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UTAH STATE UNIVERSITY ECOLOGY CENTER

Terrestrial Arthropod Series No. 9

ACULEATE HYMENOPTERA (VESPIDAE AND SPHECIDAE)
OF CURLEW VALLEY

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A preliminary survey of the terrestrial arthropods of Curlew Valley was begun in 1969. Since that time the survey has continued in connection with Desert Biome IBP projects and assignments to this area, plus trips made purely to add insect material for the survey program. In addition to the writers, assistance in collecting was received from Dr. Donald W. Davis. Various co-workers have added smaller numbers of specimens.

The preliminary insect survey of Curlew Valley was conducted as Utah State University, Ecology Center Project 31 and 31A, supported by NSF, Gifts and Grants funds.

Logan, Utah 84322
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Curlew Valley extends from the north shore of the Great Salt Lake through a section of Box Elder County in Utah, north into Oneida County, Idaho, to Holbrook Summit, Roy Summit, and to just beyond Juniper. Along the east-west highway it extends from one mile south of Strevell eastward to 4 miles east of Snowville. Utah localities include Cedar Creek, Cedar Hill, Curlew Jct., Deep Creek, Hansel Mts., Hardup and Kelton (now ghost towns), Kelton Pass, Kosmo, Locomotive Springs, Rose Ranch, Snowville and Wildcat Hills. Idaho localities include Black Pine, Curlew National Grasslands, Curlew Valley ("Stone") Reservoir, Holbrook, sand dunes about five miles south of Holbrook, Holbrook Summit (6110 ft.), Ireland Canyon, Juniper, Meadow Brook Creek, Rock Creek, meadow and foothill area south of Roy Summit, Salyer Cow Camp, Sheep Creek Mts., Stone and Twin Springs.

We are much indebted to Dr. Richard M. Bohart who recently identified nearly all of the wasps reported here. Several additional identifications were made by Drs. F. D. Parker, J. E. Gillaspay, D. P. Levin, and G. E. Bohart.

HYMENOPTERA - Vespidae

The family Vespidae includes wasps with the front wings folded longitudinally and with the pronotum in intimate contact with the tegula. Those in the subfamily Vespinae make paper nests with hexagonal cells. These are generally social and omniverous. The Eumeninae are the potterly wasps, making mud nests in which they store larval Lepidoptera,

Coeoptera and Hymenoptera (sawflies) to feed their young.

EUMENINAE

Ancistrocerus adiabatus albolactus Bequaert. Holbrook, June 9 and
Rock Creek, July.

A. catskill (Saussure). Curlew Valley Reservoir, Locomotive Springs,
Rock Creek, Salyer Cow Camp, Snowville and Stone, sometimes
on *Cirsium* and in Malaise traps, June-July, September.

A. catskill albophalaratus (Saussure). Holbrook, Kelton, Rock Creek,
south of Roy Summit and Twin Springs, May-July.

A. lineativentris Cameron. Holbrook, Rock Creek, Salyer Cow Camp and
Twin Springs, some on *Cirsium arvense*, June-August.

A. simulator Cameron. Rock Creek and Salyer Cow Camp, July.

A. spilogaster Cameron. Salyer Cow Camp, July-August.

A. tuberculocephalus (Saussure). Holbrook, Rock Creek, south of Roy
Summit, Salyer Cow Camp and Twin Springs, June-July.

(Commonly re-use the nests of yellow and black mud daubers,
Sceliphron).

Eumenes bollii Cresson. Rock Creek, June 6, 1972.

E. crucifera Provancher. Rock Creek, south of Roy Summit, Salyer Cow
Camp, Snowville and Twin Springs, July.

Euodynerus annulatus sulphureus (Saussure). Cedar Creek Jct., Cedar Hill,
Curlew Valley Reservoir, Hardup, Ireland Canyon, Kelton Pass,
Meadow Brook Creek, Rock Creek, Salyer Cow Camp, Snowville,

Stone, Twin Springs, sometimes taken on *Achillea millefolium*,
Cirsium arvense and *Solidago*, June-September.

E. auranus (Cameron). Hardup, June 28, 1972.

E. exoglyphus albovittatus (R. Bohart). Cedar Creek, Curlew Valley
Reservoir, Hardup, Holbrook, Kelton, Kelton Pass, Rock Creek
and Salyer Cow Camp, May-July.

E. foraminatus (Saussure). Rock Creek, Salyer Cow Camp, Snowville, and
Twin Springs, June-July.

E. hidalgo (Saussure). Rock Creek, south of Roy Summit, Salyer Cow Camp
and Twin Springs, some taken on *Cirsium arvense*, July-August.

E. leucomalus (Saussure). Holbrook, Rock Creek, Salyer Cow Camp and
Twin Springs, June-July.

E. pratensis (Saussure). 10 miles east of Park Valley, June 28, 1972.

Leptochilus eubescens (R. Bohart). Salyer Cow Camp, July 23, 1971.

L. rufinodus (Cresson). Cedar Creek, Hardup and Kelton Pass, June 28, 1972.

Microdynerus bakeriana (Cameron). Holbrook, Meadow Brook Creek and
Salyer Cow Camp, on *Achillea millefolium*, June.

Odynerus dilectus (Saussure). Curlew National Grasslands, Holbrook,
Snowville, and Stone, May-June. Stores nest with larvae of the
alfalfa weevil.

Parancistrocerus acarigaster (R. Bohart). Holbrook, Kelton, and
Snowville, June-July.

P. macclayi R. Bohart. Rock Creek, Salyer Cow Camp and Twin Springs,
July, some on *Cirsium arvense*.

P. minimoferus (R. Bohart). Hansel Mts. and Rock Creek, July.

- P. pensylvanicus* (Saussure). Curlew Valley Reservoir and Salyer Cow Camp, July 23, 1971.
- P. vagus* (Saussure). Ireland Canyon and Salyer Cow Camp, on *Chrysothamnus* blossoms, July-September.
- Pseudepipona herrichi* (Saussure). Salyer Cow Camp, July 27, 1972.
- Pterocheilus decorus* Cresson. Taken in Malaise trap at Holbrook, June 8 and 15, 1972.
- P. morrisoni* Cresson. Curlew Valley Jct. (Showell), Cedar Creek, Hardup, Holbrook, Kelton Pass and Snowville, May-June, sometimes on *Achillea*, some in Malaise traps.
- P. pedicellatus* R. Bohart. Cedar Creek, Cedar Hill, Holbrook and Kelton, June-September.
- P. provancheri* (Huard). Black Pine, Cedar Creek, Holbrook and Snowville, some in Malaise traps, May-July, September.
- P. quinquefasciatus* Say. Curlew Jct., Salyer Cow Camp and Snowville, July. Usually collected on *Melilotus* (sweetclover).
- Stenodynerus anormis* (Say). Curlew Valley Reservoir, Holbrook, on *Achillea millefolium* blossoms at Meadow Brook Creek, Rock Creek, Salyer Cow Camp, Stone and Twin Springs, sometimes on *Cirsium arvense*, June-September.
- S. blandoides* R. Bohart. Cedar Creek, Curlew Junction, Curlew Valley Reservoir, Holbrook, Kelton Pass, Locomotive Springs, Meadow Brook Creek, Salyer Cow Camp on *Achillea millefolium* and on *Chrysothamnus* at Wildcat Hills, June-September.
- S. canus* R. Bohart. Rock Creek, July 13, 1972.

- S. kennicottianus* (Saussure). Locomotive Springs and Salyer Cow Camp, usually on *Chrysothamnus*, July, September.
- S. noticeps* R. Bohart. On *Chrysothamnus viscidiflorus* at Cedar Hill during August, Holbrook, Kelton, Locomotive Springs, Rock Creek, Salyer Cow Camp, Snowville, on *C. nauseosus*, also at Wildcat Hills, June-September.
- S. valliceps* R. Bohart. On *Chrysothamnus* at Curlew Valley Reservoir, Cedar Hill, Kelton, Locomotive Springs, Snowville, June-September.
- Symmorphus meridionalis* Viereck. Twin Springs, July 17, 1972. Most species store tenthredinid (sawfly) larvae instead of Lepidoptera.

VESPINAE

- Polistes fuscatus utahensis* Hayward. Salyer Cow Camp, south of Roy Summit and Twin Springs, August, October.
- Vespula pensylvanica* (Saussure). Salyer Cow Camp, August 11, 1972.
- V. rufa atropilosa* (Sladen). Salyer Cow Camp, August 11, 1972.

HYMENOPTERA - Sphecidae

The Sphecidae differ from the Vespidae in not having a longitudinal fold in the forewing and in having a conspicuous separation between the pronotum and the tegula. The sphecids are solitary wasps

that come to blossoming plants. Their nest sites vary; some are found in hollow stems, or beetle burrows in wood, others burrow in the soil or make exposed cells on rocks. They line their burrows or construct their cells with various materials such as mud, resin, or fibers. In most cases, particular species will store only insects or spiders of a single family. Commonly, a particular genus restricts its prey to members of a particular order or, in some cases, to a family. Host insects are taken both as adults and as immatures, but generally by separate wasp species.

Ammophila aberti Haldeman. Cedar Hill, Holbrook, Kelton and Kelton Pass, July-August. All members of this genus provision their nests with lepidopterous larvae.

A. cleopatra Menke. Rock Creek, July 21, 1971.

A. ferruginosus Cresson. Twin Springs, July 6, 1972.

Ammophila spp. On *Solidago* ten miles west of Snowville, August 11, 1972. 75 specimens, throughout Curlew Valley.

Ancistromma capax (W. Fox). Holbrook, August 10, 16 and 26 in Malaise traps, south of Roy Summit and Snowville, July-August.

Prey - nymphal Acrididae.

A. distincta (F. Smith). Holbrook Summit at 6110 ft., and Snowville, August. Prey - nymphal Acrididae.

Astata bakeri Parker. Cedar Hill, Curlew Jct., Hansel Mts., Ireland Canyon, Kelton, Rock Creek, south of Roy Summit, Salyer Cow Camp and Snowville, July-August, sometimes on *Sophia* and other mustard blossoms. Prey - nymphal Pentatomidae.

- A. bechteli* Parker. Curlew Jct., Curlew Valley Reservoir, Holbrook, Kelton (August 24, 1949), Salyer Cow Camp and Stone, July-September. Prey - nymphal Pentatomidae.
- A. leuthstromi* Ashmead. Hansel Mts., July 22, 1969. Prey - nymphal or adult Pentatomidae.
- A. nevadica* Cresson. Cedar Hill, Park Valley Jct., Snowville and Twin Springs, June-August. Prey - nymphal Pentatomidae.
- A. nubecula* Cresson. Hansel Mts., Holbrook, south of Roy Summit, Salyer Cow Camp, Snowville, Stone and Twin Springs, June-August. Prey - nymphal and adult Pentatomidae.
- A. occidentalis* Cresson. Snowville, July 22, 1969. Prey - nymphal and adult Pentatomidae.
- Belomicrus cladothricis* (Cockerell). On *Chrysothamnus* at Holbrook, July 17, 1972. Prey - small Coleoptera.
- B. coloratus* Baker. (or near), Holbrook, Snowville and Stone, May, July. Prey - probably small Coleoptera.
- B. forbesii* (Robertson). Holbrook, June 10, 1971. Prey - probably small Coleoptera.
- Cerceris acanthophila* Cockerell. Cedar Hill, Kelton, Locomotive Springs, Snowville and Wildcat Hills, often on *Chrysothamnus viscidiflorus* and *C. nauseosus* blossoms, July-August. Prey - adult Coleoptera taken by all North American *Cerceris*.
- C. aequalis* Provancher. Curlew Valley (Stone) Reservoir, Kelton and Rock Creek, June-July.
- C. californica* Cresson. Curlew Valley (Stone) Reservoir, Rock Creek and

Twin Springs, June-July.

- C. conifrons* Mickel. Cedar Hill, Holbrook, Salyer Cow Camp and Snowville, on *Achillea millifolium*, *Solidago* and in noctuid pheromone trap, June-August.
- C. convergens* Viereck & Cockerell. Cedar Hill, Curlew Valley Reservoir, Holbrook Summit at 6110 ft., Kelton, Locomotive Springs and Snowville, visiting *Chrysanthamnus nauseosus* and *C. viscidiflorus*, July-August.
- C. finitima* Cresson. Curlew Valley Reservoir, Kelton and on *Solidago* 10 miles west of Snowville, July-August.
- C. frontata* Say. Cedar Hill on *Chrysanthamnus viscidiflorus*, August 5, 1969.
- C. nigrescens* F. Smith. Black Pine, Curlew National Grasslands, Curlew Valley (Stone) Reservoir, Holbrook, Holbrook Summit, Ireland Canyon, Kelton, Rock Creek, south of Roy Summit, Salyer Cow Camp, Snowville, Stone, and Twin Springs. Taken on *Cirsium arvense*, *Chrysanthamnus* and *Solidago*, May-September.
- C. rufinoda* Cresson. Cedar Hill on *Chrysanthamnus viscidiflorus*, on *Chrysanthamnus* at sand dunes south of Holbrook and Snowville, July-August.
- C. sextoides* Banks. Curlew National Grasslands and Curlew Valley (Stone) Reservoir on *Chrysanthamnus nauseosus*, Salyer Cow Camp and Snowville on *Solidago* and *Chrysanthamnus viscidiflorus*, July-August.
- C. varians* Mickel. Cedar Creek Jct., Holbrook, Rock Creek, Salyer Cow

Camp, Snowville and Twin Springs, June-July.

Chalybion californicum (Saussure). Curlew Valley Reservoir, south of Roy Summit and Salyer Cow Camp, July-September. Prey - spiders. Usurps nests of *Sceliphron* wasps.

Crabro cognatus Fox. Snowville, August 19, 1969. Prey - adult Diptera stored by all *Crabro*.

C. latipes F. Smith. South of Roy Summit, Salyer Cow Camp, Snowville, Stone and Twin Springs, May-August.

Crossocerus spp. Curlew Valley Reservoir, July. Prey - adult Diptera.

C. scutellifer (Dalla Torre). Curlew Valley Reservoir and Snowville, July 15, 1969. Prey - adult Diptera.

Didineis nodosa W. Fox. Holbrook in Malaise trap, Kelton, July. Prey - fulgoroid Homoptera.

Diodontus spp. 38 specimens from Curlew Valley Reservoir, Holbrook, Holbrook Summit, Ireland Canyon, Kelton, Kelton Pass, Locomotive Springs, Rock Creek, Salyer Cow Camp, Snowville and Twin Springs, May-September, visits *Chrysothamnus nauseosus*. Prey - Aphididae, Psyllidae.

Diploplectron beccum Parker. Holbrook (Malaise trap), August, 1972.

Prey - Lygaeidae (Hemiptera) for this genus.

D. ferrugineum Ashmead. Holbrook, 5 miles west Cedar Hill on *Chrysothamnus* July, August.

Dryudella sp. Snowville, August 1, 1969. Prey - small Hemiptera for this genus.

D. immigrans Williams. In Malaise trap at Holbrook, August 8, 1972.

D. pieta (Kohl). Snowville, September 5, 1969.

- D. rhimpa* Parker. Very numerous at Kelton, August 24, 1949, and Kelton Pass, Curlew Valley Reservoir and Holbrook, July-September.
- Ectemnius arcuatus* (Say). Twin Springs, August 3, 1972. Prey - Diptera for this genus.
- E. continuus* (F.). Salyer Cow Camp, August 3, 1969.
- E. dilectus* (Cresson). Cedar Hill on *Chrysothamnus viscidiflorus*, Curlew Valley Reservoir, Meadow Brook Creek, Holbrook, Rock Creek, Salyer Cow Camp, Snowville on *Solidago* and Stone, May-September.
- E. lapidarius* (Panzer). Salyer Cow Camp and Snowville, July-August.
- E. spiniferus* (W. Fox). Cedar Hill and Twin Springs on *Chrysothamnus viscidiflorus*, Curlew Valley Reservoir, Holbrook, Rock Creek on *Cirsium arvense*, Salyer Cow Camp, Snowville, on *Solidago*, July-August.
- Epinysson bellus* Cresson. Locomotive Springs, June 30, 1969. Inquilines in nests of Sphecidae.
- Eucerceris cressoni* (Schletter). Meadow Brook Creek, Rock Creek, Salyer Cow Camp and Twin Springs, on *Chrysothamnus nauseosus* and *C. viscidiflorus*, July-September. Prey - adult Coleoptera for this genus.
- E. similis* Cresson (= *E. barri* Scullen). South of Roy Summit, July 23, 1971.
- E. superba* Cresson. Attracted to *Chrysothamnus nauseosus*, *C. viscidiflorus*, *Solidago*, Cedar Hill, Curlew Valley Reservoir, Holbrook, Ireland Canyon, sand dunes south of Holbrook, Snowville, July-September.

- E. zonata* (Say). Curlew Valley (Stone) Reservoir, June 29, 1969.
- Gorytes albosignatus* W. Fox. Twin Springs, June 1, 1972. Prey -
auchenorrhynchous Homoptera for this genus.
- G. angustus* (Provancher). Salyer Cow Camp, July 27, 1972.
- G. umatillae* R. Bohart. Holbrook in Malaise trap, June 15, 1972.
- Hoplisoides punctifrons* (Cameron). Locomotive Springs, July 30, 1969.
Prey - nymphal membracidae (Homoptera).
- Hyponysson bicolor* (Cresson). Kelton, June 27, 1969. Inquilines in
nests of Specidae.
- Isodontia elegans* F. Smith. Rock Creek, Salyer Cow Camp and Twin Springs,
July. Prey - Gryllidae (*Oecanthus*).
- Larropsis tenuicornis* (F. Smith). Snowville, August, 1972 on *Chrysothamnus*
viscidiflorus. Prey - nymphal Acrididae.
- Lestica producticollis* (Puck). Salyer Cow Camp, July 27, 1971.
Prey - different species known to take adult Pterophoridae
(plume moths).
- Lestiphorus piceus* (Handlirsch). Holbrook, Holbrook Summit and Salyer
Cow Camp, July-August. Prey - unknown but probably Hemiptera.
- Lindenius columbianus* (Kohl). Common on *Chrysothamnus nauseosus*, *C.*
viscidiflorus, *Solidago* and in Malaise trap, Cedar Hill, Curlew
National Grasslands, Curlew Valley Reservoir, Holbrook, Holbrook
Summit, Ireland Canyon, Kelton, Locomotive Springs, Rock Creek,
Salyer Cow Camp, Snowville, Stone and Twin Springs, May-
September. Prey - small parasitic Hymenoptera adults.
- Linis argentata* (Palisot-Beauvais). Malaise trap, Kelton, June 30, 1969.

- Prey - crickets (Orthoptera).
- Mimesa* spp. Cedar Hill, Curlew Valley Reservoir, Hansel Mts., Holbrook, Holbrook Summit, Ireland Canyon, Kelton Pass, Snowville, and Twin Springs, June-October. Prey - Cicadellidae.
- Mimunesa mixta* (W. Fox). Rock Creek, Snowville, and Twin Springs, May, July. Prey - Cicadellidae.
- Miscophus americanus* W. Fox. Holbrook and Twin Springs, July-August. Prey - spiders (Eperidae).
- Nysson fidelis* Cresson. Stone, May 27, 1969. Inquilines in nests of Sphecidae.
- Oxybelus emarginatus* Say. Cedar Hill on *Chrysothamnus viscidiflorus*, Holbrook on *Tetradymia canescens*, Holbrook Summit, Ireland Canyon on *Chrysothamnus nauseosus*, Kelton in Malaise trap, Rock Creek, Salyer Cow Camp, Snowville, and Twin Springs, June-September. Prey - small adult Diptera.
- O. uniglumis* (L.). Holbrook, Rock Creek, Salyer Cow Camp, Snowville on *Chrysothamnus* and *Solidago*, Stone, Meadow Brook Creek and Twin Springs, May-September. Prey - small adult Diptera.
- Palmodes dimidiatus* (De Geer). Sand dunes south of Holbrook, July 17, 1972. Prey - Orthoptera.
- Pemphredon inornata* Say. Twin Springs, July 17, 1972. Prey - Aphididae.
- P. lethifer* Shuckard. Snowville, May 27, 1969 and Stone. Prey - Aphididae.
- Philanthus gibbosus* (F.). Curlew National Grasslands, Rock Creek and Twin Springs, July. Prey - Apoidea (bees) for this genus.

- P. multimaculatus* Cameron. Collected on blossoming *Chrysothamnus nauseosus*, *C. viscidiflorus* and *Solidago*, Cedar Hill, Curlew National Grasslands, Curlew Valley Reservoir, Hardup, Holbrook, Holbrook Summit (6110 ft. elev.), Kelton, Locomotive Springs, Rock Creek, south of Roy Summit, Snowville, Stone and Twin Springs, June-September.
- P. pulcher* Dalla Torre. Salyer Cow Camp, June 22, 1972.
- P. ventilabris* F. Kelton Pass, and Snowville on *Solidago*, July-August.
- Pisonopsis* spp. Holbrook, June-August, 1972. Prey - spiders.
- Pluto* sp. Locomotive Springs, July 22, 1969. Prey - probably Cicadellidae.
- Polalonia communis* (Cresson). Holbrook, Meadow Brook Creek, Rock Creek, Salyer Cow Camp and Twin Springs, on *Achilles millifolium*, *Chrysothamnus*, *Tetradymia canescens* and in Malaise trap, May-July. Prey - Lepidopterous larvae (mostly Noctuidae) for this genus.
- P. luctuosa* (F. Smith). This species was collected on *Chrysothamnus nauseosus*, *C. viscidiflorus*, bull thistle, *Solidago*, *Helianthus annuus*, *Achillea millifolium*, *Melilotus officinalis*, and on other blossoming plants from all localities in Curlew Valley, but more numerous from Snowville north. Most numerous in June and July but some taken during August and September, 130 specimens.
- P. melaena* Murray. Kelton, June 27, 1969.
- P. mexicana* (Saussure). On *Chrysothamnus nauseosus* and *C. viscidiflorus*, at Black Pine, Cedar Hill, and Wildcat Hills. Also collected

at Cedar Creek Jct., Holbrook, Juniper, Kelton Pass, Locomotive Springs, Rock Creek, Snowville, Twin Springs, June-October.

P. occidentalis Murray. Rock Creek, July 6, 1972.

P. robusta (Cresson). Holbrook, Rock Creek and Salyer Cow Camp, June-August.

P. valida (Cresson). Cedar Creek, Holbrook, Rock Creek and Twin Springs, June-July.

Prionyx atratus (Lepelletier). Visiting *Chrysothamnus nauseosus*, *C. viscidiflorus*, *Solidago* and other blossoms, Cedar Hill, Curlew Valley Reservoir, Ireland Canyon, sand dunes south of Holbrook, Locomotive Springs, Rock Creek, Snowville, Stone and Wildcat Hills, June-September. Prey - Acrididae (Orthoptera) for this genus.

P. canadensis (Provancher). Visiting *Chrysothamnus nauseosus* and *C. viscidiflorus* blooms, Cedar Creek, Cedar Hill, Hardup, Holbrook, Ireland Canyon, Kelton, Locomotive Springs, sand dunes south of Holbrook, Rock Creek, Snowville, Stone, Twin Springs and Wildcat Hills, June-September.

P. thomae (F.). Cedar Hill on *Chrysothamnus viscidiflorus*, Locomotive Springs on *C. nauseosus*, August-September.

Pseudoplisus venustus (Cresson). Salyer Cow Camp, August 10, 1972.

Prey - Homoptera.

Sceliphron caementarium (Drury). Curlew Valley Reservoir, Locomotive Springs and Salyer Cow Camp, July-August. Prey - spiders.

Solierella spp. Curlew Valley Reservoir and Holbrook, July, in Malaise

trap. Prey - some species use nymphal Hemiptera and others use nymphal Acrididae (Orthoptera).

Sphex ashmeadi (Fernald). Salyer Cow Camp, July 23, 1971 and August 10, 1972. Prey - Acrididae and Tettigoniidae for this genus.

S. ichneumoneus (L.). Holbrook on *Chrysothamnus* and in Malaise trap and sand dunes about five miles south of Holbrook, July-August.

Steniolia elegans Parker. Holbrook and Kelton, June, August. Prey - large adult Diptera.

Stictiella nubilosa Gillasp. On *Solidago* at Snowville, August 11, 1972. Prey - adult Diptera for this genus.

S. pulchella (Cresson). Sand dunes south of Holbrook, June 27, 1972.

Stigmus spp. Curlew National Grasslands and Salyer Cow Camp, May, July. Prey - Aphididae.

Stizioides uncinatus (Say). Visiting *Chrysothamnus nauseosus*, *C. viscidiflorus* and *Solidago* in blossom, at Cedar Hill, Curlew Jct., Holbrook and sand dunes to the south, Kelton, Locomotive Springs, Snowville and Stone, May-September. Inquilines in nests of *Prionyx* (Sphecidae).

Tachysphex ashmeadi Fox. On *Chrysothamnus* at Holbrook, sand dunes south of Holbrook and Rock Creek, July. Prey - Acrididae (Orthoptera) nymphs for most members of this genus.

T. coquilletti Rohwer. Snowville, August 1, 1969 and Curlew Valley Reservoir, July 25, 1969.

T. parvulus (Cresson). Salyer Cow Camp, July 21 and August 3, 1972.

T. rufitarsis (Cameron). Holbrook, on umbelliferous blooms at Salyer Cow Camp and Twin Springs, July-August.

- T. tarsatus* (Say). In Malaise trap at Holbrook, Cedar Hill in pheromone trap, Holbrook Summit, sand dunes south of Holbrook, Salyer Cow Camp, Snowville and Twin Springs, July-August.
- T. terminatus* (Smith). Curlew Valley (Stone) Reservoir, Holbrook, Rock Creek, Salyer Cow Camp, visits *Chrysothamnus*, June-September.
- T. texanus* (Cresson). In Malaise trap at Holbrook, on *Solidago* west of Snowville, June-August.
- T. sp.* Holbrook and sand dunes about five miles south, June-July.
- Tachytes fulviventris* Cresson. On *Solidago*, 10 miles west of Snowville, August 10, 1972. Prey - Acrididae and Tettigoniidae (Orthoptera) for this genus.
- T. nevadensis* R. Bohart. Kelton Pass, September 7, 1972.
- T. sayi* Banks. On *Chrysothamnus viscidiflorus*, Cedar Hill, Curlew National Grasslands, Curlew Valley Reservoir, on *Cirsium arvense* at Rock Creek, sand dunes south of Holbrook, Salyer Cow Camp, Snowville, June-July.
- Trypoxylon* spp. Kelton, Rock Creek and Salyer Cow Camp, July-August.
Prey - spiders.
- Glenostictia pulla* (Haldeman). Sand dunes about five miles south of Holbrook, July 17, 1972. Prey - adult Diptera.