

Hab. Gulf of Oman, lat. $24^{\circ} 58'$ N., long. $86^{\circ} 54'$ E., 156 fathoms, shell-sand.

A few valves of a small *Lepton*, not unlike in form to the British *L. squamosum*, Mont.

EXPLANATION OF THE PLATES.

PLATE I.

- Fig. 1. *Cyclostrema tredecimlineatum*.
- Fig. 2. — (*Tubiola*) *nugatorium*.
- Fig. 3. *Solariella iridifulgens*.
- Fig. 4. *Monilea chiliarches*.
- Fig. 5. *Epitonium zatrephes*.
- Fig. 6. — *schepmani*.
- Fig. 7. *Crosseia alliciens*.
- Fig. 8. *Teinostoma emmeles*.
- Fig. 9. *Ethalia diotrephes*.
- Fig. 10. *Fluxina stenomphala*.
- Fig. 11. *Rissoa* (*Apicularia*) *townsendi*.
- Fig. 12. — (*Scrobs*) *elspethæ*.
- Fig. 13. — (—) *ictriella*.
- Fig. 14. *Obtortio elongella*.
- Fig. 15. *Cerithium trigonostomum*.

PLATE II.

- Fig. 16. *Cerithiopsis eutreta*.
- Fig. 17. — *henjamensis*.
- Fig. 18. — (*Seila*) *ochrolivens*.
- Fig. 19. *Columbella* (*Seminella*) *salutaris*.
- Fig. 20. *Mitra* (*Pusia*) *geoffreyana*.
- Fig. 21. *Terebra remanalva*.
- Fig. 22. *Mangilia ichthys*.
- Fig. 23. — *querna*.
- Fig. 24. — *tetartemoris*.
- Fig. 25. *Pleurotomella rhytismeis*.
- Fig. 26. *Donovania tomlini*.
- Fig. 27. *Turris invicta*.
- Fig. 28. *Retusa turrigera*.
- Fig. 29. *Lepton orientale*.

II.—Descriptions and Records of Bees.—XXX. By T. D. A. COCKERELL, University of Colorado.

THE present part is wholly devoted to Australian *Prosopidæ*. After studying a long series of species of *Meroglossa* and *Palæorhiza*, it becomes evident that the latter is at best a subgenus. An examination of the mouths brings out the remarkable fact that the males have pointed (dagger-like)

tongues, while those of the females are broad and obtuse, as in *Prosopis*. Thus the acute and obtuse-tongued bees are united in a single genus! Another noteworthy feature is a comb on the first two joints of the maxillary palpi. The females apparently eat pollen; at least the tongues of *Meroglossa parallela* (Ckll.), *M. penetrata percrassa* (Ckll.), and *M. melanura* (Ckll.) are full of it. According to Perkins, *Prosopis* also eats pollen*.

Meroglossa eucalypti, sp. n.

♂.—Length about 9 mm.

Black and red, with very pale yellow markings; head black, the cheeks obscurely reddish; vertex rough and densely punctured; front with a median raised line and on each side of it a broad smooth shining area, rounded and sharply defined above; clypeus very prominent, with a very broad deep sulcus or excavation on each side, a deep trough running down each side of the face; face of clypeus shallowly transversely concave; face below antennæ pale yellow, except the supraclypeal area and the inner, almost hidden, part of the lateral sulci; lateral marks extending upward as broad bands nearly to level of top of smooth frontal areas, and ending very obtusely; labrum and mandibles ferruginous; yellow colour extending across malar space and as a band halfway up posterior orbital margins; scape swollen, sausage-shaped, bright ferruginous; flagellum ferruginous, infuscated above, except the last joint; thorax strongly and quite closely punctured, black, with most of the prothorax, and the mesothorax except some blackish suffusion posteriorly (extending about to middle sublaterally), ferruginous; tubercles, small subquadrate spot behind, axillæ, and two large but widely separated spots on scutellum all cream-colour; area of metathorax triangular, rough and longitudinally strigose, contrasting with the adjacent sides of metathorax, which are covered with greyish-white hair; tegulæ dark reddish fuscous, with a cream-coloured spot. Wings clear, nervures dark fuscous, stigma ferruginous, with a dark margin; first r. n. joining first t.-c. Legs dark reddish, with glittering hairs, small joints of tarsi becoming clear ferruginous; anterior and middle femora short and thick. Abdomen well punctured, chestnut-red and fuscous, the first segment fuscous, base and apex of second and third suffusedly fuscous; apex broad,

* Another pollen-eater is *Pseudomasaris vespoides* (Cresson), as was observed by my wife at Pecos, New Mexico. The pollen eaten is that of *Pentstemon*.

with long projecting bristles; ventral segments 3 to 5 ciliated with white hair.

♀.—Similar to the male, but the thorax is without red and the abdomen is either all black or with obscure reddish bands across the middle of the third and following segments; the head also is quite different, being red, strongly suffused with black above, without light markings, and normal in form, without facial excavations; the scape also is ordinary. The tongue is broad and obtuse, *Prosopis*-like; that of the single male has not been extracted, but it is doubtless pointed. The hind spurs are simple, black tipped with white; the mandibles are obtusely bidentate.

Hab. Mackay, Queensland (*Turner*). British Museum.

Both sexes from flowers of *Eucalyptus*, March 1900 (no. 454); ♀ at flowers of *Rosa*, April 1899; one ♀, May 1900.

Meroglossa sculptissima, sp. n.

♂.—Length about 9 mm.

Similar to *M. eucalypti*, with the same modification of the face, but differing thus:—clypeal prominence broader than long (longer than broad in *eucalypti*); scape more swollen and with a blackish mark; lateral face-marks pointed above; malar space black, but a yellowish-white stripe on lower part of cheeks; light markings of thorax chrome-yellow, the scutellum all yellow, and the postscutellum yellow except at sides (suture between them black); thorax and abdomen black without red; venation paler; legs black; apical bristles of abdomen shorter and finer.

♀.—Like the same sex of *M. eucalypti*, but the thoracic markings differing in colour and form as in the male; first r. n. entering second s.m. (as it does also in the female of *eucalypti*); head black, with the region about the mouth dark reddish; narrow lateral face-marks, creamy white, extending from about level of antennæ to that of lower end of eye; apical part of clypeus depressed; tongue *Prosopis*-like.

Hab. Mackay, Queensland (*Turner*, 1049). Male at flowers of *Eucalyptus*, 1900; females at flowers of *Cassia* (Dec. 1899) and *Rosa* (June 1900). British Museum.

Meroglossa lactifera, sp. n.

♂.—Length about 11 mm.

Shining black, with creamy white markings on head, thorax, and legs; closely similar to *M. penetrata percrassa*, but differing thus:—less robust, the abdomen especially narrower;

face narrower, not excavated; clypeus light except a broad black stripe down each side, and linear apical margin; supra-clypeal light mark emarginate above, shaped rather like the hoof of a deer; lateral marks long and narrow, ending in a point above, at about level of lower side of middle ocellus; labrum with a large light patch and a dot on each side of it; mandibles dark; scape black, rather thick but not swollen; flagellum obscurely brownish beneath toward the end; as in *percrassa*, the prothorax has two light marks above (but they are shorter), the tubercles are largely light (the light area, however, notched behind), and the tegulæ have a light spot, but there is no light spot behind tubercles; ocelli much smaller and in a triangle (large and in a curved line in *percrassa*); mesothorax shining, with well separated punctures (more densely punctured in *percrassa*); axillæ and post-scutellum wholly black, but scutellum with a broad median creamy-white band, narrowing posteriorly; area of metathorax larger than in *percrassa*, with a very prominent transverse ridge. Apical half of wings distinctly smoky; nervures strong and dark; b.n. meeting t.-m. (falling short of it in *percrassa*); first r.n. entering second s.m. very near base (at least twice as far from base in *percrassa*); second r.n. going beyond end of second s.m. (entering it near end in *percrassa*). Hind spurs strongly curved (longer and little curved in *percrassa*). Second abdominal segment very sparsely punctured on disk, its extreme base with appressed white hair; ventral surface of thorax with much white hair; second ventral segment of abdomen covered with white hair, the following ones with dark fuscous or black. The type specimen carries several pollen-bodies of an *Asclepiad* attached to its mouth.

♀.—Similar to the male, with the same peculiar venation face broader, the markings reduced to three linear stripes, the supra-clypeal mark broader than upper part of clypeal stripe; prothorax with a pair of cuneiform white marks above; tubercles black, with a variable small light spot; tegulæ with a hardly perceptible spot; scutellar mark reduced to a small triangle on anterior middle. The legs are black without light markings, whereas in the male the anterior and middle femora have large light marks, the anterior tibiæ are light in front, and the other tibiæ carry apical and basal spots.

Hab. Mackay, Queensland, May 1900, both sexes (*Turner*, 1048); also a female from Cairns, "Kur. 1. 02" (*Turner*). British Museum.

Meroglossa penetrata percrassa (Ckll.).

♂.—Similar to the female, but face deeply channelled on each side as far down as middle of clypeus; clypeus with a very broad median cream-coloured stripe; a triangular supra-clypeal mark, sharply pointed above; linear lateral face-marks, beginning near level of middle of clypeus, gradually broadening above, ending a little above level of middle of front; scape black, swollen; flagellum ferruginous beneath; thoracic markings as in female, but clypeal mark reduced to a triangle on posterior margin. Legs without light markings, but anterior tibiæ largely ferruginous in front; venter with scanty pale glittering hair, apical dorsal segments with black. Wings clear.

For other characters see under *M. lactifera*.

Hab. Mackay, Queensland (Turner, "273?"), May 1899, at flowers of *Xanthorrhæa*.

Meroglossa turneriana kurandensis (Ckll.).

A male from Cooktown, Oct. 1902, has legs marked as in true *turneriana*, and supraclypeal mark wholly wanting. The metathorax and hind femora and tibiæ are shining lilac.

This was collected by Mr. Turner, and is in the British Museum.

Meroglossa turneriana viridimutans, subsp. n.

♀.—Like the same sex of *M. turneriana* (Ckll.), with no light markings on face, but Prussian green instead of blue, with lilac tints here and there (variable) on face, thorax above, and first abdominal segment; the hind tibiæ, seen from behind, are shining purple.

This has a distinct appearance, but is only a local race; some females of *M. turneriana* from Mackay have the thorax green.

Hab. Port Darwin, Nov. and Dec. 1902 (Turner). British Museum.

A series of male *M. turneriana* obtained by Mr. Turner at Mackay and (one specimen) Cairns shows considerable variability in colour. Some have the thorax strongly suffused with lilac, and the vertex may be entirely green. The Mackay specimens were taken in August, January, February, and March. The species shows the usual *Meroglossa* dimorphism in the tongue.

Meroglossa baudinensis (Ckll.).

The tongue of *Prosopis baudinensis* has not been examined, but from its evident affinities the insect must be a *Meroglossa*.

A new locality is Port Darwin, Dec. 1902 (*Turner*).

Meroglossa reginarum (Ckll.).

The male closely resembles the female, but the face is narrower. The wings are quite conspicuously dusky and the tubercles are with or without a small light spot.

Taken by Mr. Turner at Mackay, April 1900, at flowers of *Xanthorrhœa*. (No. 621.)

Meroglossa perviridis cassiæfloris, subsp. n.

♀.—Length a little over 10 mm. ; expanse about 18.

Agrees with *perviridis* in nearly all respects, but larger, with all the light markings creamy white and the flagellum dark, faintly brownish beneath. It is very like *M. reginarum*, but averaging a little larger and more robust, and easily separated by its green colour and perfectly clear wings.

Hab. Mackay, Dec. 1899, at flowers of *Cassia* (*Turner*, 270). Also two collected May 1900. British Museum.

The original type of *reginarum* was numbered 270, but in the present collection *reginarum* is 621.

Meroglossa luxuriosa, sp. n.

♀.—Length about 12 mm. ; expanse $18\frac{1}{2}$.

Brilliant green, at first sight similar to *M. perviridis cassiæfloris*, but easily separated as follows:—Face broader; creamy white face-markings reduced to a narrow band along each eye and a spot between antennæ; no light stripe along posterior orbits; mesothorax dullish, densely punctured; scutellum much more closely punctured; middle of area of metathorax rugose. Legs without light markings. Wings distinctly dusky, especially in apical field.

This is in reality nearest to *M. varicolor*, from which it differs by being larger, without the varied rose-purple tints (the face is often flushed with purple), while the border of the prothorax is wholly green. The thorax is entirely without light markings.

♂.—Similar to the female, but smaller and more slender; yellower green; face narrower, with a cream-coloured triangle on apical part of clypeus; mandibles with a cream-coloured stripe and labrum with a small spot; scape with a minute

pale line; posterior orbits not striped; thorax without light markings; area of metathorax strongly purple, rugose in middle; apex of abdomen with a pair of minute contiguous spines.

Hab. Cairns, Queensland (*Turner*). British Museum.
 "Kur., 2. 02, 3. 02, and 4. 02."

The tongue shows the same sexual dimorphism as in the other species.

Meroglossa perkinsi, Ckll.

♂.—Length about $7\frac{1}{2}$ mm.

Resembling the female, except as follows:—Face narrower, the three light bands occupying much more space, so that the face below the antennæ may be said to be light, with a broad dark band extending from each antenna down the sides (not quite to the apex) of the clypeus; scape light in front; tubercles, upper border of prothorax narrowly, and a large triangle on each side light; mesothorax with scarcely visible traces of two pale lines; scutellum and postscutellum each with a conspicuous light band on each side, the scutellar bands also projected forwards as a slight pale line on posterior lateral edge of mesothorax; a broken light band on pleura, extending backward from tubercles. These light markings are reddish in the specimen described, but apparently altered from yellow by cyanide.

One specimen from Cooktown, Nov. 1902 (*Turner*). British Museum.

Meroglossa varicolor eboracina, subsp. n.

♂.—Metallic Prussian green, similar to *M. varicolor*, but face-marks greatly developed, the face below antennæ all light except linear clypeal sutures, and a small triangle below each antennal socket; supraclypeal mark extending as a band up to middle ocellus; a broad light stripe along posterior orbital margins; tubercles, a square spot behind, and a small spot below light, as also upper border of prothorax; scutellum with a broad light stripe on each side, and a fine line, interrupted in middle, along hind margin; postscutellum light, with a broad basal green triangle. Wings dusky. The last three ventral segments have erect dark fuscous hair.

Hab. Cape York, May 1902 (*Turner*). British Museum.

M. varicolor from Mackay, Dec. 1900 (*Turner*), ♂, has the scape white in front (it is dark in ♂ *reginarum*) and head and thorax with much rose-purple colour.

Meroglossa denticauda, sp. n.

♂.—Length about 11 mm.; expanse $17\frac{1}{3}$.

Head and thorax black, with bright chrome-yellow marks; abdomen piceous, with a broad suffused red band on first segment and a red suffusion at bases of second and third and an oblong pale yellow mark on each side of second; face narrow, inner orbital margins with a strong double curve; front densely and coarsely punctured; face below antennæ all deep chrome-yellow, except an elongate cuneiform brown mark on each side of clypeus, very narrow lower edge of clypeus, and a narrow black border round supraclypeal mark: supraclypeal mark extending upwards as a band to middle ocellus; lateral marks extending upwards as bands along orbits, gradually narrowing to a point at level of lateral ocelli; malar space black; posterior orbits bounded by a yellow band, failing below; labrum and mandibles each with a yellow spot; scape slender, yellow in front and reddish behind; flagellum dark above, dull yellowish beneath, except the fourth antennal joint, which is dark; mesothorax very densely, strongly, and coarsely punctured, reddish black, with a pair of very narrow dull yellow lines, not reaching anterior or posterior margins, and a slight yellow mark on each side above tegulæ; upper border of prothorax, tubercles, band (dull) on pleura extending downwards from tubercles, scutellum (except a median brown line), and postscutellum all yellow; area of metathorax strongly fluted and with a yellowish mark on each side; femora dark reddish, the middle pair quite bright red behind; tibiæ and tarsi yellow, suffused with reddish; hind tibiæ with the basal two-fifths canary-yellow and the rest light ferruginous; tegulæ subhyaline, with a yellow spot. Wings strongly orange-tinted, stigma and nervures amber-colour; b. n. falling barely short of t.-m.; first r. n. entering apical corner of first s.m.; second r. n. reaching second s.m. a short distance before the apex; second s.m. about as broad above as below; abdomen finely punctured; apex with two triangular teeth, forming a **W** margin, and laterally with well-developed dark cerci, minutely hairy at end. The tongue of the unique type male has not been extracted, but the insect is evidently a *Meroglossa* related to *M. melanura* (Ckll.).

♀.—Similar to the male, but differing as follows:—Face equally narrow, but the markings reduced to three narrow stripes, extending its whole length from the level of the anterior ocellus; labrum and mandibles not light-spotted; scape ferruginous; thoracic markings the same, but stripe

below tubercles reduced to a small spot, and a small spot behind tubercles, and the scutellum without a dark line; abdomen black, with two red spots on first segment, a transverse yellow mark on each side of second, and two large transverse marks on third in the subdorsal region; legs coloured as in the male.

Hab. Mackay, Queensland (*Turner*). British Museum.

The male is no. 695, Feb. 1892; the female no. 404, May 1900.

Prosopis serotinella (Ckll.).

I am indebted to Mr. R. E. Turner for three females from Mackay, two from flowers of *Cassia*, Dec. 1899, one from *Eugenia*, Nov. 1899. In the original type of *Prosopistemon serotinellum* it appeared that the stigma was enormously enlarged, invading the whole of the marginal cell; but the new specimens clearly show that this was merely due to extreme infuscation, as the stigma can be seen with its usual boundary, the marginal cell beyond in the *Cassia* specimens being very distinctly paler. The mouth-parts are those of *Prosopis*; the maxillary blade is very broad, broadly rounded apically, with many bristles, not suddenly narrowed in the apical region as it is in the European *P. confusa*. (The American *P. asinina* is intermediate between *P. serotinella* and *P. confusa* in regard to the maxillary blade.)

The name *Prosopistemon* cannot have more than subgeneric or sectional value.

Prosopis chrysaspis, Ckll., var. *a*.

♀.—Flagellum dark; nervures and stigma piceous.

Hab. Victoria (*C. F.*). Turner Collection, British Museum.

Prosopis nubilosa, Smith.

Victoria (*C. F.*). Turner Collection, British Museum.

Prosopis nubilosa subnubilosa, subsp. n.

♀.—Lateral face-marks broader, touching supraclypeal area; no distinct dark cloud in apical region of wing; first r. n. entering extreme base of second s.m.

Hab. Mackay, May 1900 (*Turner*, 271).

Prosopis eugeniella, sp. n.

♀.—Length $3\frac{1}{2}$ –4 mm.

Black, very minutely punctured, with the following parts

cream-coloured: bow-shaped lateral face-marks, going a short distance above antennæ, mandibles except apex, sometimes two short lines on upper border of prothorax, spot on tegulæ, knees, anterior tibiæ in front, middle tibiæ except a large dark mark behind, and basal half of hind tibiæ. Tarsi yellowish white, with the small joints becoming reddish; flagellum ferruginous beneath. Wings clear, iridescent, the large stigma and the nervures brown; first s.m. very long, receiving first r. n. near its apex. Runs in my table to 33, and may there be easily separated by its minute size.

Hab. Mackay, Nov. 1899, at flowers of *Eugenia*, four ♀s (*Turner*, 862); also one, Nov. 1893. Three are in British Museum; two in my collection, thanks to Mr. Turner.

(The numbers cited in this and other cases refer merely to the specimens before me. Of many of the species I saw long series in Mr. Turner's collection when at the British Museum last year.)

Prosopis microphenax, sp. n.

♂.—Length slightly over 4 mm.

Black, very minutely punctured, with pale lemon-yellow clypeus, labrum, and large cuneiform lateral marks, the last broadly truncate above at lower level of antennal sockets, which produce a concavity in the edge of the yellow; no supraclypeal mark; mandibles obscurely pallid; tubercles pale edged; flagellum dull ferruginous beneath; tegulæ dark brown; nervures and stigma brown; tarsi, anterior tibiæ in front, and basal third of hind tibiæ light; middle tibiæ short and black; area of metathorax shining, superficially like *P. eugeniella*, but the venation is quite different; the wings also are dusky at the apex. The second s.m. is large, broader than high, and the first r. n. joins the first t.-c.; in *eugeniella* the second s.m. is much higher than broad. The mesothorax is more coarsely roughened than in *eugeniella*, and it and the dark parts of the head are a pure black, whereas these parts in *eugeniella* are seen by comparison to be a greenish black.

Hab. Mackay, March 1900 (*Turner*). British Museum.

This runs to the same place in the table as *eugeniella*.

Prosopis microphenax, Ckll., var. *a*.

♂.—Length almost 5 mm.

Tubercles broadly yellow, with a dark dot; postscutellum with a small yellow spot. This runs in the table next to *P. frederici*, var., but is easily separated by the small size and black scutellum.

Hab. Mackay, December 1899, at flowers of *Cassia* (Turner). British Museum.

Prosopis infans, sp. n. (*microphenax*, var.?).

♂.—Length 4 mm. or slightly over.

Black, similar to *P. microphenax*, but face narrower; mesothorax more minutely punctured (not so rough); scutellum with a large light central patch, postscutellum with a small mark; first r. n. joining first t.-c. as in *microphenax* type (in *microphenax* var. *a* it enters base of second s.m.).

This is perhaps only a variety of *P. microphenax*.

Hab. Mackay, Jan. 1900 (Turner). British Museum.

Runs in the table to 52, where it is separated by its small size.

Prosopis constrictiformis, sp. n.

♂.—Runs to *P. constricta* in table, and is only a little over 4 mm. long, with the abdomen dark beyond the base of the third segment. It is easily separated from *constricta* by the much larger punctures of the mesothorax, and by the character of the metathorax, which has the enclosure triangular and strongly ridged, and has no strong lateral keels. The pleura has very large well-separated punctures, whereas in *constricta* it appears minutely roughened. The antennæ are long; the scape in front and the flagellum beneath bright ferruginous. First r. n. entering extreme base of second s.m.

Hab. Cooktown, Oct. 1902 (Turner). British Museum.

Prosopis nigropersonata, sp. n.

♀.—Length about 7 mm.

Robust, head and thorax black, abdomen dark steel-blue; head without light markings; the thick upper margin of prothorax, and the tubercles, bright orange, but the rest of the thorax dark; legs black, with scanty short silvery hairs; clypeus sericeous, sparsely and feebly punctured; flagellum ferruginous beneath; mesothorax and scutellum densely and strongly punctured; pleura strongly punctured; area of metathorax broad-triangular, shining, strongly irregularly wrinkled; sides of metathorax with short white pile; tegulæ black. Wings clear, nervures and stigma dark brown; second s.m. long, very much broader than high, receiving first r. n. at its extreme basal corner; abdomen short, very finely punctured. Runs in the table to 12, and runs out on account of the medium size and black face.

Hab. Mackay, March 1892 and Dec. 1900 (Turner, 854). British Museum.

Prosopis cyanophila, sp. n.

♂.—Length about 6 mm.

Slender, head and thorax black, abdomen dark steel-blue; face below antennæ entirely deep lemon-yellow, the upper edge of the yellow straight, except in the middle, where the supraclypeal mark projects in the form of a triangle; mandibles red at apex; scape yellow in front; flagellum bright ferruginous beneath; front densely punctured; mesothorax and scutellum finely and closely punctured; upper border of prothorax and tubercles bright lemon-yellow, no other yellow on thorax; area of metathorax coarsely tuberculate, its lateral margins with more or less of a double curve; tegulæ piceous. Wings clear, faintly dusky apically, stigma and nervures dark brown; second s.m. very broad, receiving first r. n. a short distance from its base. Legs brownish black, anterior tibiæ yellow in front, hind tibiæ with a cream-coloured spot beneath at base; basitarsus cream-coloured, brown at apex, small tarsal joints brown; abdomen elongate, very finely punctured, no ventral tubercles. Runs in table to same place as *P. nigropersonata*, but cannot be its male, the thoracic sculpture being very much finer.

Hab. Mackay, March 1900 (*Turner*, 335). Brit. Museum.

Prosopis xanthopoda, sp. n.

♀.—Length about or nearly 6 mm.

Black, head and thorax very finely punctured; lateral face-marks broad, deep chrome-yellow, sharply pointed below, truncate above, some distance above antennæ; scape with a yellow stripe in front; flagellum very short, ferruginous beneath; swollen upper border of prothorax, and tubercles, the two uniting, brilliant orange; no other yellow on thorax; area of metathorax shining, coarsely irregularly wrinkled; tegulæ brown. Wings hyaline, nervures and stigma brown; second s.m. large, about as high as breadth at base, receiving first r. n. at basal corner. Legs black, with apical third of anterior femora, whole of middle and hind femora, except extreme base, anterior and middle tibiæ except some brown at apex, and whole of hind tibiæ, bright orange-yellow; abdomen short and broad, very finely punctured. Runs in table to *P. amacula*, Sm., which it greatly resembles, differing at once, however, by the remarkable colour of the legs.

♂.—Similar to the female, but rather less robust (though more robust than ♂ *primulipicta*); face below antennæ smooth, entirely yellow, the yellow at sides extending upwards in the form of a hand with the index finger pointed,

and in the middle line as a low triangular (supraclypeal) projection, truncate apically; scape a little swollen, entirely bright yellow; legs yellow except the trochanters, coxæ, and hind femora, which are black, the hind femora having a small yellow spot at apex; first r. n. entering extreme corner of first s.m.; third ventral segment of abdomen with a pair of small tubercles, but no ridge between.

Hab. Victoria, 2 ♀, 1 ♂ (*C. F.*). Turner Collection, British Museum.

The male runs near to *P. bituberculata*, Sm., and *bidentata*, Sm., but is easily separated by the entirely yellow tibiæ and tarsi.

Prosopis cassiæ, sp. n.

♀.—Length about 8 mm.

Robust, red and black, with cream-coloured markings on head and thorax; head and thorax strongly punctured, the punctures of mesothorax very large, irregularly placed, well separated; head large, red, with broad (semicircular in outline) dull yellow lateral marks on face; antennæ red, the flagellum dusky above toward apex; tongue as in *Prosopis*; thorax black, with two marks on prothorax above, tubercles, small crescent behind, scutellum (except anteriorly, where the pale colour is trilobed by the sublateral incursion of the black) and postscutellum (except sides) all cream-colour; legs dark, the anterior tibiæ clear ferruginous in front; tegulæ dark rufo-fuscous, with a small white spot in front. Wings clear, nervures and stigma brown; b. n. falling short of t.-m.; first r. n. meeting first t.-c.; second r. n. joining second s.m. near apex. Abdomen dark chestnut-red with a faint purplish lustre; first segment quite dark, with a sub-apical red band; venter blackish.

Hab. Mackay, Queensland (*Turner*, 861). Brit. Museum. At flowers of *Cassia* (Dec. 1899), *Eugenia* (Nov. 1899), and *Xanthorrhœa* (April 1899).

Differs from all other species by its red head and abdomen, light face-marks, and cream-coloured thoracic markings.

Prosopis amata, Ckll.

Mackay, Queensland, March 1900 (*Turner*, 1050).

Prosopis pachygnatha, sp. n.

♀.—Length $8\frac{1}{2}$ mm.

Runs in my table of Australian *Prosopis* to 19, and runs out because lateral face-marks are roughly foot-shaped, the

clypeus has dense punctiferous grooves, and the mesothorax is strongly and very densely punctured, though not so coarsely as in *P. amata*. The light markings are lemon-yellow, not deep orange as in *P. amata*. Head and thorax black, abdomen dark shining purple; no light markings on head except the long subtriangular lateral marks, which are variable in size; scape black; flagellum ferruginous beneath; tongue normal for *Prosopis*; mandibles broad and thick, tridentate; the yellow marks on thorax consist of upper border of prothorax (interrupted in middle), tubercles, a broad but rather short transverse stripe on hinder part of scutellum, and a subquadrate patch on postscutellum; area of metathorax coarsely ridged; tegulæ piceous. Wings hyaline, stigma and nervures reddish brown; b. n. arched, falling short of t.-m.; first r. n. entering apical corner of first s.m.; legs black, the tarsi conspicuously pale-haired; abdomen delicately punctured.

Hab. Cooktown (type locality), Oct. 1904 (*Turner*); Mackay, May 1900 (*Turner*). British Museum.

Prosopis alcyonea, Erichs., ♂.

Cumberland, New South Wales (*Turner*). Brit. Museum.

Prosopis disjuncta, Ckll.

This is not a *Meroglossa*; the tongue is Prosopiform in both sexes. The female, hitherto undescribed, resembles the male, but the clypeus is without light colour, and the legs are without yellow markings. Females are *Turner's* 1051, from Mackay; three, Nov. 1899, are from flowers of *Eugenia*. Both sexes are from flowers of *Xanthorrhæa*, May 1899. In my table ♀ *disjuncta* runs to *P. albonitens*, from which it is easily separated by its larger size.

Prosopis amiculiformis, Ckll.

This species was described from the female. The male (Mackay, April and May 1900, one at flowers of *Xanthorrhæa*; *Turner*, 620), runs in my table to *P. primulipicta*, differing thus:—

Larger; face pale yellow, lateral marks ending in a point about halfway between level of antennæ and top of eye	<i>amiculiformis</i> .
Smaller; face deeper yellow, lateral marks not going nearly so far up (Mackay, May 1900; <i>Turner</i> , 714).	<i>primulipicta</i> .

The face of male *amiculiformis* is shining, and the scape

has a yellow mark in front; the anterior and middle tibiae are yellow in front, and the hind tibia is yellow at base. A female *amiculiformis* is from flowers of *Eucalyptus*.

Prosopis constricta, Ckll.

Mackay, May 1899, at flowers of *Xanthorrhoea* (Turner).

P. subplebeia, Ckll., and *P. coronata*, Ckll., were taken by Turner at Mackay, November 1891. A small example of *P. constricta* (Mackay, Nov. 1891) has clear ferruginous tegulae, but it is evidently only a variety.

III.—*Notes on Amphipoda.*

By ALFRED O. WALKER, F.L.S., F.Z.S.

Stenothoe validus, Dana.

IN 1853 Dana described the above species from Rio Janeiro as having the second joint of the third peræopods expanded like that of the fourth and fifth pairs, instead of linear as in the first and second. Since that time about twenty other species have been added to the genus, but without an exception, so far as is known, these have the second joint of the third peræopods narrow or linear. In the Amphipoda Gammaridea of 'Das Tierreich' this feature forms one of the characters of the genus, an exception being made in favour of *S. validus*. The question therefore arises, Did Dana make a mistake in stating that the joint in question was similar to that of the next two pairs? It should be borne in mind that this joint can only be seen by removing the large side-plate of the fourth segment, and that dissection was not so common in those days as now; that the genus was new; and that the probability, judging from the structure of the majority of species of Amphipoda, was that the third peræopods should resemble the fourth pair rather than the second.

The possibility of such a mistake having been made by Dana is shown by the errors of other systematists in describing this or allied species of *Stenothoe*. Thus:—

(1) Spence Bate (Cat. Amph. Brit. Mus. p. 60), having copied Dana's definition of the genus, which says that "The basos of the antepenultimate pair of pereopoda is squamiformly developed," includes *S. clypeata*, Stimpson (Mar. Invert. Grand Manan, p. 51), and figures the third peræopod



Cockerell, Theodore D. A. 1910. "Descriptions and records of bees. XXX." *The Annals and magazine of natural history; zoology, botany, and geology* 6, 17-31.

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