass feeder.

*Gryllus veletis* Alexander and Bigelow.

CO. Found in Bluegrass pasture (1).

1. Alexander and Bigelow, 1960.

*Pteronemobius canus* Scudder.

AZ, CO, NM, UT.

Taken in moist meadows (1).

1. Ball et al., 1942.

*Pteronemobius cubensis* Saussure.

AZ, CO, NM, NV, UT. Common, sometimes destructive to bermuda grass lawns (1).

1. Ball et al., 1942.

*Pteronemobius mormonius* Scudder.

AZ, NM. Common in grass (1).

1. Helfer, 1972.

**Phasmidae**

Walkingsticks are primarily found on woody plants. A few grass-feeding range species occur in our area. Taxonomy: Helfer, 1972; Ball et al., 1942; LaRivers, 1948.

*Parabacillus coloradus* (Scudder).

AZ, UT. Feeds largely on grass (1).

*Parabacillus hesperus* Hebard.

AZ, NV, UT. (Western Short-horned Walkingstick). Largely found on range grasses (1).

1. Barnum, 1964.

*Pseudosermyle stramineus* (Scudder).

AZ, CO, NM, NV. (Gray Walkingstick). Occasionally found feeding on grass (1).

1. Barnum, 1964.

**Tettigoniidae**

Grass feeding katydids have much the same mandibular adaptations as grasshoppers, although they seldom are as destructive. Taxonomy: Helfer, 1972; Ball et al., 1942; LaRivers, 1948; Alexander, 1941.

*Arethea brevicauda* (Scudder).

AZ, NV. Probable grass feeder.

*Arethea carita* Scudder.

AZ. Found in open grassy areas (1).

1. Ball et al., 1942.

*Arethea coyotero* Hebard.

AZ. Probable grass feeder.

*Arethea gracilipes* Thomas.

AZ. (Thread-legged Grass Katydid). Taken on grass (1).

1. Ball et al., 1942.

*Arethea polingi* Hebard.

AZ. Probable grass feeder.

*Arethea sellata* Rehn.

AZ. Taken on grass (1).

1. Ball et al., 1942.

*Conocephalus strictus* (Scudder).

AZ, NM. (Rapier Meadow Katydid). Found in grass (1), feeds on grass seed (2).

1. Ball et al., 1942; 2. Isely, 1944.

*Idiostatus elegans* Caudell.

NV. (Elegant Shield Back Katydid). Reported host is Bromus (1).

1. LaRivers, 1948.

*Idiostatus inermis* (Scudder).

NV. Reported on Bromus (1).

1. LaRivers, 1948.

*Idiostatus variegatus* Caudell.

UT. Probable grass feeder.

*Neoconocephalus triops* (Linnaeus).

AZ, NM, NV. (Broad-tipped Conehead). Common in Johnson grass and other range grasses (1).

1. Ball et al., 1942.

*Orchelium concinnum* Scudder.

AZ, CO, NM. Probable grass feeder.

*Ochelium gladiator* Bruner.

UT. (Gladiator Katydid). Probable grass feeder.

*Ochelium unispina* (Saussure and Pictet).

AZ. Found in desert grassland (1).

1. Ball et al., 1942.

*Orchelium vulgare* Harris.

CO. (Common Meadow Katydid). Favors clumps of tall grass (1), feeds on grass seeds (2).

1. Helfer, 1972; 2. Isely, 1944.

*Plagiostira gillettei* Caudell.

CO, NV, UT. (Gillette's Shield-back Katydid). Feeds on grassheads of Oryzopsis (1).

1. LaRivers, 1948.

**Thysanoptera****Phloeothripidae**

Most tube-tailed thrips are predaceous or spore-feeders. One grass feeding genus occurs in our region. Taxonomy: Hinds, 1902; Watson, 1923.

*Haplothrips clavisetis* Priesner.

AZ. Found on Tridens (1).

1. UA records.

*Haplothrips haplophilus* Hood.

AZ, NM, NV, UT. Common on many grasses in the west (1), including Hordeum, Oryzopsis (2), Bouteloua (3), Sporobolus (4), and Distichlis (5).

1. Hewitt et al., 1974; 2. NDA records; 3. Watts, 1965;

4. Watts and Bellotti, 1967; 5. UA records.

*Haplothrips leucanthemi* (Schränk).

UT. (The Statice Thrips). Found on many plants but most common on grass (1).

1. Essig, 1926.

**Thripidae**

Grass feeding thrips cause a type of injury known as "silver-top." The growing tips of the blades are shriveled with white streaks or blotched areas where the chlorophyll has been removed. Taxonomy: Hinds, 1902; Watson, 1923; Herrick, 1924; Andre, 1939; Speyer, 1935; Moulton, 1948; Zur Strassen, 1960, 1967.

*Anaphothrips longipennis* Crawford.

AZ, NV, UT. Reported on Avena, Triticum, Elymus (1), Aristida and Cynodon (2).

1. Bailey and Knowlton, 1949; 2. UA records.

*Anaphothrips obscurus* (Muller).

AZ, NM, NV, UT. (Northern Grass Thrips). Feeds on wild grasses and cereal crops (1). Reported on Agropyron, Dactylis (2), Zea, Avena, Triticum (3), Phleum, Sorghum, Hordeum (4), Poa, Elymus, Panicum and Agrostis (5).

1. Essig, 1926; 2. Watts and Bellotti, 1967; 3. Knowlton and Thomas, 1933; 4. NDA records; 5. UA records.

*Anaphothrips tricolor* Moulton.

NV, UT. Occurs on foliage of Agropyron (1).

1. Tingey et al., 1972.

*Anaphothrips zae* Moulton.

AZ, CO, NM, UT. Found on foliage and heads of Agropyron (1, 2), Dactylis (3), Sorghum, Leptochloa and Cynodon (4).

1. Kumar et al., 1976; 2. Tingey et al., 1972; 3. Watts and Bellotti, 1967; 4. UA records.

*Aptinothrips rufus* Gmelin.

AZ, NV, UT. Occurs on various grasses, including those of mountain meadows (1). Reported on foliage of Agropyron (2) and Elymus (3). Also, Poa, Sitanion, Eragrostis, Festuca, Alopecurus, Bromus, and Hordeum (4).

1. Bailey, 1948; 2. Tingey et al., 1972; 3. Bailey and Knowlton, 1949; 4. UA records.

*Baileiothrips arizonensis* (Morgan).

AZ. Collected on Aristida and Tridens (1).

1. UA records.

*Bregmatothrips sonorensis* Stannard.

AZ. Reported on Setaria, Panicum, Andropogon, Cynodon, Aristida, Bouteloua, Chloris, Sporobolus, Muhlenbergia, Echinochloa, Leptochloa, Dactylis, Sorghum and Hordeum (1).

1. UA records.

*Bregmatothrips venustus* Hood.

NM. A grass feeder (1), reported on Bouteloua (2), Aristida, Cynodon (3).

1. Watson, 1923; 2. Watts, 1963; 3. UA records.

*Caliothrips fasciatus* (Pergande).

AZ, CO, NV, UT. (Bean Thrips). A general feeder including grasses (1).

1. Essig, 1926.

*Chirothrips aculeatus* Bagnall.

AZ, CO, UT. Reported on foliage of Agropyron (1), Triticum (2), Sitanion and Elymus (3).

1. Tingey et al., 1972; 2. Andre, 1939; 3. UA records.

*Chirothrips alexandrae* Stannard.

CO. Probable grass feeder (1).

1. Watts, 1970.

*Chirothrips crenulatus* Hood.

CO, NM. Reported on Koeleria and Bouteloua (1).

1. Watts, 1972.

*Chirothrips falsus* Priesner.

AZ, NM. Hosts are Bouteloua, Lycurus and Muhlenbergia (1).

1. J.G. Watts, pers. comm.

*Chirothrips manicatus* (Haliday).

AZ, UT. (Maniculate Thrips). Found on grains and grasses (1). Reported on Poa (2).

1. Bailey, 1948; 2. UA records.

*Chirothrips mexicanus* Crawford.

AZ, NM. Found on a wide range of grasses including Chloris (1), Setaria, Sporobolus (2), Bouteloua (3), Cynodon, Festuca, Agrostis, Panicum (4), Digitaria, Aristida, Elymus, Eragrostis, Hilaria, Leptochloa and Sorghum (5).

1. Riherd, 1954; 2. Watts, 1970; 3. Kumar et al., 1976; 4. Watts, 1972; 5. UA records.

*Chirothrips patruelis* Hood.

AZ, NM. Reported on Bouteloua (1) and Koeleria (2).

1. Watts, 1972; 2. Watts, 1970.

*Chirothrips productus* Hood.

CO, NM, NV, UT. Collected on Agropyron (1).

1. Watts, 1970.

*Chirothrips propinquus* zur Strassen.

AZ. Probable grass feeder (1).

1. Watts, 1970.

*Chirothrips simplex* Hood.

AZ, NM, NV, UT. The most common thrips on grass seed heads in New Mexico (1), and Bermuda grass grown for seed in Arizona (2). Host grasses include: Agropyron, Andropogon, Aristida, Bothriochloa, Bouteloua, Calamovilfa, Cynodon, Dactylis, Elymus, Eragrostis, Festuca, Hilaria, Koeleria, Lycurus, Muhlenbergia, Oryzopsis, Panicum, Stipa, Sporobolus, Sorghasturm (3), Hordeum, Sitanion and Tridens (4).

1. Watts, 1970; 2. Roney, 1949; 3. Watts, 1965; 4. UA records.

*Chirothrips spiniceps* Hood.

AZ, UT. Reported on Panicum, Triticum (1) and Leptochloa (2).

1. zur Strassen, 1967; 2. UA records.

*Chirothrips texanus* Andre.

AZ, NM. Collected on Sorghum (1), Bothriochloa, Andropogon (2), Bouteloua and Muhlenbergia (3).

1. Watts, 1972; 2. Watts, 1970; 3. UA records.

*Chirothrips tuttlei* zur Strassen.

AZ. Collected on Aristida and Bouteloua (1).

1. UA records.

*Frankliniella insularis* (Franklin).

AZ. Collected on Hordeum (1).

1. UA records.

*Frankliniella minuta* (Moulton).

AZ, CO, NV, UT. (The Small Thrips). A general feeder which is found on grasses (1) including Panicum (2), Stipa, Aristida, Elymus, Hordeum, and Sitanion (3).

1. Essig, 1926; 2. Knowlton and Thomas, 1933; 3. UA records.

*Frankliniella occidentalis* (Pergande).

AZ, UT. (Western Flower Thrips). Reported on Zea, Sitanion and "bunchgrass" (1), Bouteloua (2), Agropyron (3), Muhlenbergia, Panicum, Setaria, Elymus, Sorghum, Sporobolus, Andropogon, Aristida, Cynodon, Eragrostis, Hordeum, and Leptochloa (4).

1. Knowlton and Thomas, 1933; 2. Watts and Bellotti, 1967; 3. Tingey et al., 1972; 4. UA records.

*Frankliniella tritici* (Fitch).

CO, UT. (Flower Thrips). Found on all kinds of flowers and grasses (1) including Hordeum and Sitanion (2). This record of a basically eastern species as far west as Utah needs confirmation (3).

1. Watts, 1936; 2. Knowlton and Thomas, 1933; 3. J.G. Watts, pers. comm.

*Limothrips cerealium* Haliday.

AZ, UT. (The Grain Thrips). Found on cereal grains and Avena. (1). A common eastern species, rare in the west (2).

1. Bailey, 1948; 2. Watts, pers. comm.

*Oedalothrips jacksoni* Hood.

AZ. A broad host range includes Bromus, Andropogon and Sporobolus (1).

1. UA records.

*Plesiothrips perplexus* (Beach).

AZ. Host records include Bouteloua, Sporobolus, Chloris, Elymus, Eragrostis, Leptochloa, Panicum, Setaria and Sitanion (1).

1. UA records.

*Thrips tabaci* Lindeman.

AZ, CO, NM, NV, UT. (Onion Thrips). A general feeder on grasses, weeds, many plants (1). Reported on "bunchgrass" (2), Agropyron, Bromus, Poa and Elymus (3).

1. Essig, 1926; 2. Knowlton and Thomas, 1933; 3. UA records.

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### Appendix I: Common Names of Grasses

Sources: Gould, 1977; Pohl, 1978; Humphrey, 1977; Munz and Keck, 1968.

Scientific Name	Common Name	Scientific Name	Common Name
Agropyron	Wheat-grass	Leptoloma	Witch-grass
Agrostis	Bent-grass	Lolium	Rye-grass
Aira	Hair-grass	Melica	Melic
Alopecurus	Foxtail, Wolftail	Miscanthus	Eulalia
Ammophila	Beach-grass	Muhlenbergia	Muhly
Ampelodesmos	Reed	Oryza	Rice
Andropogon	Bluestem, Beard-grass	Oryzopsis	Rice-grass
Aristida	Threeawn	Panicum	Panic-grass
Arrhenatherum	Oat-grass	Panicularia	Manna-grass
Avena	Oats	Pappophorum	Pappus-grass
Axonopus	Carpet-grass	Parapholis	Sickle-grass
Beckmannia	Slough-grass	Paspalum	Dallis-grass, Bahia-grass, Knot-grass
Bouteloua	Gramma-grass	Pennisetum	Fountain-grass, Pearl Millet
Bromus	Chess, Cheat-grass	Phalaris	Canary-grass
Buchloe	Buffalo-grass	Phleum	Timothy
Calamagrostis	Reed-grass	Poa	Blue-grass
Calamovilfa	Sandreed, Reed-grass	Polypogon	Rabbitfoot-grass
Cenchrus	Sandbur	Puccinellia	Alkali-grass
Chloris	Finger-grass	Rhynchelytrum	Natal-grass
Cynodon	Bermuda-grass	Saccharum	Sugar-cane
Cynosurus	Dogtail	Schizachyrium	Little Bluestem
Dactylis	Orchard-grass	Scelopogon	Burro-grass
Dactyloctenium	Crowfoot-grass	Secale	Rye
Danthonia	Oat-grass	Setaria	Bristle-grass, Millet
Deschampsia	Crab-grass	Sitanion	Squirreltail
Digitaria	Hair-grass	Sorghastrum	Indian-grass
Distichlis	Salt-grass	Sorghum	Johnson-grass, Sorghum Sudan-grass
Echinochloa	Barnyard-grass	Spartina	Cord-grass, Slough-grass
Eleusine	Goose-grass	Sporobolus	Dropseed, Sacaton
Elymus	Rye-grass	Stenotaphrum	St. Augustine-grass
Elyonurus	Woolly Bunch-grass	Stipa	Needle-grass
Eragrostis	Love-grass	Trachypogon	Crinkleawn
Eremochloa	Centipede-grass	Tragopogon	Goats-beard
Erianthus	Plume-grass	Trichloris	Finger-grass
Eriochloa	Cup-grass	Tridens	Tridens
Eriocoma	Rice-grass	Triodia	Fluff-grass
Festuca	Fescue	Tripsacum	Gama-grass
Glyceria	Manna-grass	Trisetum	Trisetum
Heteropogon	Tanglehead	Triticum	Wheat
Hilaria	Galleta, Mesquite	Vaseyochloa	Vasey-grass
Holcus	Velvet-grass	Zea	Corn, Maize
Homalocenchrus	Cut-grass	Zizania	Wild Rice
Hordeum	Barley	Zizaniopsis	Indian Rice
Koeleria	June-grass		
Leersia	Rice Cut-grass		
Leptochloa	Sprangle-top		