

LIST OF INSECT TYPE SPECIMENS IN THE ENTOMOLOGICAL COLLECTION OF THE BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH, NO. IV.

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There is a tendency at present in the biological sciences to shy away from systematics in favor of molecular biological studies. The Linnaean system of dealing with the multitudinous forms of animate nature is being seriously questioned. Today, biologists are concerned with the synthesis of the living environment at levels of organization such as the "biota, community, population, organism, cell, and molecule."³ No doubt emphasis in this line of endeavor will prove to be revealing as to the similarity and unity of organisms. As advancements are made in this new approach to understanding the basic makeup of organisms, their similarity and life processes, there will still be a need for recognizing the great diversity of life forms. The causes that bring about diversity of organisms may be more clearly known and manipulated, but the end product, the objective entity, that which we now know as the species, will still exist.

Modern methods employed in taxonomy are superior to those of the Linnaean period and should, through additional refinements, continue to be one way of categorizing and reporting on the product of evolution. In systematizing plants and animals, workers have described the diverse forms and preserved, for future studies, some of the specimens used in the description of the new species. These specimens have been variously designated as: type, holotype, allotype, cotype, paratype, topotype and other designations. Experience has justified the preservation of specimens so designated by the author in making a description. Without the object described, it is well nigh impossible for biologists and research workers to make a satisfactory determination of some species. It is, therefore, in the interest of future research work with the insect group, that the species representing types are listed in these reports.

Entomology is an important discipline since it is concerned with the study of a large segment of animal life. Research in this field in the western states may be aided by having authoritative collections and some type material available at a focal point such as at this university.

ORDER ORTHOPTERA

FAMILY GRYLLACRIDIDAE

Ceuthophilus nevadensis Barnum.

Brigham Young Univ. Sci. Bul., Biol. Ser., 4(3):96-100, 1964.

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³Raven, P. H., and H. W. Richard. 1967. Syst. Zool. 16:1.

Paratypes, 19 ♂♂, 16 ♀♀; Nevada Test Site, Nye Co., Nev.
(Andrew Barnum).

Ceuthophilus deserticola Barnum.

Brigham Young Univ. Sci. Bul., Biol. Ser., 4(3):100-103, 1964.

Paratypes, 7 ♂♂, 9 ♀♀; Nevada Test Site, Nye Co., Nev.
(Andrew Barnum).

ORDER HEMIPTERA

FAMILY MIRIDAE

Chlamydatus becki Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):28, 1968.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev.
(H. H. Knight and J. M. Merino).

Microphylellus symphoricarpi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):30, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H.
Knight)

Plagiognathus salviae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):30, 1968.

Paratypes, 4 ♂♂, 4 ♀♀; Nevada Test Site, Nye Co., Nev. (D E.
Beck, H. H. Knight and J. M. Merino).

Merinocapsus ephedrae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):34, 1968.

Paratypes, 3 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev. (D E.
Beck, H. H. Knight).

Beckocoris laticephalus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):36, 1968.

Paratypes, 5 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev.
(H. H. Knight, J. M. Merino).

Europiella punctipes Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):47, 1968.

Paratypes, 2 ♂♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H.
Knight, D E. Beck).

Europiella lycii Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):40, 1968.

Paratypes, 1 ♂, 3 ♀♀; Nevada Test Site, Nye Co., Nev. (D E.
Beck, H. H. Knight).

Europiella grayiae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):41, 1968.

Paratypes, 5 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev. (D E.
Beck, H. H. Knight and J. M. Merino).

Europiella stitti Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):46, 1968.

Paratype, 1 ♀; Gila Bend, Ariz.; 13 Feb. 1941 (Lloyd L. Stitt).

Europiella nigrofemorata Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):39, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight, D E. Beck and J. M. Merino).

Europiella arizonae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):46, 1968.

Paratype, 1 ♀; Aztec, Ariz., 3 Feb. 1941 (Loyd L. Stitt).

Europiella nigricornis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):40, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight, D E. Beck).

Europiella nicholi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):42, 1968.

Paratype, 1 ♀; Rincon Mts., Ariz., 2 Sept. 1923, Alt. 3,300 (A. A. Nichol).

Europiella albipubescens Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):46, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight, D E. Beck and J. M. Merino).

Europiella yampae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):43, 1968.

Paratype, 1 ♂; Steamboat Sprs., Colo., 12 July 1964, 6700' (H. H. Knight).

1 ♀, Steamboat Sprs., Colo., 11 July 1964, 6700' (H. H. Knight).

Europiella unipuncta Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):44, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (J. M. Merino, H. H. Knight).

Europiella rubricornis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):39, 1968.

Paratype, 1 ♂; Richfield, Utah, 11 June 1930, (Light Trap); (E. W. Davis).

Europiella rufiventris Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):42, 1968.

Paratypes, 1 ♂, 1 ♀; Goldwater, Arizona, 6 April 1940 (Loyd L. Stitt).

Psallus purshiae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):48, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight, J. M. Merino).

Psallus atriplicis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):48, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

Phymatopsallus prosopidis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):49, 1968.

Paratypes, 4 ♂♂, 4 ♀♀; Nevada Test Site, Nye Co., Nev (D E. Beck, H. H. Knight).

Phymatopsallus rubesi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):50, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (J. M. Merino).

Lepidopsallus arizonae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):52, 1968.

Paratypes, 1 ♂, 1 ♀; Mt. Lemon, Ariz., Santa Cat. Mts., 27 July 1917, 9000' (H. H. Knight).

Lepidopsallus nicholi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):52, 1968.

Paratype, 1 ♀; Empire Mts., 5000', Ariz., 20 May 1928 (A. A. Nichol).

Lepidopsallus pini Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):53, 1968.

Paratype, 1 ♀; Ft. Garland, Colo., 10 Aug. 1925 (H. H. Knight) (*Pinus edulis*).*Lepidopsallus longirostris* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):54, 1968.

Paratypes, 1 ♂, 1 ♀; Pingree Pk., Colo., 20 Aug. 1925 (H. H. Knight).

Lepidopsallus monticola Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):54, 1968.

Paratypes, 1 ♂, 1 ♀; Veta Pass, Colo., 9 Aug. 1925 (H. H. Knight) (On *Pinus*).*Nevadocoris becki* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):59, 1968.

Paratypes, 3 ♂♂, 3 ♀♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight, D E. Beck and J. M. Merino) (On *Tetradymia*).*Nevadocoris pallidus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):60, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight) (On *Grayia spinosa*).*Nevadocoris bullatus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):60, 1968.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight) (On *Chrysothamnus*).*Brachyceratocoris nevadensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):61, 1868.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

Macrotylus salviae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):62, 1968.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev. (D E. Beck and H. H. Knight).

Coquillettia luteiclava Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):63, 1968.

Paratypes, 1 ♂; 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino).

Coquillettia albella Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):62, 1968.

Paratypes, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). On *Eriogonum inflatum*.

Dicyphus ribesi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):70, 1968.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev. (Beck, Marino and Knight).

Dicyphus hesperus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):73, 1968.

Paratypes, 1 ♂; Moscow, Idaho, 18 Mar. 1934; 2560', (H. Shipman) (Mullen). 1 ♀, Genese, Ida., 23 May 1936 (R. E. Miller).

Dicyphus stitti Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):74, 1968.

Paratype, 1 ♂; Gila Bend, Ariz., 6 Oct. 1940 (Lloyd L. Stitt). On *Martynia parviflora*.

Macrolophus mimuli Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):75, 1968.

Paratypes, 1 ♂, 1 ♀; Huachuca Mts., 6000', Ariz., 14 June 1928 (A. A. Nicol). Breeding on *Mimulus cardinalis*.

Sixeonotus bebbiae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):76, 1968.

Paratype, 1 ♂; Mohawk, Ariz., 23 Apr. 1940 (Lloyd L. Stitt).

Sixeonotus dextratus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):76, 1968.

Paratype, 1 ♂; Tucson, Ariz., Sabino Canyon. 23 July 1917 (H. H. Knight).

Sixeonotus areolatus Knight.

Bul. Brook. Ent. Soc. 23:243.

Paratype, 1 ♂; Rock Island, Tex., 3½ m. Northwest; 20 June 1922 (Grace O. Wiley).

Largidea nevadensis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):84, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). On *Pinus monophylla*.

Labops hirtus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):88, 1968.

Paratype, 1 ♂; Yellowstone Park, Wyo., 20 July 1925 (A. A. Nichol).

Slaterocoris longipennis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):90, 1968.

Paratypes, 2 ♂♂, 2 ♀♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

Slaterocoris rubrofemoratus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):90, 1968.

Paratypes, 1 ♂, 2 ♀ ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight). On *Artemisia tridentata*.*Lopidea deserta* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):99, 1968.

Paratypes, 5 ♂ ♂, 5 ♀ ♀; Nevada Test Site, Nye Co., Nev. (Beck, Knight and Merino).

Lopidea calli Knight.

Bul. Brook. Ent. Soc., 29:11, 1934.

Paratype, LaSal, San Juan, Co., Utah, June, 1927 (Anson Call, Jr.).

Lopidea becki Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):98, 1968.

Paratype, 1 fl; Nevada Test Site, Nye Co., Nev. (Beck, Knight, and Merino). On *Eriogonum umbellatum*.*Ceratopidea daleae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):100, 1968.

Paratypes, 3 ♂ ♂, 3 ♀ ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight). On *Dalea polyadenia*.*Daleapidea daleae* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):101, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (Beck, Knight and Merino).

Hesperocapus plagiatus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):103, 1968.

Paratype, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

Hesperocapus artemisicola Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):102, 1968.

Paratype, 1 ♂; Hudson, Colo., 25 Aug. 1925 (H. H. Knight) (*Artem. filifolia*).*Dichaetocoris nevadensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):103, 1968.

Paratypes, 2 ♂ ♂, 2 ♀ ♀; Nevada Test Site, Nye Co., Nev. (Knight and Merino).

Dichaetocoris merinoi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):111, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (Knight and Merino). On *Piuus monophylla*.*Dichaetocoris pinicola* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):110, 1968.

Paratypes, 3 ♂ ♂, 3 ♀ ♀; Nevada Test Site, Nye Co., Nev. (Knight and Merino). On *Pinus monophylla*.*Dichaetocoris symphoricarpi* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):112, 1968.

Paratypes, 5 ♂ ♂, 5 ♀ ♀; Nevada Test Site, Nye Co., Nev.

(Beck, Knight and Merino). Host plant *Symphoricarpos, longifloris*.

Dichaetocoris juniperi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):113, 1968.

Paratypes, 3 ♂♂, 3 ♀♀; Nevada Test Site, Nye Co., Nev. (Knight and Merino). On *Juniperus oostrosperma*.

Dichaetocoris utahensis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):114, 1968.

Paratype, 1 ♀; Scipio, Utah, 29 June 1965 (H. H. Knight).

Dichaetocoris stanleyae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):115, 1968.

Paratypes, 2 ♂♂; Nevada Test Site, Nye Co., Nev. (Beck, Knight and Merino). Host plant *Stanleya pinnata*.

Dichaetocoris coloradensis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):116, 1968.

Paratypes, 1 ♂, 1 ♀; Durango, Colo., 13 Aug. 1925 (H. H. Knight).

Melanotichus shoshonea Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):125, 1968.

Paratypes, 1 ♂; Yellowstone Nat. Park, Wyo., 8 Aug. 1937 (H. H. Knight). 1 ♀, Shoshone Nat. Forest, Wyo., 7 Aug. 1927 (H. H. Knight).

Melanotrichus azteci Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):122, 1968.

Paratype, 1 ♀; Phoenix, Ariz., 17 Mar. 1939 (Lloyd L. Stitt).

Melanotrichus malvastri Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):120, 1968.

Paratypes, 1 ♂, 1 ♀; Whittier, Cal., 18 April 1935 (E. L. Pad dock).

Melanotrichus nevadensis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):122, 1968.

Paratypes, 5 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). On *Artemisia tridentata*.

Melanotrichus pallens Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):125, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight and J. M. Merino).

Melanotrichus eurotiae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):128, 1968.

Paratypes, 5 ♂♂, 5 ♀♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight and J. M. Merino). Taken on *Euratia lanata*.

Melanotrichus atriplicis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):125, 1968.

Paratype, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). Taken on *Atriplex canescens*.

Parthenicus furcatus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):133, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (D E. Beck and J. M. Merino). Taken at incandescent light.

Parthenicus pinicola Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):140, 1968.

Paratypes, 1 ♀; Grand Canyon, Ariz., 40 mi. South, 3 Aug. 1917 (H. H. Knight). 1 ♂; Durango, Colo., 13 Aug. 1925 (H. H. Knight).

Parthenicus merinoi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):135, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (D E. Beck and J. M. Merino).

Parthenicus atriplicis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):135, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino).

Parthenicus incurvus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):150, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (D E. Beck and J. M. Merino).

Parthenicus becki Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):149, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

Parthenicus conspersus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):139, 1968.

Paratypes, 1 ♂, 1 ♀; Richfield, Utah, 8 July 1930 (Light trap). (E. W. Davis).

Parthenicus cowaniae Knight.fl

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):148, 1968.

Paratypes, 1 ♂, 1 ♀; Grand Canyon, Ariz., 3 Aug. 1917 (H. H. Knight).

Parthenicus boutalouae Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):154, 1968.

Paratype, 1 ♀; Hauchuca Mts., 6000', Ariz., 14 June 1928 (A. A. Nichol). On *Bouteloua gracilis*.*Ceratocapsus nevadensis* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):156, 1968.

Paratypes, 2 ♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight and J. M. Merino). Taken on *Sphaeralcea*.*Pilophorus miscosetosus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):169, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino).

Pilophorus merinoi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):175, 1968.

Paratypes, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino).

Pilophorus utahensis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):175, 1968.

Paratypes, 1 ♂; Gnd. Junc. Colo., 28 July 1900; 1 ♀; Leeds, Utah, 12 Oct. 1952 (E. W. Davis).

Pilophorus nevadensis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):172, 1968.

Paratype, 1 ♂; Wells, 15 mi. East, Nev. 12 July, 1965 (H. H. Knight).

Pilophorus hesperus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):169, 1968.

Paratypes, 1 ♂, 1 ♀; Estes Park, Colo., 24 Aug. 1925 (H. H. Knight).

Pilophorus diffusus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):168, 1968.

1 Paratype; Pingree Park, Colo., 20 Aug. 1923 (C. J. Drake).

Pilophorus dislocatus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):171, 1968.

Paratype, 1 ♀; Huachuca Mts., Ariz., 29 July 1905 (L. L. Stitt).

Pilophorus salicis Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):173, 1968.

Paratypes, 1 ♂; Las Animas, Colo., 6 Aug. 1925 (H. H. Knight).

1 ♀, Wray, Colo., 4 Aug. 1925 (H. H. Knight).

Irbisia shulli Knight.

Bul. Brook. Ent. Soc., 36:75, 1941.

Paratypes, 1 ♂; Lenore, Ida., 7 May 1938, 1000' (W. E. Shull).

1 ♀, Lenore, Ida., 7 May 1938, 1000, (W. W. Shull, E. Ritzheimer).

Irbisia fuscipubescens Knight.

Bul. Brook. Ent. Soc., 36:76, 1941.

Paratypes, 1 ♂, 1 ♀; Tampico, Wash., 10 May 1925 (E. W. Davis).

Irbisia elongate Knight.

Bul. Brook. Ent. Soc., 36:77, 1941.

Paratypes, 1 ♂, 1 ♀; Wen. Mts., Wn., 9 July 1930 (F. P. Dean).

Irbisia nigripes Knight.

Canadian Ent., 57:94, 1925.

Autotype, Rosevere Creek, Raft River Mts., Utah, June 1928 (D Elden Beck).

Pinalitus brevirostris Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):187, 1968.

Paratypes, 1 ♂; Trinidad, Colo., Stonewall, 8500', 7 Aug. 1925 (H. H. Knight). 1 ♀; Trinidad, Colo., Stonewall 8500', 8

Aug. 1925 (H. H. Knight).

Pinalitus rubrotinctus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):189, 1968.

Paratype, 1 ♀; Mt. Lemon, Ariz., Santa Cat. Mts., July 26, 1917, 9000' (H. H. Knight).

Dichrooscytus flavescens Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):196, 1968.

Paratypes, 2 ♀; Newcastel, Wyo., 19 Aug. 1927 (H. H. Knight).

1 ♂; Grand Can., Ariz., 6 Sept. 1931 (H. H. Knight); 1 ♀;

Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight).

Dichrooscytus rufivenosus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):196, 1968.

Paratypes, 1 ♂, 1 ♀; Pagosa Sprs., Colo., 12 Aug. 1925 (H. H. Knight).

Dichrooscytus ruberellus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):199, 1968.

Paratypes, 1 ♂, 1 ♀; Pingree Pk.: Colo., 22 Aug. 1925 (H. H. Knight).

Phytocoris flavellus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):234, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight, and J. M. Merino).

Phytocoris albidosquams Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):232, 1968.

Paratype, 1 ♂; Nevada Test Site, Nys Co., Nev. (D E. Beck).

Phytocoris juniperanus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):238, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. M. Merino). On *Juniperus osteosperma*.*Phytocoris subcinctus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):254, 1968.

Paratype, 1 ♂; Richfield, Utah, 15 Aug. 1929 (E. W. Davis), Light trap.

Phytocoris becki Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):214, 1968.

Paratypes, 5 ♂♂, 3 ♀♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight, and J. M. Merino). Taken on *Ephedra nevadensis*.*Phytocoris tanneri* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):257, 1968.

Paratype, 1 ♂; Richfield, Utah, 15 July 1929 (E. W. Davis). Taken at light trap.

Phytocorois rostratus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):253, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. H. H. Knight, D E. Beck, and J. M. Merino). Swept from *Chrysothamnus nauseosus*.

Phytocoris tricintus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):256, 1968.

Paratype, 1 ♀; Tucson, Ariz., 12 May 1929 (E. D. Ball).

Phytocoris merinoi Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):227, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (D E. Beck, H. H. Knight and J. M. Merino). Taken on *Grayia spinosa*.*Phytocorius breviatus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):226, 1968.

Paratypes, 1 ♂, 3 ♀ ♀; Nevada Test Site, Nye Co., Nev. (J. M. Merino). Taken at black light.

Phytocoris deserticola Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):251, 1968.

Paratype, 1 ♀; Nevada Test Site, Nye Co., Nev. (H. H. Knight).

Phytocoris nigrolineatus Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):224, 1968.

Paratype, 1 ♂; Nevada Test Site, Nye Co., Nev. (H. H. Knight and J. Merino). Taken on *Solazaria mexicana*.*Phytocoris reticulatus* Knight.

Brigham Young Univ. Sci. Bul., Biol. Ser., 9(3):217, 1968.

Paratypes, 1 ♂, 1 ♀; Nevada Test Site, Nye Co., Nev. (Taken from can pit-trap).

Sittocapsus franseriae Knight.

Entomological News, 53:156, 1942.

Paratype, Mohawk, Ariz., April 6, 1927 (Loyd L. Stitt).

Bolteria juniperi Knight.

Brigham Young Univer. Sci. Bul., Biol. Ser., 9(3):202, 1968.

Paratypes, 1 ♂; Nevada Test Site, Nye Co., Nev., 1 ♀; Scipio, Utah, 29 June 1965 (H. H. Knight).

FAMILY SALDIDAE

Saldula varionis Drake and Hottes.

Great Basin Nat., 10(1-4):57, 1950.

Paratypes, 7, 5 from Escalante Desert, Kane Co., Utah (D Elden Beck); 1 from Gateway, Colo., Sept.-Oct. 1949 (F. C. Hottes and C. Drake).

ORDER DIPTERA

FAMILY TIPULIDAE

Erioptera maria Alexander.

Amer. Midl. Nat., 39:20, 1948.

19 paratypes; Puffers Lake, Beaver Canyon, Utah; 20 July 1936 (D. Elmo Hardy).

Tipula edmundsi Alexander.

Amer. Midl Nat., 39:75, 1948.

- 1 paratype; Logan Canyon, Utah Experimental Station; 22 May 1938 (D. Elmo Hardy).

FAMILY BIBIONIDAE

Bibio knowltoni var. *paltidus* Hardy.

Utah Acad. Sci., Arts and Letters, 14:203, 1937.

Holotype ♂ - Provo Environs, Utah; 8 May 1937 (D. Elmo Hardy).

Allotype ♀ - Provo Environs, Utah; 8 May 1937 (D. Elmo Hardy).

Paratype ♂ and ♀ - Provo Environs, Utah Co., Utah (Lowell Miller).

Bibio lobata Hardy.

Utah Acad. Sci., Arts and Letters, 14:203, 1937.

Paratype ♀ - Sierra Co., California; W. M. Wheeler Collection.

Bibio painteri James.

Amer. Mus. Novitates 832:2, 1936.

2 paratypes; Manhattan, Kansas; 17 April 1934 (C. W. Sabrosky).

Bibio albipennis beameri Hardy.

Kans. Univ. Sci. Bul., 30:451, 1945.

8 paratypes; Douglas Co., Kansas; 5 November 1931 (R. H. Beamer).

Plecia americana Hardy.

Kans. Ent. Soc. Jour., 13:15, 1940.

1 paratype; Pensacola, Florida; 30 April 1888 (A. S. Stevens).

Plecia nearetic Hardy.

Kans. Ent. Soc. Jour., 13:20, 1940.

1 paratype ♂ - Morgan City, Louisiana; 17 April 1938 (John Standish).

Bibio melanopilosus var. *bisepta* Hardy.

Utah Acad. Sci., Arts and Letters, 14:204, figs. 7, 8, 9, 10, 1937.

Holotype, allotype, and 44 paratypes; Provo Environs (Brigham Young University Campus), Utah, 12 May 1936 (D. E. Hardy).

Bibio lucens Hardy.

Utah Acad. Sci., Arts and Letters, 14:203-204, 1937.

3 paratypes; 1 - Hennepin Co., Minn., Oak Grove; 13 May 1933 (A. A. Nichol). 1 - Mer Blue, Ont.; 28 May 1927 (G. S. Walley). 1 - Miners Bay, Ont.; 26 May 1929 (G. S. Walley).

Bibio knowltoni Hardy.

Utah Acad. Sci., Arts and Letters, 14:202-203, figs. 5 and 6, 1937.

Allotype ♀; Sandy, Utah; 5 May 1931 (G. F. Knowlton) (*On Sophia sophia*).

Holotype ♂; Granger, Utah; 29 April 1931 (G. F. Knowlton) (*On Lepidium*).

Paratype ♂; Sunset, Utah; 5 May 1931 (G. F. Knowlton) (*On Erodium cleutarium*).

Bibio sericata Hardy.

Utah Acad. Sci., Arts and Letters, 14:207, 1937.

14 paratypes; 6 - Sunrise, ele. 6318 ft. Mt. Rainier, Washington; 13 August 1931 (J. Wilcox). 8 - Headley, B.C.; 29 August 1923 (C. B. Garrett).

Bibio mickeli Hardy.

Utah Acad. Sci., Arts and Letters, 14:205, figs. 11, 12, 1937.

47 paratypes; 27 - Prontenac, Minn.; 29 May 1930 (C. E. Mickel). 18 - Goodhue Co., Minn.; 29 May 1930 (Carl T. Schmidt). 1 - Minneapolis, Minn., Mississippi River near "U"; 18 May 1922 (Wm. E. Hoffmann). 1 - Ecology Collection; Hennepin Co., Minn.; basswood-maple ass'n; 27 May 1922 (Wm. E. Hoffmann).

Bibio rufalipes Hardy.

Utah Acad. Sci., Arts and Letters, 14:207, 1937.

2 paratypes - Waco, Texas (Belfrage) Collection of C. V. Riley.

Bibio nigrifemoratus Hardy.

Utah Acad. Sci., Arts and Letters, 14:206, 1937.

6 paratypes; 2 - Monte, B.C.; 13 May 1936 (J. K. Jacob). 1 - Rochester, Washington; 30 March 1932 (Wm. W. Baker). 2 - Mecham, Oregon; Ele. 3680 ft.; 8 May 1927 (H. A. Schullen). 1 - Kiger's Island, Oregon; 12 April 1930 (J. Wilcox).

Bibio utahensis Hardy.

Utah Acad. Sci., Arts and Letters, 14:208-209, 1937.

Holotype and 33 paratypes.

Holotype and 16 paratypes - Provo Environs, Utah Co., Utah (Harry Thomas). 5 - South Fork, Provo Canyon, Utah; 8 May 1937 (D. E. and Agnes Hardy). 1 - Utah Lake, East Side, Utah Co., Utah. 3 - Provo Environs, Utah; 10 May 1937 (M. I. Killpack). 1 - Provo, Utah (A. Sutherland). 6 - Provo, Utah (D. E. Hardy). 1 - Aweme, Man., Canada; 30 May 1923 (R. M. White).

Bibio signatus Hardy.

Utah Acad. Sci., Arts and Letters, 14:208, 1937.

Holotype ♂ - Spanish Fork, Utah; 29 April 1936 (D. E. Hardy).

Bibio velcida Hardy.

Utah Acad. Sci., Arts and Letters, 14:209, 1937.

4 ♂ paratypes; 3 - Low Bush, Ontario, Lake Abitibi; 12 June 1925 (N. K. Bigelow). 1 - Fredricton, New Brunswick; 30 May 1931 (R. P. Gorham).

Philia oklahomensis Hardy.

Utah Acad. Sci., Arts and Letters, 14:211, figs. 19, 20, 21, 1937.

11 paratypes; 1 - Locust Grove, Oklahoma; 5 May 1934 (E. E. Ivy) (genitalia dissected). 2 - Paris, Texas; 9 April 1904 (C. T. Brues). 3 - College Station, Texas; 27, 30 March 1932 (H. J. Reinhard) (4642). 3 - Victoria, Texas; 13 March 1908 (in

Spanish Moss) (J. D. Mitchell). 1 - Dallas, Texas; 25 March 1906 (on *salix*) (W. D. Pierce).

Philia arizonaensis Hardy.

Utah Acad. Sci., Arts and Letters, 14:209, 210, figs. 13, 14, 1937.
3 paratypes; Huachuca Mt., Arizona (Brooklyn Museum Coll. 1929, Catalog No. 162 (2) and 163).

Phila breviceps var. *atelestes* Hardy.

Utah Acad. Sci., Arts and Letters, 14:210, 1937.
51 paratypes; Meach Lake, Quebec; 21 June 1916.

Philia stigmaterus var. *nigra* Hardy.

Utah Acad. Sci., Arts and Letters, 14:212, 1937.
14 paratypes; 3 - Plummer, Minn.; 10 and 12 September 1931 (Donald Denning). 5 - Polk Co., Minn.; 5 September 1936 (D. G. Denning). Kittson Co., Minn.; 20 June 1936 (D. G. Denning). 1 - Lancaster, Minn., 26 August 1936 (D. G. Denning).

Philia jamesi Hardy.

Utah Acad. Sci., Arts and Letters, 14:210, 211, figs. 15, 16, 17, 18, 1937.
31 paratypes; 4 - Pingree Park, Colorado; 19 August 1935 (M. and H. James). 1 - Pingree Park, Colorado; 15 August 1934 (A. E. Pritchard). 11 - Pingree Park, Colorado; 14 August 1934 (C. W. Sabrosky). 6 - Masonville, Colorado, 5 and 6 September 1934. 9 - Marshall Pass, Colorado; 16 September 1917, Cornell University Expedition, ele. 10,250 ft. (R. C. Shannon).

FAMILY STRATIOMYIDAE

Ptilocera bergi James

Proc. U. S. Nat'l. Mus., Vol. 98, No. 3228:202, 1948.
5 ♀ ♀; Solomon Islands, Guadalcanal; 1944 (D E. Beck collection #419, 325, 367, 420, 587, 381). 1 ♀ - Solomon Islands, Guadalcanal; 1944 (Ernest Reimschiessel). 3 ♂ ♂ - Solomon Islands, Guadalcanal; 1944 (D E. Beck collection #587, 367, 362).

FAMILY TABANIDAE

Chrysops dilatus Rowe and Knowlton.

Ohio Jour. Sci., 36:256, 1936.
1 paratype; St. George, Utah, #28 (head missing).

FAMILY THEREVIDAE

Zionea tanneri Hardy.

Ent. Soc. Amer. Ann., 31:144, 1938.
Genotype-Holotype; Zion Nat'l. Park, Utah (Vasco M. Tanner).

FAMILY ASILIDAE

Mallophora (Mallophorina) pallida Johnson.

Great Basin Nat., 18:41, 1958.

Holotype, Allotype and 12 paratypes; Holotype, Allotype and 1 paratype - Little Granite Mts., Dugway Pr. Grounds, Tooele Co., Utah; 21 August 1955 (D. E. Johnson). 5 paratypes - same except 19 August 1955. 1 paratype - same except 12 August 1955. 1 paratype - S.E. end of Cedar Mts., Tooele Co., Utah; 28 August 1955 (D. E. Johnson). 2 paratypes - same except 7 August 1957. 1 paratype - 9 miles east of Delta, Millard Co., Utah; 19 August 1957 (D. E. Johnson). 1 paratype - Cane Spring, Cedar Mts., Dugway Pr. Grounds, Tooele Co., Utah; 10 August 1955, (D. E. Johnson).

Erax tanneri Bromley.

N.Y. Ent. Soc. Jour., 44:105, 1936.

Holotype - Buena Vista, Colo., ele. 7,800 ft.; August 1932 (C. Lynn Hayward).

Erax knowltoni Bromley.

Utah Acad. Sci., Arts and Letters, 14:104, 1937.

Paratype; Milford, Utah; June.

Cyrtopogon albifacies Johnson.

Great Basin Nat., 3(1):1, 1942.

Holotype, Allotype and 1 paratype; Holotype - Glacier Lake, Timpanogos, Utah Co., Utah (Vasco M. Tanner). Allotype and paratype - same (E. T. Vest).

Neoitamus hardyi Bromley.

Utah Acad. Sci., Arts and Letters, 15:61, 1938.

Holotype and 1 paratype; Spanish Fork, Utah (D. Elmo Hardy).

FAMILY BOMBYLIIDAE

Conophorus painteri Priddy.

Kan. Ent. Soc. Jour. 31:12, 1958.

1 paratype; Bear Ears, Elk Ridge, Utah (Vasco M. Tanner).

Poecilanthrax marmoreus Johnson and Johnson.

Great Basin Nat., 17(1-2):16, 1957.

4 paratypes; Zion Nat'l. Park, Utah (Vasco M. Tanner).

Poecilanthrax varius Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106:114, 1960.

3 paratypes; 1 - North Fork, Provo Canyon, Utah (D. Elmo Hardy); 2 - Spanish Fork, Utah (D. Elmo Hardy).

Poecilanthrax tanbarkensis Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106(2):109-110, 1960.

5 paratypes; 3 - Tanbark Flat, L.A. Co., California; 2 - 12, 14, July, 1956 (J. C. Hall). 1 - Glendale, L.A. Co., California; 29 July, 1956 (E. I. Schlinger).

Exoprosopa arenicola Johnson and Johnson.

Great Basin Nat., 18(3-4):71, 1958.

4 paratypes; 2 - Little Granite Mt., Tooele Co., Utah, 24 August 1956 (D. E. Johnson). 1 - Little Granite Mt., Dugway Proving Grounds, Tooele Co., Utah, 12 August 1956 (D. E. Johnson). 1 - S.E. end of Cedar Mts., Tooele Co., Utah, 21 August 1956 (D. E. Johnson).

Exoprosopa utahensis Johnson and Johnson.

Great Basin Nat., 18(3-4):81, 1958.

1 paratype, Antelope Springs, Millard Co., Utah, 10 August 1943 (D. E. Johnson).

Exoprosopa sharonae Johnson and Johnson.

Great Basin Nat., 18(3-4):78, 1958.

4 paratypes; 2 - Little Granite Mt., Tooele Co., Utah, 16 August 1958 (D. E. Johnson). 2 - Little Granite Mt., Dugway Proving Grounds, Tooele Co., Utah, 1 September 1955 (D. E. Johnson) Field #39.

Poecilanthrax marginatus Johnson and Johnson.

Great Basin Nat., 17(1-2):14, 1957.

Holotype and Allotype. Johnson's Pass, Tooele Co., Utah, 4 September 1955 (D. E. Johnson).

Poecilanthrax ingens Johnson and Johnson.

Great Basin Nat., 17(1-2):13, 1957.

Holotype and Allotype. Ramsey Canyon, Huachuca Mts., Cochise Co., Arizona, 5 September 1955 (F. G. Werner and G. D. Butler).

Poecilanthrax sackenii monticola Johnson and Johnson.

Great Basin Nat., 17(1-2):23, 1957.

Holotype - Aspen Grove, Utah Co., Utah, 23 July 1955 (D. E. Johnson).

Allotype - Emerald Lake, Mt. Timpanogos, Utah Co., Utah, 4 August 1955 (D. E. Johnson).

Poecilanthrax robusta Johnson and Johnson.

Great Basin Nat., 17(1-2):20, 1957.

Holotype and Allotype. Walker's Pass, California, 29 September 1945 (D. E. Johnson).

Poecilanthrax fasciata Johnson and Johnson.

Great Basin Nat., 17(1-2):11, 1957.

Holotype - Crowley, Colorado, 2 September 1939 (M. T. James).

Poecilanthrax butleri Johnson and Johnson.

Great Basin Nat., 17(1-2):11, 1957.

Holotype - Tucson, Arizona, 15 October 1955 (F. G. Werner) *Baccharis saraothroides*.Allotype - Tucson Arizona, 14 October 1955 (G. D. Butler) *Baccharis*.*Exoprosopa sharonae* Johnson and Johnson.

Great Basin Nat. (1958), 18:78.

- Holotype - West Side Little Granite Mt., Tooele Co., Utah, 3 September 1955 (D. E. Johnson).
Allotype - S.E. end of Cedar Mts., Tooele Co., Utah, 3 September 1955 (Sharon Johnson).
- Exoprosopa arenicola* Johnson and Johnson.
Great Basin Nat., 18(3-4):71, 1958.
Holotype and Allotype - Westside Little Granite Mts., Tooele Co., Utah, 27 July 1955 (D. E. Johnson).
- Exoprosopa utahensis* Johnson and Johnson.
Great Basin Nat., 18(3-4):81, 1958.
Holotype - Antelope Springs, Millard Co., Utah, 10 August 1943 (D. E. Johnson).
Allotype - S.E. end of Cedar Mts., Tooele Co., Utah, 28 August 1955 (D. E. Johnson).
- Exoprosopa abdominalis* Johnson and Johnson.
Great Basin Nat., 19(1), 10, 1959.
Holotype and Allotype - Weldon, Kern Co., California; 5 August 1945 (D. E. Johnson).
- Exoprosopa butleri* Johnson and Johnson.
Great Basin Nat., 18(3-4):74, 1958.
Holotype - 4 miles East Apache Junction, Arizona; 15 May 1954 (G. D. Butler).
Allotype - Sycamore Canyon, Atascosa Mts., Arizona, 22 May 1955 (G. Butler) (*Senecio longilobus*).
- Oestranthrax farinous* Johnson and Maughan.
Great Basin Nat., 13:18, 1953.
Holotype and 6 paratypes; Delta, Utah., 5 July (D. E. Johnson).
Allotype and 1 paratype; Delta, Utah; 5 July 1943 (D. E. Johnson).
2 paratypes - Delta, Utah., 4 July (D. E. Johnson).
- Conophorus sackenii* Johnson and Maughan.
Great Basin Nat., 13:22, 1953.
Holotype, allotype and 4 paratypes; Herlong, California, 14 May 1944 (D. E. Johnson).
- Exepacmus johnsoni* Copuillet.
Amer. Ent. Soc. Trans., 21:101, 1894.
1 Androtype ♂. Johnson and Johnson, Inyokern, California, 28 April 1945 (D. E. Johnson).
- Lordotus lutcelus* Hall.
Calif. Univ. Pubs. Ent., 10:26, 1954.
2 paratypes; Walkers Pass, California, 16 September 1945 (D. E. Johnson).
- Lordotus miscellus melanosus* Johnson and Johnson.
Great Basin Nat., 19:24, 1959.
Holotype, Allotype and 9 paratypes; Holotype, Allotype - Little Granite Mt., Tooele Co., Utah; 14 September 1957 (D. E. Johnson). 3 paratypes - same except 11 September 1956. 3 -

paratypes - same except 7 September 1956. 2 - Dog Area, Dugway Pr. Grounds, Tooele Co., Utah, 12 September 1955 (D. E. Johnson) Field #44. 1 - same except 31 August 1955 Field #38.

Lordotus lutescens Johnson and Johnson.

Great Basin Nat., 19(1):15, 1959.

6 paratypes; Las Cruces, New Mexico; 25 April 1954 (R. H. Beamer).

Lordotus cingulatus lineatus Johnson and Johnson.

Great Basin Nat., 19(1):22, 1959.

Holotype, Allotype and 2 paratypes; Ten miles E. San Quintin, Mexico, Baja California; 10 September 1955 (Paul H. Arnaud).

Lordotus perplexus Johnson and Johnson.

Great Basin Nat., 19(1):16, 1959.

Holotype and Allotype; Rillite, Arizona; 20 March 1934 (A. J. Basinger).

Lordotus apicula Coquillett.

Ent. Amer., 3:116, 1887.

Homotype and Plesiotype; Skull Valley, Tooele Co., Utah; 31 May 1956 (D. E. Johnson). One Pleisotype - Skull Valley, Tooele Co., Utah; 9 June 1957 (D. E. Johnson).

Lordotus abdominalis Johnson and Johnson.

Great Basin Nat., 19(1):10.

Holotype - Tucson, Arizona; 24 April 1954 (F. G. Warner). Allotype - West of Standfield, Arizona; 11 April 1955 (Butler and Werner).

Lordotus arizonensis Johnson and Johnson.

Great Basin Nat., 19(1):19, 1959.

Holotype - Sabino Canyon, Santa Catalina Mts., Arizona; 17 October 1955 (G. D. Butler).

Lordotus cingulatus Johnson and Johnson.

Great Basin Nat., 19(1):21, 1959.

5 paratypes; 17 miles north of Wolf Hole, Mohave Co., Arizona; 9 September 1958.

Lordotus sororculus nigriventris Johnson and Johnson.

Great Basin Nat., 19(1):17, 1959.

Holotype, Allotype, and 8 paratypes; Holotype, Allotype and 1 paratype - Skull Valley, Tooele Co., Utah; 13 May 1956 (D. E. Johnson). 1 paratype - same except 31 May 1956. 1 paratype - same except 18 May 1958. 2 paratypes - same except 2 June 1957. 1 paratype - Dugway Mts., Juab Co., Utah; 25 May 1958 (D. E. Johnson). 2 paratypes - Wig Mts., Dugway Pr. Grounds, Tooele Co., Utah; 23 April 1956 (D. E. Johnson).

Poecilanthrax johnsonorum Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106:69, 1960.

Holotype and Allotype; Little Granite Mt., Tooele Co., Utah; 14 September 1957 (D. E. Johnson).

Poecilanthrax hyalinipennis Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106:64, 1960.

4 paratypes, 3 - Little Granite Mt., Tooele Co., Utah; 14 September 1957. 1 - Little Granite Mt., Dugway Pr. Grounds, Tooele Co., Utah; 15 September 1955 (D. E. Johnson) Field #45.

Poecilanthrax apache Painter and Hall.

Kans. Agr. Expt. Sta. Tech. Bul., 106:31, 1960.

2 paratypes; Tucson, Arizona; 15 October 1955 (F. G. Werner) (*Baccharis sarothroides*).

Poecilanthrax painteri Maughan.

Kans. Ent. Soc. Jour., 8:56-57, 1935.

Allotype and 3 paratypes; Allotype and 1 paratype - Blacksmith Fork Canyon, Cache Co., Utah, 20 June 1944 (D. E. Johnson); 2 paratypes - Lava Hot Springs, Idaho, 27 June 1948 (D. E. Johnson).

Poecilanthrax alpha zionensis Johnson and Johnson.

Great Basin Nat., 17(1-2):6, 1957.

Holotype - Zion National Park, Utah, 8 July 1932 (D. E. Johnson).

Lordotus cingulatus rufotibialis Johnson and Johnson.

Great Basin Nat., 19:23, 1959.

Holotype and Allotype; Phoenix, Arizona, 29 September 1940 (Parker).

Conophorus hiltoni Priddy.

Kans. Ent. Soc. Jour., 31:24, 1958.

Holotype, Allotype and 2 paratypes; Herlong, California, 14 May 1944 (D. E. Johnson).

Conophorus collini Priddy.

Kans. Ent. Soc. Jour., 31:31, 1958.

1 paratype; Oceano, S. Luis Obispo Co., California, 24 April 1951 (R. M. Bohart).

Conophorus painteri Priddy.

Kans. Ent. Soc. Jour., 31:12, 1958.

Holotype, Allotype and 4 paratypes; American Fork Canyon, Utah, 4 July 1953 (D. E. Johnson); 1 paratype - Aspen Grove, Utah Co., Utah, 19 July (D. E. Johnson).

Amphicosmus arizonensis Johnson and Johnson.

Great Basin Nat., 19:67, 1960.

Holotype and Allotype; Tucson Mts., Arizona; 16 August 1955 (G. D. Butler).

Dicranoclista fasciata Johnson and Johnson.

Great Basin Nat., 19:71, 1960.

Holotype; Cedar Creek, Arizona; 15 miles West of Fort Apache,

21 June 1957 (G. Butler and F. Werner). Allotype; Provo, Utah Co., Utah, July 1933 (D. E. Johnson).

Villa utahensis Maughan.

Kans. Ent. Soc. Jour., 8:51, 1935.

2 paratypes; Provo, Utah; 29 April 1934 (D. E. Johnson).

1 metatype; Provo environs, Utah (D. E. Johnson).

FAMILY DOLICHOPODIDAE

Dolichopus indianus Harmston and Knowlton.

Amer. Midl. Nat., 36:672, 1946.

1 paratype; Indianapolis, Indiana; 7 March 1943 (F. C. Harmston).

1 paratype; Indianapolis, Indiana; 7 March 1943 (F. C. Harmston).

Medeterus arnaudi Harmston.

Great Basin Nat., 11(1-2):12, 1951.

♂ paratype; Redwood City, California, San Mateo Co.; 4 June 1946 (Paul H. Arnaud).

Aphrosylus wirthi Harmston.

Great Basin Nat., 11(1-2):13, 1951.

1 paratype; Moss Beach, San Mateo Co., California; 21 March 1948 (W. W. Wirth) (Intertidal rocks).

FAMILY PIPUNCULIDAE

Chalarus latifrons Hardy.

Kans. Univ. Sci. Bul., 29:33, 1943.

6 paratypes; 3 - Austin, Nevada; 12 August 1940 (R. H. Beamer, D. E. Hardy). 1 - Cloudcroft, New Mexico; 27 June 1940 (R. H. Beamer); 1 - Ruidoso, New Mexico; 26 June 1940 (R. H. Beamer). 1 - Pacific, California; 9 August 1940 (D. E. Hardy).

Tomosvaryella tumida Hardy.

Kans. Ent. Soc. Jour., 13:112, 1940.

2 paratypes; Belle Glade, Florida; 18 July 1939 (R. H. Beamer).

Tomosvaryella xerophila Hardy.

Kans. Univ. Sci. Bul., 29:188, 1943.

2 paratypes; 1 - Cuervo, New Mexico; 23 June 1940 (L. C. Kuitert). 1 - Rustler's Peak, Chiricahua Mts., Arizona; 5 July 1940 (D. Elmo Hardy).

Tomosvaryella tumida Hardy.

Kans. Ent. Soc. Jour., 13:112, 1940.

1 paratype; Belle Glade, Florida; 18 July 1939 (R. H. Beamer).

Tomosvaryella lepidipes Hardy.

Kans. Univ. Sci. Bul. 29:166, 1943.

4 paratypes; 2 - Garnett, Kansas; 22 September 1940 (D. Elmo Hardy). 1 - Maybell, Colorado; 18 August 1940 (R. H.

Beamer). 1 - Yosemite National Park, California; 1 August 1940 (D. Elmo Hardy).

Tomosvaryella beameri Hardy.

Kans. Ent. Soc. Jour., 13:107, 1940.

1 paratype; Cherokee Co., Kansas; 30 August 1939 (R. H. Beamer).

Tomosvaryella floridensis Hardy.

Kans. Ent. Soc. Jour., 13:109, 1940.

1 ♂ paratype; Adel, Ga.; 11 August 1939 (J. D. Beamer).

Tomosvaryella wilburi Hardy.

Kans. Ent. Soc. Jour., 12:22, 1939.

1 paratype, 8 metatypes; paratype - Manhattan, Kansas; 13 August 1937 (D. A. Wilbur). 3 metatypes - Tonganoxie, Kansas; 6 May 1939 (D. Elmo Hardy). 4 metatypes - Cherokee Co., Kansas; 30 August 1939 (R. H. Beamer). 1 metatype - Lawrence, Kansas; 22 August 1939 (D. Elmo Hardy).

Tomosvaryella coquilletti coquilletti (Kertész).

Tomosvaryella proxima Cresson.

Amer. Ent. Soc. Trans., 36:318, 1911.

3 homotypes; Tonganoxie, Kansas; 6 May 1939 (R. H. Beamer) by D. Elmo Hardy.

Tomosvaryella similis Hough.

Boston Soc. Nat. Hist. Proc., 29:84, 1899.

2 homotypes; Garnett, Kansas; 29 August 1939 (R. H. Beamer) compared by D. Elmo Hardy.

Tomosvaryella contorta Hardy.

Kans. Ent. Soc. Jour., 12:18, 1939.

10 metatypes; 1 - Onyx, California; 23 August 1940 (D. Elmo Hardy). 1 - Onyx, California; 23 August 1940 (R. H. Beamer). 1 - Kernville, California; 24 August 1940 (R. H. Beamer). 3 - Tonganoxie, Kansas; 6 May 1939 (D. Elmo Hardy). 2 - Garnett, Kansas; 29 August 1939 (J. D. Beamer).

Tomosvaryella subvirescens Loew.

Berlin Ent. Ztschr., 16:87, 1872.

7 homotypes; 1 - Tonganoxie, Kansas; 6 May 1939 (D. Elmo Hardy). 2 - Tonganoxie, Kansas; 3 September 1939 (R. H. Beamer). 4 - Douglas Co., Kansas; 23 August 1939 (R. H. Beamer) compared by D. Elmo Hardy.

Tomosvaryella exilidens Hardy.

Kans. Ent. Soc. Bul., 29:162, 1943.

2 paratypes; 1 - Moriarty, New Mexico; 24 June 1940 (E. E. Kenaga). 1 - Sunnyside Canyon, Huachuca Mts., Arizona; 9 July 1940 (D. Elmo Hardy).

Tomosvaryella turgida Hardy.

Kans. Ent. Soc. Jour., 13:113, 1940.

- 2 paratypes; Griffin, Georgia; 12 August 1939 (R. H. Beamer, A. T. Hardy).

Tomosvaryella agnesea Hardy.

Kans. Ent. Soc. Jour., 13:103, 1940.

- 2 paratypes and 4 metatypes; Paratypes, 1 - Manhattan, Kansas, 15 June 1943 (D. A. Wilbur). 1 - Douglas Co., Kansas; 23 August 1938 (R. H. Beamer). Metatypes, 1 - Glasco, Kansas; 24 August 1940 (E. E. Kenaga). 1 - Arivaca, Arizona; 12 July 1940 (R. H. Beamer). 1 - Kernville, California; 24 July 1940 (R. H. Beamer). 1 - Onyx, California; 23 July 1940 (D. Elmo Hardy).

Tomosvaryella dissimilis Hardy.

Kans. Univ. Sci. Bul., 29:161, 1943.

- 2 paratypes; 1 ♂ - Chiricahua Mts., Arizona; 4 July 1940 (D. Elmo Hardy). 1 - Bishop, California; 28 July 1940 (L. C. Kuitert).

Tomosvaryella aliena Hardy.

Kans. Ent. Soc. Jour., 20:146-153, 1947.

New name for *propinqua* Hardy.

Kans. Univ. Sci. Bul., 29:169, 1943.

- 5 paratypes; 1 - Goshen, Utah; 16 August 1940 (R. H. Beamer). 2 - Goshen, Utah; 16 August 1940 (L. C. Kuitert). 1 - Fruita, Colorado; 4 September 1938 (D. Elmo and A. Hardy). 1 - Lone Pine, California; 28 July 1940 (R. H. Beamer).

Tomosvaryella quadradentis Hardy.

Kans. Univ. Sci. Bul., 29:172, 1943.

- 3 paratypes; 2 - Carson City, Nevada; August 1940 (D. Elmo Hardy). 1 ♂ - Silver Lake, Kansas; 24 August 1940 (L. J. Lipovsky).

Tomosvaryella brevijuncta Hardy.

Kans. Univ. Sci. Bul., 29:155, 1943.

- 1 paratype; Palm City, California; 19 July 1940 (R. H. Beamer).

Dorylomorpha tridentata Hardy.

Kans. Univ. Sci. Bul., 29:141, 1943.

- 2 paratypes; 1 - Lake Tahoe, California; 11 August 1940 (R. H. Beamer). 1 - Lake Tahoe, California; 11 August 1940 (D. Elmo Hardy).

Pipunculus nevadensis Hardy.

Kans. Univ. Sci. Bul., 29:106, 1943.

- 1 paratype; Fallon, Nevada; 12 August 1940 (E. E. Kenaga).

Pipunculus huachueanus Hardy.

Kans. Univ. Sci. Bul., 29:95, 1943.

- 2 paratypes; 1 - Sunnyside Canyon, Huachuca Mts., Arizona; 9 July 1940. (R. H. Beamer). 1 - Sunnyside Canyon, Huachuca Mts., Arizona; 9 July 1940 (D. Elmo Hardy).

Pipunculus cinctus subtilis Hardy.

Kans. Univ. Sci. Bul., 29:84, 1943.



Tanner, Vasco M. and Harris, Don R . 1969. "LIST OF INSECT TYPE SPECIMENS IN THE ENTOMOLOGICAL COLLECTION OF THE BRIGHAM YOUNG UNIVERSITY, PROVO, UTAH, NO. IV." *The Great Basin naturalist* 29, 183–205.

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