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THE PROSOPIDÆ, OR OBTUSE-TONGUED BEES, OF THE
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THE PROSOPIDÆ, OR OBTUSE-TONGUED BEES, OF THE PHILIPPINE ISLANDS

By T. D. A. COCKERELL
(University of Colorado)

The Prosopidæ, represented by the genus *Prosopis* Fabricius, are easily recognized among the Philippine bees by their small size, short emarginate tongue, and scanty development of hair on the body. The wings have a large stigma and only two submarginal cells. The only Philippine bees that can be confused with them are the species of *Allodape*, which are long-tongued. In *Allodape* the face marks are unlike those of *Prosopis*, the broad light mark down the middle of the face being especially characteristic. The *Prosopis philippinensis* of Ashmead is an *Allodape*.

The Philippine species of *Prosopis*, so far as known, may be separated thus:

- | | |
|--|------------------------|
| Abdomen steel blue | worcesteri sp. nov. |
| Abdomen black | 1. |
| 1. Clypeus entirely yellow in male; small slender species, with the tarsi and greater part of the tibiæ yellow; lateral face marks not going above level of antennæ..... | taclobana Cockerell. |
| Clypeus entirely black in female; lateral face marks cuneiform, truncate above; tubercles broadly edged with white; stigma piceous; abdomen strongly shining; both recurrent nervures meeting transverse-cubitals. | tagala Ashmead. |
| Clypeus black with a light patch or spot..... | 2. |
| 2. Lateral face marks cuneiform, not extending along orbital margins above level of antennæ..... | 3. |
| Lateral face marks extending above level of antennæ..... | 4. |
| 3. Mesothorax coarsely punctured, shining between the punctures. | cuneifera sp. nov. |
| Mesothorax entirely dull and very finely and densely punctured; scutellum with large punctures..... | opacissima sp. nov. |
| 4. Scape with a light mark in front; light area on clypeus triangular, pointed above | 5. |
| Scape entirely black; light area on clypeus not pointed above..... | 6. |
| 5. Hind tibiæ entirely black in male..... | palavanica Cockerell. |
| Hind tibiæ broadly yellow at base in male..... | mindanensis Cockerell. |
| 6. Clypeal mark shaped like a tall hat; upward extension of lateral face marks cuneiform, not extending far above antennæ. | benguetensis sp. nov. |
| Clypeal mark a spot near lower margin; upward extension of lateral face marks narrow..... | 7. |

7. Mesothorax finely punctured *contradicta* sp. nov.
 Mesothorax coarsely punctured; female with face broad, area of clypeus above yellow mark about as broad as long; male with face narrow, area of clypeus above yellow mark much longer than broad.

luzonica Cockerell.

Prosopis worcesteri sp. nov.

Male (type).—Length, nearly 6 millimeters; dark blue, the cheeks and sides of thorax green; mandibles black, reddish apically; labrum black; clypeus white, with the lateral and inferior margins black; white lateral face marks filling space between clypeus and eye, and extending nearly halfway up front, ending obtusely but narrowly; scape black with a reddish spot at extreme base; flagellum short for a male, ferruginous beneath; mesothorax finely and closely punctured; tubercles with a pale spot, but prothorax otherwise dark; base of metathorax shining, area not distinctly defined; tegulae black, wings dusky, stigma piceous; recurrent nervures joining second submarginal cell about equally distant from base and apex; basitarsi white or whitish except apically; hind tibiae white at base.

Female.—Face dark green, without light markings; tubercles without light spot; hind tibiae white at base, but their basitarsi entirely dark.

LUZON, Laguna, Los Baños, male (*Baker*, type); Mount Maquiling, females (*Baker*). Allied to *P. jacobsoni* Friese, from Java, but distinguished by the longer lateral face marks and dark clypeal margin. I have ventured to associate this pretty little species with the name of one who will be always remembered for his varied labors in the Philippine Islands.

Prosopis taclobana Cockerell.

Prosopis taclobana COCKERELL, Ann. & Mag. Nat. Hist. (1915), VIII, 16, 2.

LEYTE, Tacloban (from *Baker*).

Prosopis tagala Ashmead.

Prosopis tagala ASHMEAD, Proc. U. S. Nat. Mus. (1905), 28, 959.

LUZON, Manila (*C. S. Banks*). I have examined Ashmead's type.

Prosopis cuneifera sp. nov.

Female.—Length, 6 millimeters or over (abdomen of type strongly retracted); very robust, black; light marks of face consisting of cuneiform lateral marks, obliquely truncate above at level of antennae, and a broad median band (not twice as long as broad) on clypeus, not extending above the middle third;

antennæ black; mesothorax and scutellum very coarsely punctured, scutellum and disk of mesothorax shining between the punctures; area of metathorax triangular, transversely plicate basally; tubercles with a large yellow spot, and a very widely interrupted yellow marginal band on prothorax; tegulæ piceous, with a yellow spot; wings rather dusky, stigma piceous, first recurrent nervure joining second submarginal cell a short distance from base; legs black, anterior tibiæ with a broad yellow stripe on more than basal half, middle tibiæ with a light spot at extreme base; hind tibiæ broadly light at base; abdomen broad, polished, without evident punctures.

LUZON, Mount Banahao (*Baker*). Somewhat related to *P. feai* Vachal, from Burma.

Prosopis opacissima sp. nov.

Female.—Length, 5.5 to 6 millimeters; black, with the mesothorax dull and excessively densely punctured, the scutellum with much larger and more widely separated punctures; mandibles black, red at apex; orbits strongly converging below; yellow face marks consisting of cuneiform lateral marks, truncate above at level of antennæ, and a broad band on clypeus, not reaching upper margin, its length at least twice its breadth, and its upper end rounded; scape black, flagellum very obscurely brown beneath; thick upper border of prothorax interrupted in middle, tubercles and spot on tegulæ yellow; base of metathorax dull and rugose; wings hyaline, stigma brown; first recurrent nervure meeting first transverse cubital; basitarsi, basal two-thirds of anterior tibiæ in front, middle tibiæ at base, and nearly basal half of hind tibiæ yellow; abdomen moderately shining, with extremely fine punctures.

MINDANAO, Davao (from *Baker*, type locality). LUZON, Laguna, Mount Maquiling (from *Baker*). Related to *P. scutula* Vachal, from Burma.

Prosopis palavanica Cockerell.

Prosopis palavanica COCKERELL, Ann. & Mag. Nat. Hist. (1915), VIII, 16, 1.

PALAWAN, Puerto Princesa (from *Baker*).

Prosopis mindanensis Cockerell.

Prosopis mindanensis COCKERELL, Ann. & Mag. Nat. Hist. (1915), VIII, 16, 486.

MINDANAO, Dapitan (from *Baker*).

Prosopis benguetensis sp. nov.

Male.—Length, about 6.5 millimeters; black, with rather slen-

der abdomen; labrum and mandibles black; pale lemon yellow lateral and clypeal marks, the former extending a short distance above level of antennæ, acutely angulate above and below, the upper inner side shorter than the lower inner; clypeal mark a very broad band, truncate submarginate above, and with a small projection at each side of base; scape black, rather robust; flagellum long, coffee brown beneath; head very finely punctured; mesothorax finely and closely punctured, punctures of scutellum larger, but dense; base of metathorax polished and shining; end of tubercles and two marks on upper margin of prothorax yellow; ventral surface of thorax with white hair; tegulæ piceous, with no light spot; wings somewhat dusky, the apical region decidedly brown; stigma dark reddish brown; first recurrent nervure meeting first transverse cubital, but second recurrent going beyond end of second submarginal cell; anterior tibiæ yellow in front, but legs otherwise dark, except that hind basitarsi are a little pallid at base; abdomen shining, with very fine punctures on second and following segments; lateral hind margins of segments with poorly developed white hair bands.

LUZON, Benguet, Baguio (*Baker*). Easily distinguished from *Prosopis contradicta* and *P. mindanensis* by the shining base of metathorax.

Prosopis contradicta sp. nov.

Male.—Length, about 6 millimeters; black, with yellow markings as follows: Small mark above apical margin of clypeus, narrow lateral face marks (shining on inner side) narrowly continued up orbital margin some distance above antennæ, rather narrowly interrupted band on prothorax, spots on tubercles and tegulæ, and anterior tibiæ in front. Scape short; flagellum long, dark coffee brown beneath; sides of front with rather large punctures; mesothorax and scutellum distinctly shining, finely but very distinctly punctured; area of metathorax elongated, dull and rough, but the oblique lateral margins shining; abdomen reddish black; segments (including first) with very minute sparse punctures.

NEGROS, Cuernos Mountains (from *Baker*). Somewhat related to *P. mustela* Vachal, from Burma.

Prosopis luzonica Cockerell.

Prosopis luzonica COCKERELL, Ann. & Mag. Nat. Hist. (1914), VIII, 14, 364 (♀); (1915), 16, 486 (♂).

LUZON, Mount Maquiling and Mount Banahao (*Baker*).

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