4 ♂♂ same data, 1 ♂ U. S. National Museum, 1 ♂ my collection, 2 ♂♂ University of California, Berkeley.

HETEROMPHRALE CHILENSIS (Kröber)

One female .51 m. W. Vilcho, Talca Prov., Chile, 615 m, 13 January 1967 (M. E. Irwin). This specimen will be deposited in the University of Chile collection, Santiago.

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New Records of North American Tabanidae I. Species New to the Faunas of Mexico and of the United States

(Diptera)

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Significant, though perhaps not unexpected, additions to the recently cataloged Western Hemisphere faunas of tabanid flies, Neotropical for Mexico (Fairchild, 1971) and Nearctic (Philip, 1965), have been found in recently studied collections as acknowledged below.

Abbreviations below include: California Academy of Sciences (CAS); Arizona State University (ASU); University of California, Berkeley (Calif. Insect Survey) (CIS); United States of America (US); and the author (CBP).

Apatolestes ater Brennan.—Two females taken in Baja California Norte, 17 miles inland from Ensenada at 3,200 ft., 10 July 1969, by S. C. Williams and V. F. Lee (CAS), extend previously known, sparse distribution of this species south from southern California. First Mexican record.

Silvius (Silvius) gigantulus (Loew).—Several females of this rather widespread species in western US were found in CIS collection from Baja California: 2 ♀, Melling Ranch, 26 May 1958, I. Powell; 1 ♀, Sierra San Pedro Martir, La Grulla, 6,500 ft., 28 May 1958, and 1 ♀, 5 mi. s. Socorro, 6,000 ft., 27 May 1958, both by J. Powell. First record for Mexico.

Chrysops chiriquensis Fairchild.—A series of 12 females of this Central American species was represented in the Dampf collection (CBP) from Chiapas:

San Cristobal, 15 July 1926; La Casas, September 1940, M. Masias; and "road from Tuxtla to San Cristobal, behind wood near stream on vegetation, 5–8 AM," 3 June 1926. Six females were also taken in the San Cristobal area, 7–11,000 feet, 7 May to 8 August by the 1969 Canadian National Museum Expedition—(H. J. Teskey). Previously unrecorded for Mexico.

Chrysops clavicornis Brennan.—Dr. Paul Arnaud, Jr. (CAS) took four females of this western Nearctic species in the Sierra San Pedro Martir: La Grulla, 6,900 ft., 12–16 June 1953, and Rancho Viejo, 7,000 ft., 14 June 1953.

Myiotabanus muscoideus (Hine).—Dr. G. B. Fairchild (personal correspondence) identified in the U. S. National Museum, a male of the peculiar sarcophagid-like fly from Villa Hermosa, Tobasco, 6 August 1964, Spangler coll. This rare fly was previously known only from Guatemala.

Atylotus incisuralis (Walker).—Another new record from Mexico supplied by Dr. Arnaud is a typical, unpatterned female taken in the same La Grulla collection. This is also a widespread and variable fly in the western Nearctic fauna.

Tabanus laticeps Hine.—New to Mexico, also from Baja California, courtesy of Dr. L. L. Pechuman, Cornell University, are females of this taken in Sierra San Pedro Martir, Socorro, June 1963, E. L. Sleeper.

Tabanus oldroydi Philip.—A female from Dr. F. F. Hasbrouck of ASU (courtesy of Dr. Mont. Cazier), establishes this northwestern Mexican species just across the US border near Yuma, Arizona (as predicted when originally described), and is another example of the arbitrary nature of utilitarian separation of the two faunas by political boundaries: Yuma, 2 April 1965, J. DeNolse. Also from ASU were received: 4 ♀, Baja California, 28 mi. sw El Crucero, 27 July 1968, Bentzien, Bigelow, S. C. Williams and M. Cazier, and 1 ♀ "taken above a mangrove border on the beach," 18 mi. se Mulegé, 20 April 1969, Williams. In CAS, also from B. C., 14 females are labelled "18 mi. n. Bahia de los Angeles, nr La Gringa, 30.iv.63, Papp." In CIS, 2 ♀ are from Gonzales Bay (Bahia Gonzaga on some maps), 29 April 1921, Van Duzee ("a series April 28" with same data otherwise, listed by Cole (1921) as *T. rubescens* Bell., also probably represented *T. oldroydi*). The species is obviously early on the wing and is unexpectedly well established in northwestern Mexico; other specimens in CIS are from La Cholla, Sonora, April.

Systematically, *T. oldroydi* is closer to *Poeciloderas* Lutz in several respects than to *Tabanus s. str.* It has hairy eyes in both sexes and a prominent, bare callus at the vertex (♀), but it lacks the enlarged antennal scape and narrowed wing cell R_5 ascribed to the group by Fairchild (1961), both of which characters may be variable in *Tabanus* spp. The eye pattern comprises two, plus a short, narrow purple bands on green ground, instead of two narrow green bands on purple possessed by the genotype, *Poeciloderas quadripunctatus* (Fabr.) (syn. *T. nigropunctatus* was described from Mexico by Bellari). The general hoary-gray appearance of *T. oldroydi* becomes, in worn specimens, rather shining blackish on the thorax, and the reddish on the abdomen is accentuated which probably accounted for Cole's misdetermination.

Tabanus ebeneus Philip.—When this large black fly was described from Guatemala and Panama, two females were overlooked in the Dampf Coll. from Oaxaca: Cerro de la Aguilerro, 8 August 1935, Dampf. Dr. G. B. Fairchild (personal correspondence) considers this to be a variant of *T. morbosus* Stone from Arizona. Though there is considerable resemblance, comparison of the respective types at

U. S. National Museum shows apparent critical differences in *T. ebeneus*: longer flagellum including style, more excised plate with more acute tooth, frontal keel a little more slender, knob of halter pallid on distal half, and abdomen with more brownish shades and less pruinosity. As more specimens of both species accumulate, subspecific relationship may be revealed by intergradation in these characters or geographic overlap.

Stenotabanus xenium Fairchild.—A female in CAS from Chiapas, Ruins at Palenque, 26–30 June 1959, P. and C. Vaurie, is labelled "agrees with paratype" by Fairchild. The species was originally described from Canal Zone & Colombia.

Stenotabanus guttatulus (Townsend).—Since revival of this Arizona species from synonymy with Mexican *Stenotabanus cribellum* (Osten Sacken) (Philip, 1959), Mexican records require review. Osten Sacken's type and mine of the later synonymized *Stenotabanus currani* were from the west coast (?Sinaloa and Nayarit). In CAS, there is a typical *S. guttatulus* taken 11 mi. sw Sawmill, Sierra Juarez, (B.C.) 5,200 ft., 16 July 1969, by S. C. Williams and V. F. Lee, the first undoubted record from Mexico.

Silvius (Assipala) aquilus (Philip).—In 1967, I described an unusual, unique small fly, "presumed to be from Central America" based on a "pinned but unlabelled specimen in the collection of the late Alphonso Dampf . ." The first additional specmens in fresher condition were received from Dr. Mac A. Tidwell of the University of North Carolina, and provide opportunity to augment the original description. Data on the small series, collected by C. N. Ross in Vera Cruz, Mexico in 1965, are: 5 ♀ Ocotal Chico, 1,900 ft., 16 February and 17 March, "riverine secondary rain forest"; 3 ♀, 1 mi. n Soteapan (similar forest), 1,400 ft. 29 March; 1 ♀, 2 mi. ne Vigis, "lower montane rain forest," 700 ft., 23 April. These observations suggest sylvan habits.

Length, 7.5 to 11 mm. All darker than type, body colors like *S. melanoptera* (Hine), legs and antennae of several almost black; venters vary from having typical semilunar, mediobasal spots on sternites, to occasionally entirely gray. Mesonotum and scutellum blackish with two inconspicuous, submedian gray stripes anteriorly. A pair of swollen parafacial calli above unusually enlarged apodemal pits more conspicuous shining black than in type; gray pollinosity between them sparse and fragmented across lower clypeus. Inconspicuous midtergal yellow hairs evident in certain lights on only one. All show heavy substigmal and subapical infuscation in wing patterns similar to type (the original figure printed too faintly), but labia normal (unextended), and palpi about half as long.

Silvius (Assipala) megaceras (Bellardi).—This most closely approaches *S. aquilus* but has a row of middorsal pale triangles on the abdomen which, in related *S. tanycerus* (Osten Sacken), expand to narrow incisural bands; *S. aquilus* is darker bodied and lacks the pale notal and scutellar margins of both. None of these has the scape and pedicel apically as swollen as in *S. ceras* (Townsend).

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Studies on the Distribution and Biology of *Atimia helenae* Linsley on Two California *Cupressus* Species

(Coleoptera: Cerambycidae)

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The biology of *Atimia helenae* Linsley on cypress is poorly known. The species was originally described by Linsley (1934) from a collection taken on *Cupressus sargentii* Jepson in 1921 at Cypress Ridge, Marin County, California. Observations by Linsley (1939, 1962) provide some information on the flight period, host specificity and the restricted geographic distribution in California. In 1966, Dr. J. A. Powell reared adults from cypress material which was collected at Carson Ridge in Marin County. At that time he also made the first observations on the distinct "pitch shelters" that are constructed on the host by developing *Atimia* larvae.

Ten coastal California foothill stands of cypress, comprisng four closely related species, were surveyed for *Atimia* and its associates from 1966– 68. *Atimia*-infested branches and trunk sections were periodically sampled during an 8-month period from two of the more heavily infested stands for the purpose of studying the immature stages and seasonal history development. Infested material was sectioned into small billets which were then split apart by means of a hand axe, thereby exposing the life stage for examination. A portion of this sample was left intact and

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