

NOTES ON THE DISTRIBUTION OF SOME SOUTHWESTERN MEGACHILIDS, WITH DESCRIPTIONS OF THREE NEW FORMS

(Hymenoptera: Apoidea)

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Although the primary objective of this paper is to describe three megachilids, the opportunity is taken to present new data on the distributions of other species. Since some of these represent new areas it is felt that they should be published in order that the information may be more generally available.

For the opportunity to examine material recorded herein, I am deeply indebted to the following: George D. Butler, Jr., University of Arizona (UA); Jerome G. Rozen, Jr., personal collection (JGR); Stuart M. Fullerton, personal collection (SMF). These have been supplemented by material in the joint collection of Gerald I. Stage and the author (SS). Much of the latter has been presented to us by the collectors, and I wish to express our gratitude to these individuals: J. S. Buckett, D. R. Miller, C. W. O'Brien and J. A. Powell.

Subfamily LITHURGINAE

LITHURGE ECHINOCACTI (Cockerell)

Previously recorded only from Arizona (Tempe, Palmdale, Coyote Mts.), available material now extends the range into northwestern Mexico.

NEW RECORDS. *Sonora*: 1 ♀, 3 ♂ ♂, San Bernardo, July 24-29, 1935 (H. S. Gentry; SS). *Baja Calif.*: 1 ♀, Santa Maria Valley [nr. San Quintin], Aug. 11, 1954 (J. A. Powell; SS). *Ariz.*: 1 ♀, Tucson, Aug. 8, 1959 (H. P. Koenig; SS).

Subfamily ANTHIDIINAE

***Paranthidium jugatorium butleri* Snelling, new subspecies**

Female.—Structurally similar to nominate and other forms, but mesoscutal punctures a little finer, less approximate. Black, with dull yellow maculae as follows: Clypeus, except longitudinal median black stripe; sides of face with broad extension along inner orbits almost to tops of eyes (somewhat tapering above); stripe of variable extent behind eyes; L-shaped mark on anterior corner of mesoscutum; posterior border of scutellum; axillae occasionally; spot at apices of femora; stripe on outer surface of anterior tibiae; spot at bases of middle and hind tibiae; two widely separated apical spots (often somewhat elongate) on side of first tergite; narrow apical fasciae on tergites two to five (median interruption becoming progressively more narrowed so that fascia on fifth may be entire); broad spot in center of sixth

tergite. Hind tibial spurs dirty-white. Tegulae black, edges brownish. Wings smoky-gray, stigma and veins black and/or dark brown, marginal cell very darkly clouded. Pubescence as in *P. j. perpictum* Cockerell.

Male.—Very similar to males of other forms and to its female, differing from latter as follows: clypeus entirely, mandibles except apices, axillae, all tibiae and tarsi entirely, yellow. Fifth and sixth tergites (rarely fourth to sixth) with complete apical fasciae, sixth often entirely yellow. Seventh tergite black. Ventrites largely yellow. Tegulae ferruginous. Wings as in female.

Holotype female, allotype, 3 ♀♀ paratypes, CHIRICAHUA MTS., ARIZONA, 7000-8000 ft., September 6, 1953 (G. D. Butler), on Helianthus, 1 paratype on Erigeron. The following additional paratypes were also examined: 11♀♀, same locality, Sept. 7, 1953 (G. D. Butler), partly on Erigeron; 1 ♀, Baboquivari Mts., Sept. 25, 1938 (R. H. Crandall); 1 ♀, Huachuca Mts., Sept. 27, 1936 (R. H. Crandall); 3 ♂♂, Santa Catalina Mts., Sept 5, 1938 (R. H. Crandall); 3 ♀♀, Huachuca Mts., Aug. 30, 1953 (G. D. Butler); 11 ♀♀, 2 ♂♂ Graham Mts., Aug. 15, 16, 1952 (G. D. Butler), on "crown beard"; 1 ♂, Santa Catalina Mts., Aug. 25, 1954 (G. D. Butler); 1 ♀, Flagstaff, Sept. 12, 1951 (J. G. Rozen). The holotype, allotype and most paratypes are in the collection of the University of Arizona. One paratype is in the Rozen collection, and several have been retained in the author's collection.

This subspecies, named for the collector of the type series, shows some variation in the females; in some cases the median stripe of the clypeus extends only one-half, or even less, of the distance between the base and apex. In many of the paratypes the stripe behind the eyes is supplemented by another immediately behind the ocelli, forming a band extending from the upper one-third of the outer orbit across the vertex, slightly interrupted in the middle. In some specimens, also, there are small yellow maculae present on the mesopleurae, showing a tendency toward *P. j. perpictum*.

ANTHIDIUM PALMARUM MICHENERI SCHWARZ

This form was recently described by Schwarz (1957) from a small series (8 ♂♂, 2 ♀♀) from Quemada, Maverick Co., Texas. Additional specimens are available from the following localities.

NEW RECORDS.—*Arizona*: 1 ♂ Molina Basin, Mt. Lemmon, May 13, 1954 (F. G. Werner; UA); 1 ♂, 1 ♀, [Santa] Catalina Mts., May 9, 1954 (G. D. Butler; UA), on *Phacelia distans*; 1 ♂, [Santa] Catalina Mts., May 13, 1954 (G. D. Butler; UA), on *Sphaeralcea*. *Texas*: 1 ♀, 3 ♂♂, 36 mi. S. Sonora, April 10, 1950 (Beamers, Stephen, Michener, Rozens; JGR) on *Phacelia*;

1 ♂, 8 mi. S. Concan, April 14, 1952 (Michener, Beamers, Wille, LaBerge; SS), on *Phacelia*.

ANTHIDIUM PORTERAE Cockerell

Schwarz has recorded this species from Flagstaff, Arizona. The following records from that state would indicate that it is both widespread and rather common there.

NEW RECORDS.—*Arizona*: 1 ♂, Boyce Thompson Arboretum, near Superior, Aug. 23, 1953 (G. D. Butler; UA); 1 ♀, Santa Rita Mts., Aug. 23, 1924 (G. T. Vorhies; UA); 2 ♀ ♀, 2 ♂ ♂, Peppersauce Canyon, Santa Catalina Mts., Aug. 13, 1940 (J. J. duBois; SS); 4 ♀ ♀, 1 ♂, Tucson, May 1, 1938 (R. H. Crandall; UA); 1 ♀, 2 ♂ ♂, 4 mi. E. Florence Junction, May 15, 1954 (G. D. Butler; UA), on *Psilostrophe* and *Asclepias*; 1 ♀, 5 mi. E. Willcox, May 19, 1954 (F. G. Werner; UA), on *Erigeron*; 1 ♀, Pearce, Oct. 2, 1954 (G. D. Butler; UA); 1 ♂, 5 mi. W. Portal, Chiricahua Mts., Aug. 3, 1958 (P. A. Opler; SS) *New Mexico*: 2 ♀ ♀, 2.5 mi. N. Rodeo, Hidalgo Co., Sept. 9, 1959 (G. I. Stage; SS); 1 ♀, 3 mi. N. Rodeo, Sept. 3, 1959 (G. I. Stage; SS); 3 ♀ ♀, 11 mi. NW Lordsburg, Hidalgo Co., Sept. 9, 1959 (J. M. Burns; SS); 1 ♀ Las Cruces, Dona Ana Co., June 10, 1938 (SS), on *Penstemon occid[entata]*. *Texas*: 1 ♀, 36 mi. S. Sonora, April 10, 1950 (Beamers, Stephen, Michener, Rozens; JGR), on *Phacelia*.

CALLANTHIDIUM FORMOSUM (Cresson)

A male from Oak Creek Canyon, Coconino Co., July 9, 1959 (SS), extends the range of this species into Arizona. Although extensive collecting has been done in the southern part of the state by Dr. Butler, this species has not yet been found there. Probably the species is not anywhere common in that state.

DIANTHIDIUM CURVATUM XEROPHILUM (Cockerell)

A female from Apache Pass, Dos Cabezos Mts., Arizona, Aug. 20, 1954 (F. G. Werner; UA), is apparently the first capture of this rare form outside of New Mexico.

Stelis (Chelynia) semirubra reducta Snelling, new subspecies

This appears to be a northern form of *S. semirubra* Timberlake which is characterized by a reduction in the extent of the ferruginous color of the abdomen. In the southern individuals which I have seen, unfortunately all males, the ferruginous color extends over the first five tergites, with the ventrites also largely or entirely of that color; the fourth and fifth tergites may at times be somewhat suffused with brownish. In the Sierran material, this ferruginous coloration is limited to the first three tergites only, with the ventrites largely darkly suffused. The one northern female has the ferruginous color almost entirely suppressed, limited to

large spots on the first two tergites and the second and third ventrites.

Holotype male, allotype female, from STRAWBERRY LAKE, TUOLUMNE CO., CALIF., June 17, 1961 (R. R. Snelling). One paratype male is from 2 mi. S. Mormon Bar, Mariposa Co., Calif., May 21, 1960 (R. R. Snelling), on *Cryptantha*. The holotype and allotype are in the California Academy of Sciences, the paratype in the author's collection.

Subfamily MEGACHILINAE

ANTHOCOPA (ATOPOSMIA) PYCNOGNATHA SOLATA Michener

Since this apparently rather widespread species seems to be uncommon, the following new records are of interest. The capture at Knight's Ferry is noteworthy since it represents an area quite different from that which may previously have been considered the normal habitat for *A. p. solata*. This is an area of rolling grassland hills covered with oaks. A few pines occur locally in the immediate area where the specimens were captured. In general the spring vegetation is very similar to that of such higher elevations as, for example, the Mariposa region where this species has also been taken. It is of significance that the captures were made along the Stanislaus River bottom. It seems probable that the river flora, which is characteristic of higher elevations, has been carried down to this level by the stream, and that the bees have migrated downstream along with their host plants.

NEW RECORDS.—*Calif.*: 1 ♀ 3 ♂ ♂, 2 mi. W. Knight's Ferry, Stanislaus Co., May 30, 1961 (R. R. Snelling; SS); 1 ♂, 3.6 mi. W. California Hot Springs, Tulare Co., June 14, 1961. (G. I. Stage & R. R. Snelling; SS), on *Penstemon*; 1 ♀, 4 mi. W. Camp Sierra, Fresno Co., June 24, 1961 (G. I. Stage & R. R. Snelling; SS) on *Penstemon*.

ANTHOCOPA (ATOPOSMIA) HEBITIS (Michener)

This rare species is closely related to the above and apparently has a similar distribution.

NEW RECORDS.—*Calif.*: 3 ♂ ♂, 15 mi. E. Mariposa, Mariposa Co., May 30, 1960 (R. R. Snelling; SS), on *Penstemon*; 2 ♀ ♀, 4 mi. SE. Dunlap, Fresno Co., June 24, 1960 (R. R. Snelling; SS), on *Mimulus*.

PROTERIADES REMOTULA (Cockerell)

Hurd and Michener (1955) record a total of eleven specimens of this uncommon species. The following records should, therefore, be added to the known range of *P. remotula*.

NEW RECORDS.—*Calif.*: San Diego Co.: 3 ♀ ♀, Jacumba, May 13, 1956 (R. R. Snelling; SS), on *Cryptantha*. Los Angeles Co.: 1 ♀, 4 mi. S. Pear-

blossom, April 14, 1960 (R. R. Snelling; SS), on *Cryptantha*. Stanislaus Co.: 1 ♀, 3 mi. NW. LaGrange, April 6, 1960 (S. M. Fullerton, SMF); 3 ♂ ♂, Knight's Ferry, April 10, 1961 (R. R. Snelling; SS) resting on ground; 9 ♀ ♀, 4 ♂ ♂, same locality, April 15, 1961 (R. R. Snelling & M. D. Snelling; SS), ♀ ♀ on *Cryptantha*, ♂ ♂ resting on ground and on *Cryptantha*; 1 ♂, same locality and date (T. D. Duncan; SS), on *Cryptantha*. Mono Co.: 1 ♀, Crooked Creek, White Mts., June 25, 1961 (D. R. Miller; SS); 2 ♂ ♂, same data (J. S. Buckett; SS).

The specimens from Crooked Creek were at first thought to be *P. incanescens* (Cockerell), but the female is too small, the antennal scape is too short, and the clypus is not so strongly produced and truncate. In the males the second ventrite is not enlarged to cover the third, and so these specimens must be referred to *P. remotula*.

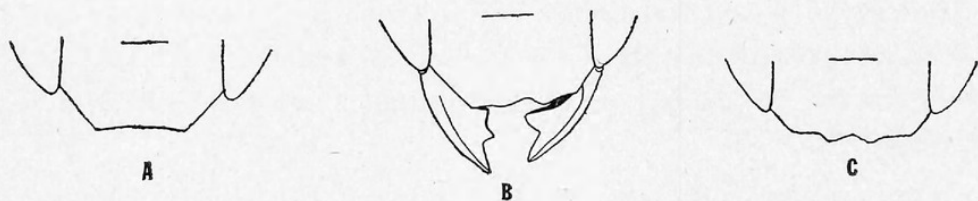
ASHMEADIELLA (ASHMEADIELLA) ARIDULA ASTRAGALI Michener

On May 16, 1955 the author collected a single gynandromorphic specimen of this species at Turlock, Stanislaus County, California, at the flowers of *Phacelia distans*. This capture is of interest since there have been only two sex anomalies previously described in the genus. Michener (1943) described intersexes of *A. (Ashmeadiella) opuntiae* (Cockerell) and *A. (Chilosima) rhodognatha* Cockerell. The two specimens described by Michener were not laterally distinctive, while the present example is primarily so in the characters of the head and thorax. An examination of the abdomen and its terminalia reveals no modifications over those of normal females.

The head and thorax of the present individual offer characters which on the left half are essentially male, and on the right essentially female. The pubescence of the lower two-thirds of the face on the left half is very dense and yellowish, a characteristic of the males of this species, while on the right it is somewhat shorter, much sparser and rather whitish as in normal females. The left mandible is typically male in appearance, while the right is typically female. The clypeal punctures on the right are coarse and distinct, comparable in size to those of the vertex; the punctures of the left side are much more obscure, the few apparent punctures present on a dull, roughened surface, these being finer than those of the vertex as in normal males; the apical margin of the clypeus is as shown in figure 1B. The right antenna is twelve segmented and the left is thirteen segmented (as in normal females and males respectively).

The thorax is, unfortunately, generally denuded of pubescence, but that which remains is apparently typical of the female. The left tegula is distinctly darker than the right (normal males often have somewhat darker tegulae than the females). The left tarsal claws are not cleft as in normal males, but are apically thickened; the right tarsal claws are simple, as in normal females.

As stated above, the abdomen does not differ from that of the normal females.



EXPLANATION OF FIGURES

Fig. 1. *Ashmeadiella* (*Ashmeadiella*) *aridula astragali* Michener. Lower half of face of: A, normal female; B, gynandromorph, including mandibles; C, normal male.

ASHMEADIELLA (ASHMEADIELLA) TITUSI (Michener)

The distribution of this rare species, previously known only from cismontane southern California, is now extended into moderate elevations in the Sierra Nevada Mountains. This area does not differ essentially from that of southern California, and the two regions have many species in common. The records from Los Angeles and San Bernardino Counties are significant since they indicate a tendency toward a desert habitat, the two areas being transitional between typical cismontane and desert habitats.

NEW RECORDS.—*Calif.*: Mariposa Co.: 2 ♀ ♀, 1 ♂, Exchequer Dam, May 25, 1957 (R. R. Snelling & M. D. Snelling; SS), on *Lotus*. Los Angeles Co.: 2 ♀ ♀, 2 ♂ ♂, 4 mi. SE. Pearblossom, April 13, 1960 (R. R. Snelling; SS), on *Lotus*. San Bernardino Co.: 2 ♀ ♀, Morongo Valley, April 26, 27, 1957 (R. R. Snelling & M. D. Snelling; SS), on *Lotus*; 1 ♀, same locality, April 12, 1960 (R. R. Snelling; SS), on *Lotus*.

ASHMEADIELLA (ASHMEADIELLA) DIFUGITA EMARGINATULA (Michener)

The capture of two females of this species in the Kern River Canyon, 25 miles east of Bakersfield, Kern Co., Calif., June 18, 1961 (C. W. O'Brien; SS), on *Clarkia* sp., is of interest since this apparently is the first record of this species west of the Sierran crest. The specimens do not differ from Lassen County specimens in my collection.

Ashmeadiella (Arogochila) micheneri Snelling, new species

In the Hurd and Michener key (1955) this species drops out at couplet 2, since it combines a nearly absent lateral clypeal notch with an apically widened median lobe. By liberal interpretation, it may be run to couplet 6 where it again fails to meet either requirement, since the apex of the labrum is truncate and more than half as wide as the mandible at the narrowest point.

Despite these discrepancies, however, *micheneri* seems to be closely related to *A. erema* Michener, from which it differs in the shape of the median lobe, the lack of well defined lateral clypeal notches, and the broadly truncate apical margin of the labrum. It shares with that species the peculiar, forward directed median lobe.

Female: Integument of head and thorax black. Mandibles black, except for rufous apical one-fifth. Scape and pedicel black, flagellum uniformly brownish. Tegulae dark piceous, usually with rufescent spot in middle. Legs dark rufescent or piceous, hind femora with rufous stripe or spot on dorsal surface; middle and hind tibial spurs black; tarsal claws rufescent. Integument of abdomen largely black, but with large lateral rufous blotches, diminishing on progressive tergites, fifth and sixth tergites entirely black. Pubescence sparse throughout, entirely pale, except on inner surface of basitarsi where it is ochraceous. Wings hyaline, slightly brownish, veins and stigma dark rufescent. *Head*: Face broad, distance between eyes at level of clypeal base 1.35-1.61 times distance from anterior ocellus to clypeal base (median, 1.50); eyes distinctly convergent above; cheeks broad, 0.85-0.97 times greatest eye breadth (median, 0.91); clypeus and frons bulging when viewed in profile, at level of clypeal base 0.40 times maximum eye breadth in front of eye, lateral areas of face and clypeus sharply depressed below median area. Distance from lateral ocelli to hind margin of vertex slightly greater than distance between ocelli and eyes; distance from antennal sockets to anterior ocellus 1.43-1.47 times distance from that ocellus to posterior margin of vertex. Mandibles elongate, apical margin forming broad cutting edge in which apical tooth is narrowly rounded and middle tooth forms a slight convexity on the edge. Labrum somewhat variable, apex truncate to slightly notched, apex as broad as, or slightly broader than, the narrowest part of mandible. Clypeus with lateral projections reduced to mere triangular protuberances of the margin or entirely absent; median lobe somewhat elongate, narrow basally, expanding suddenly in middle, then reduced to narrowly pointed apex (Fig. 2A, B), greatest breadth slightly more than median length. First flagellar segment 1.40 times second, 0.61-0.64 times second plus third. Clypeus moderately shiny, disc roughened, punctures quite sparse and obscure; punctures of basal and lateral areas distinct, confluent, as large as those of lower lateral areas of face. Punctuation of lower lateral areas becoming finer and ovoid at level of antennae, more rounded above antennal level, more nearly rugose, integument a little duller than that of lower areas. Punctures of supraclypeal area coarse, integument subrugose. Punctures of frons sub-

equal to those of upper lateral areas, close, interstices shining, but inner surface of punctures dull, minutely rugose. Punctures of vertex coarse, close, with shining interstices, those of area between eyes and ocelli larger than those behind ocelli; punctures of genae finer than those of lower lateral areas of face, with shining interstices. *Thorax*: Punctures of mesoscutum coarse, dense, interstices shining, punctures equal to those of vertex. Punctures of mesopleurae a little larger than of mesoscutum, interstices strongly shining. Tegulae largely impunctate, with a few scattered punctures anteriorly and along inner margin, outer margin distinctly tessellate, surface otherwise shining. Mesoscutellum punctured as mesoscutum, with narrow median impunctate longitudinal line. Lateral areas of metanotum virtually impunctate, moderately shining; median area tessellate, duller than lateral area, with a few scattered large punctures. Basal area of propodeum tessellate, moderately shiny, minutely longitudinally wrinkled; posterior surface rather shiny, tessellation distinct, lateral areas somewhat more roughened, with pubescence arising from minute, subconical raised areas. Tarsal claws edentate, broad basally, abruptly narrowed at midpoint; hind tibial spurs long, slender, pectinate, the teeth distinct, very close. *Abdomen*: Punctures generally rather coarse; of first tergite a little finer and closer than of second; of third to fifth, becoming progressively finer and closer; of sixth, coarser than of fifth, so that segment appears almost rugose; apical margins of tergites one to five more finely, closely punctate than discs. All tergites with distinct pubescent fasciae arising immediately before apical margins. Scopa moderately dense; the ventrites dull, tessellate with large scattered punctures, those of apical segment especially dense.

Length, to apex of second tergite, 3.5-5.0 mm.; forewing, 3.8-4.7 mm.

Male.—Pubescence and integument as in female, except that in small individuals the ferruginous color of the abdomen is usually reduced to lateral blotches on first three tergites, while in larger specimens the color extends to sixth tergite. Tegulae rufo-testaceous. Ferruginous blotch on hind femur of small individuals greatly reduced or entirely absent. Tibial spurs and tarsal claws dark ferruginous to light rufescent. *Head*: Essentially as in female. Transfacial breadth at level of clypeal base 0.65-0.81 times distance between anterior ocellus and clypeal base (median, 0.73); eyes 0.46-0.53 times greatest genal breadth (median, 0.49); distance from lateral ocelli to posterior margin of vertex 0.81-0.89 times distance between eyes and ocelli (median, 0.85); first flagellar segment 1.20-1.25 times second (median, 1.22), 0.33-0.36 times second plus third (median, 0.34). *Thorax*: Punctuation generally as in female, but tegulae with a few more evident punctures, entire metanotum rugosely punctate, lateral areas of propodeum strongly punctate. Hind tibial spurs as in female. Tarsal claws thickened apically, with distinct inner tooth separated from shaft by narrow cleft. *Abdomen*: Punctuation as in female. Apical tergite and genitalia as Fig. 2C, D.

Length, to apex of second tergite, 4.2-5.1 mm.; forewing, 3.5-4.0 mm.

Holotype male, allotype female, 23 ♀♀, 15 ♂♂ paratypes, KNIGHT'S FERRY, STANISLAUS CO., CALIF., April 10, 1951 (R. R. Snelling), on *Phacelia*. Paratypes: 8 ♀♀, 5 ♂♂, same data as

holotype (S. M. Fullerton); 5 ♀♀, 3 ♂♂, same locality, April 15, 1961 (R. R. Snelling & M. D. Snelling) on *Phacelia*; 1 ♀, same data (T. D. Duncan); 2 ♀♀, 1 ♂, same locality, April 9, 1961 (S. M. Fullerton); 6 ♀♀, 3 ♂♂, same locality, April 20, 1961 (S. M. Fullerton); 2 ♀♀, Exchequer Dam, Mariposa Co., March 29, 1961 (R. R. Snelling), on *Phacelia*.

Holotype, allotype and four paratypes in collection of California Academy of Sciences. Paratypes in the following collections, in addition to those of the author and S. M. Fullerton: American Museum of Natural History, California Department of Agriculture, California Insect Survey, Museum of Comparative Zoology, United States National Museum, University of California at Davis and Riverside, and the University of Kansas.

At the type locality this species was rather abundant. Females were noted entering and leaving smaller crevices and pock marks in the rocks which comprised a stone fence line.

I take great pleasure in dedicating this species to Dr. Charles D. Michener in recognition of his invaluable contributions to apoid

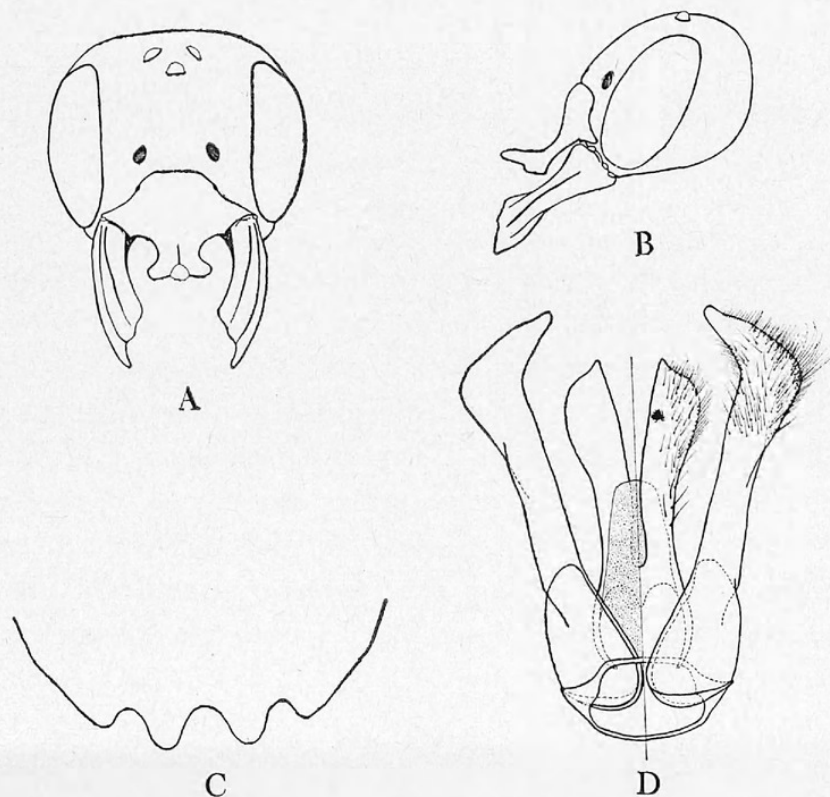


Fig. 2. *Ashmeadiella (Argochila) micheneri*, new species. A, female head, frontal aspect; B, same, lateral aspect; C, outline of male seventh tergite; D, male genitalia, right side dorsal aspect, left side ventral aspect.

systematics in general, and megachiline systematics in particular.

ASHMEADIELLA (AROGCHILA) AUSTRALIS (Cockerell)

The captures from Knight's Ferry, as given below, probably represent an intrusion into an otherwise unsuitable area after the manner discussed above for *Anthocopa pycnognatha solata*.

NEW RECORDS.—*Calif.*: 1 ♀, 1 ♂, 2 mi. W. Knight's Ferry, Stanislaus Co., May 30, 1961 (S. M. Fullerton; SMF); 4 ♀ ♀, 3 ♂ ♂, same data (R. R. Snelling; SS), on *Penstemon*. 1 ♂, 3.6 mi. W. California Hot Springs, Tulare Co., June 14, 1961 (G. I. Stage & R. R. Snelling; SS), on *Penstemon*. 1 ♀, Alpine Lake, Marin Co., June 6, 1957 (J. Powell; SS). 1 ♀, 6 mi. W. Mt. Bullion, Mariposa Co., May 30, 1959 (G. I. Stage; SS). *Nevada*: 1 ♀, 2 mi. E. Currant, Nye Co., June 24, 1960 (G. I. Stage; SS).

LITERATURE CITED

HURD, P. D., AND C. D. MICHENER

1955. The megachiline bees of California. Bull. Calif. Insect Surv., 3:1-247.

MICHENER, C. D.

1943. Sex anomalies in the genus *Ashmeadiella* with notes on the homologies between male and female genital appendages. Pan-Pacific Ent., 19:96-100.

SCHWARZ, H. F.

1957. Anthidiinae, mainly from Kansas and Texas. Jour. Kans. Ent. Soc., 30:131-137.

A NEW SPECIES OF AMBRYsus FROM COSTA RICA

(Hemiptera, Naucoridae)

IRA LA RIVERS

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The species described below is quite distinctive, without any obviously close relatives in the genus. The outline of the female plate superficially resembles that of *A. inflatus* La Rivers (1953) when both are drawn on a flat surface, but is quite different when the third dimension is added. Whereas the plate in *A. inflatus* is relatively flat, that of the new species has strong dorso-ventral curvature, specially to the two median, most posterior, terminal sinuosities. The male genital processes are singularly different between the two species, as are other points. *A. harmodius* is a member of the *signoreti* group.

This is a medium-sized, light-colored species, with vague mottling, particularly posteriorly and is quite typical looking for an *Ambrysus*. Size 10.0 mm. in length and 6.25 mm. in width. Dorsum lighter on head, prothorax, scutellum, embolia and connexival borders; with darker mottling on hemelytra. Venter light-



Snelling, Roy R. 1962. "Notes on the distribution of some southwestern megachilids, with descriptions of three new forms (Hymenoptera: Apoidea)." *The Pan-Pacific entomologist* 38, 225–234.

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