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Revision of the plant genus *Geranium* in Utah

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

Vasco M. Tanner¹

ABSTRACT.— Type material added to the Brigham Young University Life Sciences Museum insect collection includes 6 holotypes, 5 allotypes, 106 paratypes, 78 cotypes, 48 homotypes, 1 metatype, and 1 androtype.

Since the previous lists (I-IV)² were published, the following type specimens have been added to the University Type Collections. Thousands of specimens have also been added to the research collection. The pinned collection now consists of more than 900,000 specimens. These are arranged in cabinets, catalogued as to orders, families, genera and species. Fortunately, rather intensive collecting was conducted in many areas of this region prior to the changes that have been made in the lands, watersheds, and drainage of the Great Basin. The biota of one hundred years ago is now greatly changed. Introduced plants and animals, along with killing and poisoning activities, have reduced and may have exterminated some species.

In 1974, Mrs. Lucile Maughan Johnson, wife of the late D. Elmer Johnson, contributed their bee-fly (Bombyliidae) collection to the Life Sciences Museum at Brigham Young University. This collection consisted of 6,400 pinned specimens. Included in it are many type specimens.

ORDER HEMIPTERA
Family Belostomatidae

Abedus herberti utahensis Menke
Univ. Calif. Publ. Ent. 16(8):423-424, 1960.
3 paratypes: St. George, Utah; V-1917, V. M. Tanner.

ORDER HOMOPTERA
Family Hydrometridae

Hydrometra becki Drake
Bull. So. Calif. Acad. Sci. 50(2):103, 1951.
3 paratypes: Solomon Islands; Guadalcanal: VI-30-1944, D. E. Beck.

ORDER COLEOPTERA
Family Cantharidae

Malthodes thedae Fender
Northwest Sci. 42(3):108-110.
Holotype (male): Hat Creek, Lassen National Forest, California; VI-24-1961,
S. L. Wood, J. B. Karren, and D. E. Bright.

Family Elateridae

Megopenthes apacheorum Becker
Canadian Ent. 103(2):157-160, 1971.

¹Department of Zoology, Brigham Young University, Provo, Utah 84602.
²List I, Proc. Ut. Acad. Sci., Arts, and Letters 12:181-193, 1935. List II, Proc. Ut. Acad. Sci., Arts, and Letters 13:147-152, 1936. List III, Great Basin Nat., 29:150-164, 1969. List IV, Great Basin Nat., 29:183-205, 1969.

- 2 paratypes: 1 mi. south of Prescott, Yavapai Co., Arizona; VIII-1-1962, S. L. Wood, J. B. Karren, H. Shurtleff.

Family Tenebrionidae

Edrotes leechi Doyen

Pan. Pacific Ent. 44(3):218, 1968.

- 2 paratypes: Arches National Monument, Grand Co., Utah; VII-25-1965, J. Doyen, on sand dunes at night.

Family Curculionidae

Tychius badius Clark

Brigham Young Univ. Sci. Bull. Biol. Ser. 13(3):25-26, 1971.

- 4 paratypes (two males, two females): La Plata Co., Mancos, Colorado, W. E. Clark, V-1969; sweeping *Astragalus scopulorum*.

Tychius phalarus Clark

Brigham Young Univ. Sci. Bull. Biol. Ser. 13(3):31-33, 1971.

- 2 paratypes (one female, one male): Organ Pipe Cactus National Monument, Dripping Springs, Arizona; IV-1969, W. E. Clark.

Protostrophus peninsularis Mshl.

Ann. Mag. Nat. Hist. (12)6:323.

- 6 cotypes: South Africa, Cap Penin. Ralk Bay; XI-1950, G. A. K. Marshall.

Stenoscelis lefevrei Mshl.

Ann. Mus. Congo Belge (Ser. 8) Sci. Zool. 25:23.

- 5 cotypes: 5 Mulimbu. P. C. Lefevre. 1951. P.C.L. 586. Coll. R. Mayne. Com. Et. Bois. Congo. R. 2354.

Celetes bondari (Mshl.)

Rev. Ent. Rio de J. 14, 1943.

- 5 cotypes (2 male, 3 female): Brazil, Bahia, 1939, Dr. G. Bondar, #2625.

Conotrachelus leucophrys Mshl.

Rev. Ent. Rio de J. 11:646, 1940.

- 3 cotypes (1 male, 1 female): Brazil, Bahia, G. Bondar, #1519; (1 female): Brazil, Bahia, 1935 Dr. G. Bondar, #1880. In fruit of *Bacuparymirim*.

Opterus waigeensis Mshl.

The Otiorrhynchine Curculionidae of the Tribe Celeuthetini (Col.) British Museum, p. 93, 1956.

- 1 cotype (female): Waigen, Browning 63-47.

Cyrtionyx pipesis Mshl.

Ent. Mon. Mag. 76:176, 1940.

- 6 cotypes (male): British West Indies, St. Lucia, 1000 ft. XI-20-1939, R. G. Gennah, #324, on *Pipes* sp.

Aspidomycter lunatus Mshl.

Ann. Mag. Nat. Hist. (11)10:109, 1943.

- 2 cotypes (female): Gopaldhora, Rungbong Vall., Sikkim, H. Stevens, 1916-218.

Macrocorynus inermipeo Voss

Rev. Ent. Rio de J. 18:57, 1947.

- 3 paratypes: L. edoardo, Ecydor, V-22-1938.

ORDER DIPTERA

Family Bombyliidae

Parabombylius subflavus Painter

Ent. News 37:76, 1926.

- 1 homotype: Arivaca, Arizona; III-12-1940, L. C. Kuitert.

Heterostylum crocram Painter

Kans. Ent. Soc. Jour. 3:6, 1930.

- 1 homotype: Gidding, Texas; V-5-1954, R. H. Beamer.

Heterostylum robustum Osten Sacken

(U.S. Dept. Int.) U.S. Geol. Geog. Survey Ter. Bull. 3:257, 1877.

- 1 homotype: Texas, Belfrage.

Lordotus apiculus Coq.

Ent. Amer. 3:116, 1887.

1 homotype: Dugway Proving Grounds, Tooele Co. IV-23-1956.,
D. E. Johnson.

Lordotus bucerus Coq.

Amer. Ent. Soc. Trans. 21:110, 1894.

1 homotype, Ehrenberg, Arizona; IV-16-1934. F. H. Parker.

Lordotus junceus Coq.

West Amer. Sci. 7:198, 1891.

2 homotypes: Amortajada Bay, Isla San José, Gulf of California, Mexico;
III-25-1953.

Lordotus m. miscellus Coq.

Ent. Amer. 3:116, 1887.

2 homotypes: Walker Pass, California; IX-16-1945, D. E. Johnson.

Lordotus perplexus Johnson and Johnson

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

4 paratypes: San Diego, California.

2 paratypes: Sabino Canyon, Arizona.

Lordotus ermae Hall

Pan-Pacific Ent. 28:49, 1952.

2 paratypes: Tanbark Flat, Los Angeles Co., California; VI-20-1950,
J. C. Hall.

1 paratype: Johnston Point, Los Angeles Co., California;
VII-14-1950, R. Schuster.

Lordotus lutescens Johnson and Johnson

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

Holotype and Allotype: Las Cruces, New Mexico; IV-25-1954,
R. H. Beamer.

Geminaria canalis Coq.

Ent. Amer. 3:115, 1887.

1 homotype: Tucson, Arizona; IV-23-1937, O. Bryant.

Aldrichia ehrmani Coq.

Amer. Ent. Soc. Trans. 21:94, 1894.

1 homotype: Robertson, Carlinville, Illinois.

Toxophora pellucida Coq.

Ent. Amer. 1:222, 1886.

1 homotype: Patagonia, Santa Cruz Co., Arizona; VIII-25-1955,
F. G. Werner and G. D. Butler.

Toxophora vista Coq.

West Amer. Sci. 7:199, 1891.

1 homotype: Skull Valley, Tooele Co., Utah; VI-14-1956, D. E. Johnson.

Toxophora maxima Coq.

Ent. Amer. 1:222, 1886.

2 homotypes: Geddings, Texas; V-10-1954, L. D. Beamer.

1 homotype: Tucson, Arizona; VII-14-1954, G. D. Butler.

Aphoebantus borealis Cole

Calif. Acad. Sci. Proc., Ser. 4:11:251, 1921.

1 homotype: San Antonio, R. S. Santa Clara Co., California;
VI-27-1953, R. A. Schuster.

Aphoebantus tardus Coq.

West Amer. Sci. 7:10, 1891.

2 homotypes: Dateland, Arizona; IV-2-1955, Butler and Wernest.

Dicranoclista vandykei Coq.

Amer. Ent. Soc. Trans. 21:94, 1894a.

1 homotype: Davis Mountains, Texas; IV-17-1954, L. D. Harmer.

Villa syrtis (Coq.)

Amer. Ent. Soc. Trans. and Acad. Nat. Sci. Phila., Ent. Sect.
Proc. 14:173, 1887a.

1 homotype: San Bernardino Co., California, May.

Villa cinerea Cole

Calif. Acad. Sci. Proc., Ser. 4:12:299, 1923.

1 homotype: Inyokern Co., California; V-21-1945, D. E. Johnson.

2 homotypes: Sabino Canyon, Arizona; IV-30-1956, G. D. Butler.

1 homotype: Mesa, Arizona; IV-10-1952, D. E. Johnson.

Villa flavipilosa Cole

Calif. Acad. Sci., Ser. 4:12:303, 1923.

3 homotypes: Sabino Canyon, Pima Co., Arizona; V-5-1955,
G. D. Butler.

Villa meridionalis Cole

Calif. Acad. Sci. Proc., Ser. 4:12:292, 1923.

1 homotype: Oracle Junction, Pima Co., Arizona; VII-1948,
F. Werner.

Villa vigilans (Coq.)

Amer. Ent. Soc. Trans. and Acad. Nat. Sci. Phila., Ent. Sect.

Proc. 14:176, 1887.

3 homotypes: Walker's Pass, California; VIII-16-1945, D. E. Johnson.

Villa crocina (Coq.)

Amer. Ent. Soc. Trans. 19:183, 1892.

1 homotype: Roll, Arizona; VI-13-1957, G. D. Butler.

Lepidanthrax inauratus (Coq.)

Amer. Ent. Soc. Trans. and Acad. Nat. Sci. Phila. Ent. Sect.

Proc. 14:170, 1887a.

4 cotypes: San Diego and Sacramento, California.

1 homotype: San Francisco, California; V-21-1922; San Dunes, C. L. Fox.

Lepidanthrax hyalinipennis Cole

Calif. Acad. Sci. Proc., Ser. 4, 12:307, 1923.

3 homotypes: Inyokern, California; VIII-4-1945, D. E. Johnson.

1 paratype: Sanford, Arizona; IX-24-1956, G. D. Butler.

1 paratype: San Francisco Bay, Gulf of California.

3 paratypes: Tortuga Island, Gulf, California; V-11-1921, E. P. Van Duzee.

1 paratype: Angeles Bay, Gulf, California; VI-23-1921, E. P. Van Duzee.

Lepidanthrax angulus O. S.

Biologia Centrali-Americana, Diptera 1:111, 1886.

1 homotype: Superior, Arizona; V-2-1938, E. C. Crumb.

Lepidanthrax agrestis (Coq.)

Amer. Ent. Soc. Trans. and Acad. Nat. Sci. Phila. Ent. Sect.

Proc. 14:171, 1887.

1 cotype: California, Coq.

1 homotype: Delta, Utah; VII-4, D. E. Johnson.

Lepidanthrax painteri Maughan

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

1 metatype: Wendell, Idaho; VI-26-1953, A. R. Gittins, sweeping *Artemisia*.

Poecilanthrax tanbarkensis Painter and Hall

Kans. Agr. Expt. Sta. Tech. Bull. 21, 1960.

1 paratype: Tanbark Flat, Los Angeles Co., California; VII-14-
1956, R. W. Bushing.

Poecilanthrax vexativus Painter and Hall

Kans. Agr. Expt. Sta. Tech. Bull. 119, 1960.

1 paratype: Trinidad, Colorado; VIII-7-1925, C. J. Drake.

Poecilanthrax butleri Johnson and Johnson

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

12 paratypes: Tucson, Arizona; V-1955, G. D. Butler.

Poecilanthrax marginatus Johnson and Johnson

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

4 paratypes: Zion National Park, Utah, and Juab Co., Utah,
A. M. Woodbury.

Poecilanthrax eremicus Painter and Hall

Kans. Agri. Expt. Sta. Tech. Bull. 106:51, 1960.

- 1 paratype: Near Kingman, Arizona; VII-1952, Beamer, La Berge, Liang.
- Poecilanthrax moffitti* Painter and Hall
Kans. Agri. Expt. Sta. Tech. Bull. 106:78, 1960.
- 2 paratypes: Walker Pass, Kern Co., California; IX-26-1957, J. C. Hall.
- Poecilanthrax montanus* Painter and Hall
Kans. Agri. Expt. Sta. Tech. Bull. 106:82, 1960.
- 1 paratype: Sheep Lake, Yakima Co., Washington; VIII-6-1940, J. F. O. Clark.
- Poecilanthrax sackenii monticola* Johnson and Johnson
Great Basin Nat. 17(1-2):23, 1957.
- 2 paratypes: Emerald Lake, Mt. Timpanogos, Utah Co., Utah; VIII-4, 1950, D. E. Johnson.
- 1 paratype: Pebble Basin, Idaho; VII-24-1948, D. E. Johnson.
- Poecilanthrax fasciatus* Johnson and Johnson
Great Basin Nat. 17(1-2):11, 1957.
- 1 paratype: Crouley, Colorado; IV-2-1939, M. T. James.
- Poecilanthrax robustus* Johnson and Johnson
Great Basin Nat. 17(1-2):20, 1957.
- 7 paratypes: Walker Pass, California; IX-29-1945, D. E. Johnson.
- Pantarbes pusio* Osten Sacken
Biologia Centrali-Americana, Diptera 1:153, 1886.
- 4 homotypes: Inyokern, California; Ribbonwood, California; Baboquivari Mts., Arizona; and Alpine, Utah Co., Utah.
- Pantarbes willistoni* Osten Sacken
Biologia Centrali-Americana, Diptera 1:153.
- 1 androtype: Organ, New Mexico; IV-20-
- Pantarbes capito* Osten Sacken
(U.S. Dept. Int.) U.S. Geol. Geog. Survey Ter. Bull. 3:256, 1877.
- 3 homotypes: California.
- Exoprosopa doris* Osten Sacken
(U.S. Dept. Int.), U.S. Geol. Geog. Survey Ter. Bull. 3:235, 1877.
- 1 homotype: Inyokern, California; VIII-5-1945, D. E. Johnson.
- Exoprosopa arenicola* Johnson and Johnson
Great Basin Nat. 18(3-4):71, 1958.
- 13 paratypes: Little Granite Mt., Tooele Co., Utah; VII-24-1956, D.E. Johnson.
- Exoprosopa butleri* Johnson and Johnson
Great Basin Nat. 17(1-2):11, 1957.
- 4 paratypes: Mesa, Sycamore Canyon and Sacaton, Arizona.
- Exoprosopa tiburonensis* Cole
Calif. Acad. Sci. Proc. Ser. 4, 12:291, 1923.
- 2 homotypes: Inyokern, California; VIII-4-1945, D. E. Johnson.
- Bombrylius lassenensis* Johnson and Johnson, new name
Pallescens is preoccupied. Hesse, 1938, California.
- 1 holotype, 1 allotype, 5 paratypes: Herlong, California; V-7-14-16-1944, D. E. Johnson.
- Conophorus sackeni* Johnson and Maughan
Great Basin Nat. 13(1-2):22, 1953.
- 1 holotype, 1 allotype, 4 paratypes: Herlong, California; V-14-1944, D. E. Johnson.
- Oestranthrax farinosus* Johnson and Maughan
Great Basin Nat. 13:18, 1953.
- 1 holotype, 1 allotype, 9 paratypes: Delta, Utah; VII-1943, D. E. Johnson.

Exoprosopa sharonae Johnson and Johnson

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

1 holotype: Little Granite Mountain(Tooele Co., Utah.

1 allotype: Cedar Mountains. Tooele Co., Utah.

paratypes: Delta, Millard County; Simpron Springs, Tooele Co., Utah,
IX-1955, D. E. Johnson.

ORDER HYMENOPTERA

Family Formicidae

Pogonomyrmex guatemaltecus Wheeler

Psyche 21:149-151, 1914.

3 cotypes: Zacapa, Guatemala; XII-12-1911, Wm. M. Wheeler, all

3 specimens tipped on one pin.

Pogonomyrmex occidentalis var. *utahensis*, Olsen

Harvard Univ. Mus. Compar. Zool. Bull. 77:498, 509, 1934.

6 cotypes: Zion National Park, Utah; VII-18-1932, W. S. Creighton, all

6 specimens tipped on two pins.

Pogonomyrmex wheeleri Olsen

Harvard Univ. Mus. Compar. Zool. Bull. 77:496, 511, 1934.

3 cotypes: Escuinapa, Sinaloa, Mexico. J. H. Batty, all

3 specimens tipped on one pin.

Pogonomyrmex desertorum Wheeler

Psyche 9:387-388, 1902.

3 cotypes: Alamito, Presidio Co.: XII-19-1901, all

3 specimens tipped on one pin.

Pogonomyrmex (*E.*) *saucius* Wheeler and Mann

Bull. Am. Mus. Hist. 33:29-31, 1914.

7 cotypes: Mannesville, Haiti. W. M. Mann, all

7 specimens on tips, on two pins.

Pogonomyrmex desertorum var. *ferrugineus* Olsen

Harvard Univ. Mus. Compar. Zool. Bull. 77:496, 506, 1934.

3 cotypes: College Peak, Tucson, Arizona. P. Klingentery, all

3 specimens on tips.

Pogonomyrmex huachucanus Wheeler

Psyche 21:151-152, 1914.

4 cotypes: Miller Canyon, Huachuca Mountains. 5600 feet;

XI-11-1910, W. M. Wheeler, all 4 specimens tipped on one pin.

Pogomyrrex similis Olsen

Harvard Univ. Mus. Compar. Zool. Bull. 77:497, 512, 1934.

Cotypes: Oracle, Arizona; III-13-1919; North Slope Mount

Lemon. at 4500 feet, W. M. Wheeler.

Pogonomyrmex comanche Wheeler

Psyche 9:392, 1902.

4 cotypes: Milano, Sabine Co., Texas; V-23-1902, all

4 specimens tipped on one pin.

Pogonomyrmex californicus subsp. *sinaloanus* Olsen.

Harvard Univ. Mus. Compar. Zool. Bull. 77:55, 504, 1934.

6 cotypes: Sinaloa, Mexico. Case, all

6 specimens tipped on two pins.

Pogonomyrmex apache Wheeler

Psyche 9:392, 1902.

3 cotypes: Fort Davis, Texas, W. M. Wheeler. June, 1902. all

3 specimens tipped on one pin.

Aphaenogastee (*Atomyrma*) *boulderensis* M. R. Smith

Great Basin Nat. 2:120-121, 1941.

4 paratypes: Boulder Dam, Arizona; V-2-1941, 55661,

Vasco M. Tanner.

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