

A REVISION OF THE AUSTRALIAN TELEASINAE
[HYMENOPTERA: PROCTOTRYPOIDEA].

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The subfamily Teleasinae of the family Scellionidae is rich in species, poor in genera; Kieffer (Das Tierreich, 1926) listed 230 species under 9 genera. The group is a compact one, and the numerous species are very similar in general outline. Little is known of their host associations; one North American species has been reared from the eggs of a Carabid beetle, and the group may be restricted to parasitism of Coleopterous eggs.

In my experience, the Australian species are found usually in damp situations, either among the low shrubs and undergrowth of the coastal heavily-timbered country, or among grass growing near streams or swamps. They are particularly abundant during the wet season summer months in the mountain scrubs of Southern Queensland, where they can be collected in numbers running over the surface of leaves within a few feet of the ground; on the other hand they are not plentiful in the humid tropical jungles of North Queensland. Their actions are rather slow in comparison with the rapid jerky movements and quick short flight of the majority of the Scellionidae.

The chief characters of the subfamily are as follows: Head transverse, the vertex thin; ocelli situated close together, the lateral pair far removed from the eye margins; frons not depressed or excavated above the antennal insertion. Antennae inserted on a small prominence near the mouth; 12-jointed in both sexes; in the female with a compact 6-jointed club, the third and fourth funicle joints usually short; in the male, filiform, the flagellar joints usually long. Thorax stout; pronotum hardly visible from above; scutum with the parapsidal furrows either delicate or absent, deep and abbreviated in one genus; scutellum semi-circular, in one genus armed with a spine on either side; metanotum usually armed with from one to three teeth or spines; propodeum rather short, frequently armed with a tooth at the posterior angles, and sometimes with a small tooth at the anterior angles. Forewings often abbreviated; marginal vein very long, much longer than the stigmal vein, rarely as long as the submarginal, the stigmal vein usually short, the postmarginal absent. Abdomen rather short, rarely more than twice as long as its greatest width; broadly oval; narrowed at the base; lateral margins carinated on the ventral side; segment 1 sub-petiolate, sometimes with a basal prominence in the female; segment 3 the longest, except in *Gryon* Haliday; 4-6 short.

The Genera of the Teleasinae.

Kieffer recognized nine genera in his 1926 monograph, but he omitted *Gryonoides* Dodd (1919). *Teleas* Latreille, which occurs in Europe, Asia, and

North America, is replaced in Australia by the allied *Gryonella* Dodd. *Gryon* Haliday, with three European species, is known to me from description only, and its position in the Teleasinae appears doubtful.

Two characters regarded by Kieffer as of sufficient importance for the separation of genera, namely, the presence or absence of parapsidal furrows, and the presence of a basal abdominal prominence in the female, I am unable to accept. For example, *Hoplogryon* Ashmead is distinguished from *Trimorus* Forster merely by the parapsidal furrow character; in the Australian species, the furrows, when present, are usually delicate, and in several species are present in the male and not discernible in the female. Hence I must regard *Hoplogryon* as a synonym of *Trimorus*. On the other hand, in the Australian species of *Xenomorus* Walker, the furrows, although abbreviated, are deep and profound. The abdominal prominence may or may not be present in a closely-related group of Australian species. Kieffer has used this character to separate *Propentacantha* Kieffer (= *Pentacantha* Ashmead) from *Hoplogryon*, whereas Ashmead (1893) gives as an additional character "postscutellum with three spines." Most of the species placed by Kieffer in the former genus will no doubt fall more naturally into *Trimorus*. *Propentacantha* should fall as a synonym of *Trissacantha* Ashmead, and it is significant that, in writing of the latter, Ashmead (1893) states "it may be the opposite sex of *Pentacantha* but the mesonotum has two distinct furrows."

I recognize eight genera in the subfamily, which can be separated by means of the following key:

1. Second abdominal segment longer than the third *Gryon* Haliday.
2. Second abdominal segment shorter than the third 2.
3. Scutellum armed with a spine on either side *Gryonoides* Dodd.
4. Scutellum unarmed 3.
5. Legs stout, the femora thickened 4.
6. Legs slender, the femora not thickened 5.
7. Metanotum with one tooth or spine *Teleas* Latreille.
8. Metanotum bidentate *Gryonella* Dodd.
9. Male antennae with whorls of long hairs; parapsidal furrows deep and abbreviated *Xenomorus* Walker.
10. Male antennae merely pubescent; parapsidal furrows absent or delicate 6.
11. Metanotum unarmed *Paragryon* Kieffer.
12. Metanotum with one tooth or spine *Trimorus* Forster.
13. Metanotum with three teeth or spines *Trissacantha* Ashmead.

There is yet the possibility of the grouping together of the last three genera in the above key under one head. In *Trimorus*, the metanotal tooth is very variable in size, and may be minute; in *Paragryon gracilipennis* Dodd, the metanotum is flat and quite unarmed, without even a median carina. The species herein described as *Trissacantha asperata* might well be placed in *Trimorus*, yet is undoubtedly closely related to *Trissacantha trifurcata* and *T. simulata*. The three genera, *Gryon*, *Gryonoides*, and *Teleas*, have not been recognized in this country, while *Gryonella* appears purely Australian.

TRIMORUS Forster.

Hym. Stud., 2, 1856, 101, 104.—*Hoplogryon* Ashmead, *Bull. U.S. National Museum*, 45, 1893, 200.

In this genus I have included species with or without parapsidal furrows, and with or without a prominence on the basal abdominal segment of the female.

Trimorus is the dominant genus of the subfamily, and, as in other parts of the world, the species are numerous in Australia, forty-three being recognized in this revision.

The sexes may differ markedly in colour and in sculpture; indeed, species whose females are readily separated can be distinguished with great difficulty in the male sex. Again, in certain forms the parapsidal furrows are evident in the male, but cannot be discerned in the female.

Generally, wing and antennal characters are very similar throughout the range of species. The type of sculpture, however, shows great diversity and appears to be constant in any species. Other distinguishing points may be found in the size and shape of the tooth or spine of the metanotum, and the shape of the posterior margin of the propodeum.

Trimorus norfolcensis Dodd (*Trans. Roy. Soc. S. Aust.*, 43, 1924, 176), a wingless form from Norfolk Island, should be transferred to the genus *Opisthacantha* Ashmead of the Scelioninae; the normally long vertex of the head, and the situation of the lateral ocelli close to the eye margins, show that it cannot be included in the Teleasinae.

Key to the Australian Species of *Trimorus* Forster.

1. Females 2
2. Males 39
3. Wings abbreviated or rudimentary 3
4. Wings fully developed 7
5. Segment 3 of abdomen finely densely striate *tenuistriatus*
6. Segment 3 of abdomen reticulate *hirsuticornis*
7. Segment 3 of abdomen without distinct sculpture 4
8. Upper frons smooth 5
9. Upper frons densely finely sculptured 6
10. Segment 3 of abdomen densely pubescent *parvulus*
11. Segment 3 of abdomen not pubescent *tantillus*
12. Forewings not extending beyond posterior margin of thorax; sculpture of scutum very fine *lativentris*
13. Forewings reaching posterior margin of second abdominal segment; sculpture of scutum definitely punctate *parvipennis*
14. Large species with the apical antennal joints contrasting pale yellow 8
15. Small to medium-sized species, the apical antennal joints not contrasting pale yellow 10
16. Scutellum with a short tooth posteriorly; segment 3 of abdomen coarsely striate *citriclavus*
17. Scutellum without a tooth; segment 3 of abdomen punctate or rugose 9
18. Propodeum without definite teeth or spines; segment 3 of abdomen with a strong wavy rugose sculpture *tricoloricornis*
19. Propodeum with strong teeth latero-posteriorly; segment 3 of abdomen strongly confluent punctate *gallidiclavus*
20. Scutum smooth; parapsidal furrows forming broad sulci posteriorly *nitescens*
21. Scutum sculptured; parapsidal furrows absent or delicate 11
22. Forewings narrow, the marginal cilia long; a small black species with dark legs *nymphaipennis*
23. Forewings broad or moderately broad, the marginal cilia not particularly long 12
24. Segment 3 of abdomen smooth, at the most striate at base; upper frons not striate, except in *nigrinotum* and *striatiscutum* 13
25. Segment 3 wholly or in part punctate or rugose, or wholly striate; upper frons striate, except in *fuscescens* 25
26. Frons wholly striate 14
27. Upper frons without striae 15
28. Basal segment of abdomen with a distinct prominence; metanotal tooth replaced by a thin lamella *nigrinotum*

- Basal segment of abdomen without a prominence; metanotum with a minute tooth *striatiscutum*
15. Scutum showing a marked contrast in sculpture between the impressed reticulation and the posterior strong striae; a black species with dark legs and antennae *aterrimus*
 Scutum uniformly sculptured, or at least not showing a marked contrast between two types of sculpture 16
16. Basal segment of abdomen with a raised prominence *australicus*
 Basal segment of abdomen without a prominence 17
17. Funicle joints yellow, 1 and 2 elongate, 2 longer than 1 18
 Funicle joints dark, 1 and 2 rarely elongate, 2 never longer than 1 19
18. Posterior margin of propodeum uniformly gently concave, without lateral teeth; funicle joints 3 and 4 longer than wide *varicornis*
 Posterior margin of propodeum gently concave medially, straight laterally, armed with strong lateral teeth; funicle joints 3 and 4 wider than long *bicoloricornis*
19. Scutum with some fine striae posteriorly *atropes*
 Scutum without striae posteriorly 20
20. Sculpture of scutum of fine impressed reticulation; spine of metanotum short 21
 Sculpture of scutum densely punctate; spine of metanotum usually long 22
21. Scutum uniformly reticulate, the parapsidal furrows not evident *sordidus*
 Reticulation of scutum failing laterally and posteriorly; parapsidal furrows evident *assimilis*
22. Spine of metanotum short; upper frons reticulate *pulchritarsis*
 Spine of metanotum long and acute; upper frons smooth or finely punctate 23
23. Upper frons with dense fine punctures and pubescence; posterior margin of propodeum straight *punctatus*
 Upper frons smooth, with scattered pin-punctures and pubescence; posterior margin of propodeum somewhat concave 24
24. Abdomen slender, the basal segment not much shorter than its posterior width *concoloricornis*
 Abdomen short and broad, the basal segment much shorter than its posterior width *breviventris*
25. Segment 3 of abdomen uniformly striate, without other sculpture *striatellus*
 Segment 3 densely punctate or reticulate, if partially striate, other sculpture or punctures are present either medially or laterally 26
26. Posterior angles of propodeum armed with an outwardly-curved tooth, in front of which is a smaller tooth; segment 3 of abdomen longitudinally rugose-striate *ovispinus*
 Posterior angles of propodeum acute or armed with a straight tooth, the smaller tooth absent 27
27. Scutum with strong longitudinal striae or rugae posteriorly; segment 3 of abdomen strongly longitudinally punctate and striate *rugulosus*
 Punctuation of scutum reticulate or with a longitudinal tendency, but there are no definite posterior rugae or striae 28
28. Segment 3 of abdomen with large scattered punctures, shortly foveate-striate at base; head abruptly smooth behind the line of the ocelli *pilosicornis*
 Segment 3 of abdomen not sculptured as above; head rarely smooth behind the line of the ocelli 29
29. Segment 3 of abdomen striate medially, densely punctate laterally *fuscicornis*
 Segment 3 finely striate and punctate *delicatus*
 Segment 3 densely punctate or reticulate, the striae never present medially 30
30. Segment 3 with impressed reticulation *impressus*
 Segment 3 with dense punctures or raised reticulation 31
31. Segment 3 strongly punctate 32
 Segment 3 finely punctate for the greater part 33
32. Metanotal spine narrowly acute, situated high above base of abdomen; posterior margin of propodeum straight laterally with strong outwardly-projecting lateral teeth *acutispinus*
 Metanotal spine broad and blunt, not situated high above base of abdomen; posterior margin of propodeum regularly concave, the lateral angles acute and hardly projecting outwardly 33

33. Segment 2 of abdomen strongly punctate between the striae medially; segment 3 smooth medially on posterior third *castaneithorax*
Segment 2 without punctures between the striae medially; segment 3 punctate except narrowly along posterior margin 34
34. Posterior margin of propodeum lightly concave; base of abdomen without a raised prominence *crassispinus*
Posterior margin of propodeum deeply concave to receive base of abdomen which bears a raised prominence *validispinus*
35. Segment 3 regularly punctate, without lateral striae, the lateral margins broadly smooth 36
Segment 3 striate laterally 37
36. Size larger; posterior margin of propodeum not regularly concave, the posterior angles projecting outwardly *tenispunctatus*
Size smaller; posterior margin of propodeum regularly concave, the posterior angles not projecting outwardly *cuthorax*
37. Segment 1 of abdomen without a raised prominence; funicle 1 no longer than the pedicel *condensus*
Segment 1 with a raised prominence; funicle 1 longer than the pedicel 38
38. Segment 1 of abdomen twice as wide posteriorly as basally; funicle joints dark *latispinus*
Segment 1 one-half wider posteriorly than basally; funicle joints yellow *nigricornis*
39. Segment 3 of abdomen densely punctate or strongly sculptured; frons striate 40
Segment 3 smooth, at the most very shortly striate at base or with a few punctures; frons usually not striate 49
40. Size very large; segment 3 of abdomen coarsely sculptured 41
Size medium to rather small; segment 3 finely striate or punctate 42
41. Segment 3 with a wavy rugose sculpture *pallidicornis*
Segment 3 regularly striate and punctate *tricoloricornis*
42. Scutum with definite striae or rugae posteriorly *rugulosus*
Scutum without definite striae or rugae 43
43. Segment 3 with line impressed striae; vertex smooth behind the eyes *delicatus*
Segment 3 finely punctate 44
44. Posterior margin of propodeum concave medially, almost straight laterally 45
Posterior margin of propodeum uniformly concave 46
45. Metanotal tooth short; propodeum not conspicuously pubescent; temples and cheeks smooth or nearly so *tenispunctatus*
Metanotal tooth rather long; propodeum conspicuously pubescent; temples and cheeks strongly striate *acutispinus*
46. Vertex smooth behind the eyes *condensus*
Vertex striate behind the eyes 47
47. Punctate area of segment 3 of abdomen shorter medially than laterally *castaneithorax*
Punctate area of segment 3 not shorter medially than laterally 48
48. Funicle joints gradually decreasing in length *nigricornis*
Funicle joints subequal *crassispinus*
49. Funicle joints with long pubescence; segment 3 of abdomen with definite scattered punctures laterally; frons striate, scutum and scutellum very coarsely reticulate-punctate *pilosicornis*
Funicle joints shortly pubescent; segment 3 without definite punctures laterally; sculpture of scutum and scutellum not coarse 50
50. Forewings narrow, the longest marginal cilia equal to the greatest width of the wing *myrmecipennis*
Forewings broad or moderately broad, the longest marginal cilia much shorter than the wing width 51
51. Scutum striate posteriorly; frons not striate *australis*
Scutum without striae 52
52. Funicle 1 of antennae somewhat shorter than 2 53
Funicle 1 somewhat longer than 2; frons not striate *assimilis*
53. Thorax wholly black 54
Thorax partly red 55

54. Frons wholly striate *nigrinotum*
 Upper frons not striate *punctatus*
 55. Abdomen black, except at base 56
 Segments 2 and 3 mostly yellowish 57
 56. Metanotal tooth slender; abdomen slender, twice as long as its greatest width *varicornis*
 Metanotal tooth rather stout; abdomen stout, less than one-half longer than its greatest width *breviventris*
 57. Scutum black, the punctures dense; antennae twice as long as the body *speciosus*
 Scutum red, the punctures sparse; antennae one-half longer than the body *pulcherrimus*

TRIMORUS TENUISTRATUS, n. sp.

♀. Length, 0.80 mm. Golden-brown, the abdomen dusky apically, the scutum and scutellum faintly dusky; antennae dull yellow-brown, the scape bright yellow; legs bright yellow; eyes black.

Head normal; vertex very finely closely transversely striate; frons with similar longitudinal striae, but broadly smooth above the antennal insertion; cheeks smooth; a few fine hairs are scattered over the surface. Antennal scape long and slender; pedicel slender, fully twice as long as its greatest width; funicle 1 as wide as and a little shorter than the pedicel, 2 slightly shorter than 1 but plainly somewhat longer than wide, 3 and 4 very short and transverse; club compact, joints 1-5 transverse. Thorax stout; scutum and scutellum with fine impressed reticulation and fine pubescence; metanotum with a very short tooth at meson; posterior angles of the propodeum with a minute tooth. Forewings vestigial, not extending beyond the posterior margin of the thorax. Abdomen stout, not one-half longer than its greatest width; segment 1 transverse; 3 occupying most of the surface and not much wider than long; 1 and 2 rather strongly striate; 3 very finely closely striate; 4 and 5 short and transverse, minutely punctate and with fine pubescence.

♂. Unknown.

Habitat.—South Australia: Mt. Lofty; one female collected in moss by R. J. Burton.

Holotype in the South Australian Museum.

A small species with vestigial wings, easily distinguished by the fine striae of the head and segment 3 of the abdomen, and the golden-brown colour.

TRIMORUS HOWENSIS Dodd.

Hoplogryon howensis Dodd, *Trans. Roy. Soc. S. Aust.*, 48, 1924, 177.

♀. Length, 1.25 mm. Head dark brown or fuscous; thorax deep reddish-brown; abdomen fuscous, the basal segment bright red, its lateral line pale yellow; legs yellow-brown, the tarsi clear yellow; antennae dusky-black, the scape and pedicel dull yellow.

Head slightly wider than the thorax, the vertex thin, the frons broad; eyes large, bare, wide apart; frons with a short median carina above the antennae; frons and vertex with dense close impressed reticulation and scattered short fine hairs, the lower face with longitudinal striae; cheeks very narrow dorsally, with fine surface reticulation; ocelli very small, the lateral pair somewhat nearer to the median ocellus than to the eyes. Antennal scape long and slender, as long as the next four joints united; pedicel one-third longer than its greatest width; funicle joints as wide as the pedicel, 1 one-half longer than pedicel, twice as long as wide, 2-4 gradually shortening, 4 a little longer than wide; club 6-jointed.

rather slender, joint 1 as long as wide, 2-5 rather distinctly wider than long. Thorax as wide as long; scutum and scutellum with fine dense surface reticulation and fine dense pubescence; parapsidal furrows not indicated; metanotum with a small acute tooth medially; propodeum very short, visible as small lateral areas, the posterior angles with a small raised tooth. Forewings vestigial, very narrow, hardly extending beyond posterior margin of the thorax. Legs slender. Abdomen somewhat wider than the thorax, not greatly narrowed at base, broadly rounded posteriorly, one-third longer than its greatest width; segment 1 extremely short and transverse; 2 much longer than 1; 3 three times as long as 2, almost as long as its greatest width; 4-6 short; 1 and base of 2 striate; 2 and 3 with dense impressed reticulation and fine scattered pubescence; 4-6 with very fine sculpture and pubescence.

♂. Unknown.

Habitat.—Lord Howe Island, the type female collected by A. M. Lea.

Holotype in the South Australian Museum. I.14572.

Readily distinguished from the other wingless species by the reticulate third abdominal segment and the longer funicle joints of the antennae.

TRIMORUS PARVULINUS, n. sp.

♀. Length, 0.75 mm. Head dull brownish-black; thorax dull reddish-brown; abdomen black, the base reddish-yellow; legs brown, the tarsi and base and apex of femora and tibiae yellowish; antennae piceous, the first two joints dull yellow-brown.

Head somewhat distinctly wider than the thorax, the frons distinctly convex; eyes small, wide apart, weakly pubescent; vertex between the ocelli and toward the occipital margin coriaceous; frons smooth, with scattered fine hairs, the lower face densely finely striate; median carina of frons delicate but complete; cheeks smooth with a few fine hairs. Antennal scape long and slender; pedicel one-third longer than its greatest width; funicle 1 as wide as and a little shorter than the pedicel, a little longer than wide, 2 as wide as long, 3 and 4 small and transverse; club compact, the joints much wider than long. Thorax stout; scutum finely densely pubescent and densely very finely reticulate-punctate; scutellum densely punctate and pubescent at base, smooth posteriorly; metanotum with a short erect median tooth; propodeum very short, margined posteriorly, the posterior margin concave, the posterior angles weakly acute. Forewings vestigial, linear, not extending beyond the posterior margin of the second abdominal segment. Abdomen short, broad, strongly convex, distinctly wider than the thorax, one-fourth longer than its greatest width; segment 1 widening posteriorly, shorter than its basal width; 3 fully twice as long as 1 and 2 united; 4-6 very short; 1 and 2 strongly striate; 3-5 smooth, with numerous scattered pin-punctures bearing fine hairs and forming a noticeable pubescence.

♂. Unknown.

Habitat.—Victoria: Dandenong Ranges, two females in December, A. P. Dodd; Warraagul, one female in June, F. E. Wilson.

Holotype in the Queensland Museum. Paratypes in the collections of Mr. F. E. Wilson and the author.

This species differs from *latirentis* in the darker colouring of the thorax, legs, and basal joints of the antennae, and in the coriaceous sculpture of the head being confined to the vertex; it differs from *tantillus* in the definitely pubescent third segment of the abdomen.

TRIMORUS TANTILLUS, n. sp.

♀. Length, 0.95 mm. Head and abdomen, except the basal segment, black; thorax dull reddish-brown; basal segment of abdomen bright yellow; legs, including the coxae, golden-yellow; antennal scape yellow, dusky toward apex, the remaining joints fuscous.

Vertex behind the ocelli with fine impressed reticulation and fine pubescence; frons smooth, polished, with a median carina, the lower face densely finely striate; cheeks smooth. Antennal scape slender, longer than the pedicel and funicle joints united; pedicel one-half longer than its greatest width; funicle 1 a little shorter than the pedicel, 2 as long as 1; 3 and 4 abruptly shorter and transverse; club compact, the joints transverse. Thorax normal; scutum with fine raised reticulation and scattered fine pubescence; scutellum smooth, faintly sculptured at base; metanotum with a minute tooth medially; posterior angles of the propodeum each with a small blunt tooth. Wings vestigial, not reaching beyond the posterior margin of the thorax. Abdomen stout, wider than the thorax, barely one-half longer than its greatest width; segment 1 short, transverse; 3 occupying most of the surface, slightly wider than long; 1 and 2, except posteriorly, strongly striate, the remaining segments smooth; 3 with scattered fine hairs posteriorly, 4 and 5 with scattered hairs.

♂. Unknown.

Habitat.—Tasmania: Waratah; one female taken in moss and lichens by A. M. Lea.

Holotype in the South Australian Museum.

Resembles *lativentris*, but in that species the upper frons is sculptured, and segment 3 of the abdomen is definitely pubescent and with numerous scattered minute punctures.

TRIMORUS LATIVENTRIS, n. sp.

♀. Length, 0.75 mm. Head dull brown, the eyes black; thorax and basal segment of abdomen golden-yellow; abdomen black; legs bright golden-yellow; antennal scape and pedicel yellow, the funicle and club fuscous.

Head somewhat wider than the thorax, the frons convex; upper half of frons and the vertex finely coriaceous, with fine pubescence; lower frons smooth medially, finely pubescent laterally; median carina of frons complete; vertex somewhat depressed medially; eyes small, wide apart, shortly pubescent; ocelli very minute. Antennal scape moderately short, but fully as long as the next five joints united; pedicel slightly longer than its greatest width; funicle 1 and 2 globose, subequal, as wide as long; 3 and 4 minute, transverse; club compact, the joints transverse. Thorax not much longer than its greatest width; scutum and scutellum very finely, densely, indefinitely punctate-coriaceous and pubescent; metanotum with a minute medial tooth; propodeum very short, its posterior margin gently concave, its posterior angles subacute. Wings vestigial, narrow flaps that extend as far as the posterior margin of the thorax. Abdomen much wider than the thorax, rotund, as wide as long; segment 1 short and transverse; 2 somewhat longer than 1 but very transverse; 3 almost twice as long as 1 and 2 united; 4-6 very short, combined not one-third as long as 3; 1 and 2 longitudinally striate; remaining segments with a rather conspicuous pubescence of fine hairs arising from minute punctures.

♂. Unknown.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, two females in February, A. P. Dodd.

Holotype in the Queensland Museum. Paratype in the author's collection.

TRIMORUS PARVIPPENNIS, n. sp.

♀. Length, 0.95 mm. Head brownish-black; thorax dull reddish-brown; abdomen black, the basal segment bright reddish-yellow; antennae piceous, the scape reddish basally; legs dull brown, the tarsi and apex of the femora and tibiae yellow.

Head slightly wider than the thorax, the frons a little convex; eyes feebly pubescent; upper frons and vertex to the occiput densely coriaceous-reticulate and weakly pubescent; lower half of frons smooth and shining, the median carina delicate, one-half complete, not extending into the upper coriaceous area; face below the ventral line of the eyes finely densely striate; cheeks smooth, with scattered fine punctures. Antennal scape long and slender; pedicel slightly longer than its greatest width; funicle 1 fully as wide as the pedicel, a little longer than wide, 2 as wide as long, 3 and 4 small and very transverse; club compact, joints 1-5 much wider than long. Scutum densely finely reticulate-punctate; scutellum with similar sculpture but smooth posteriorly at the median line; metanotum with a very short tooth medially; propodeum very short, its posterior border margined and gently concave, its posterior angles subacute. Forewings abbreviated, reaching to the base of segment 3 of the abdomen; slender; venation normal, extending almost to the apex. Abdomen somewhat wider than the thorax, one-third longer than its greatest width; segment 1 very short, one-half as long as its basal width; 3 twice as long as 1 and 2 united; 4-6 very short; 1 and 2, except posteriorly, striate; 3 with numerous scattered minute punctures bearing fine hairs; 4-6 densely finely punctate and pubescent.

♂. Unknown.

Habitat.—Victoria: Dandenong Ranges, one female in December, A. P. Dodd. Holotype in the Queensland Museum.

The wings are longer than in the other abbreviated-winged forms except *parvulus*; nearest to *lativentris* but differs in the darker colour of the thorax, legs, and antennae, and in the more distinct punctuation of the scutum.

TRIMORUS CITREICLAVUS, n. sp.

♀. Length, 2.60 mm. Black, the thoracic sutures showing reddish, the teeth of the propodeum red; legs, including the coxae, bright reddish-yellow; antennal scape brown, reddish at base, the next six joints brownish-yellow, the five apical joints intense pale yellow; mandibles red, the teeth black.

Head normal; frons with a complete median carina from the antennal insertion to the frontal ocellus; vertex and upper half of frons very densely finely punctate and pubescent, the hairs short, fine and whitish; frons laterally with longitudinal striae and short whitish pubescence, the striae failing dorsally; cheeks with fine longitudinal striae, fine dense punctures, and fine pubescence; eyes faintly pubescent; mandibles large, tridentate, the teeth long and acute. Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 somewhat longer than the pedicel, twice as long as its greatest width, 2 as long as 1, 3 quadrate, 4 transverse; club compact, the joints transverse. Thorax no longer than its greatest width; scutum and scutellum finely very densely reticulate-

punctate and with fine pubescence; on either side against the posterior margin of the scutum are several irregular longitudinal striae or rugae; scutellum just before the posterior margin medially with a small acute tooth; metanotal spine very long, slender, curved, longitudinally striate, extending over the basal abdominal segment; propodeum short, declivous, coarsely punctate and finely pubescent, without carinae, the posterior margin gently concave, armed latero-posteriorly on either side with a strong acute projecting tooth or spine. Forewings extending a little beyond apex of abdomen; broad, smoky-brown; venation dull brown; submarginal vein attaining the costa at one-half the wing length, the marginal vein one-third as long as the submarginal, the stigmal vein short. Abdomen two-thirds longer than its greatest width; segment 1 one-half wider posteriorly than basally, a little shorter than its greatest width; 2 one-half longer than 1; 3 twice as long as 2 or as 4-6 united; 1 and 2 very strongly sparsely longitudinally striate; 3 more densely striate, the striae straight and regular, the surface between smooth; 4 and 5 with fine impressed reticulation and a few scattered small punctures; posterior margin of 2-5 narrowly smooth; 3-5 pubescent laterally; 4 and 5 with scattered hairs dorsally.

♂. Unknown.

Habitat.—Queensland; exact locality unknown; one female taken by A. A. Girault.

Holotype in the Queensland Museum.

A large distinct species with pale antennae and strongly striate third segment of abdomen; the small tooth on the scutellum can hardly be considered more than a good specific character.

TRIMORUS TRICOLORICORNIS, n. sp.

♀. Length, 2.5-3.0 mm. Head and abdomen black; thorax dull black laterally and ventrally, chestnut-red dorsally, the scutellum and median third of the scutum black; coxae blackish, the legs bright reddish-yellow, the posterior tarsi dusky; antennal scape deep red, the next seven joints fuscous, the apical four very pale yellow.

Head transverse, the vertex thin; behind the line of the ocelli very densely rather finely reticulate-punctate and with fine pubescence; frons rather strongly longitudinally striate, finely sculptured between the striae; median carina of frons complete; a small smooth area above the antennal prominence; cheeks densely punctate above, becoming striate toward the mouth. Antennal scape long and slender; pedicel a little longer than its greatest width; funicle 1 twice as long as the pedicel; 2 a little shorter than 1; 3 and 4 short, wider than long; club compact, joints 1-5 transverse. Thorax stout; scutum and scutellum very densely rather strongly reticulate-punctate, with a tendency toward longitudinal rugae on the scutum medio-posteriorly; metanotal spine very long, rather slender, subacute, its surface rugose; propodeum short, finely rugose-punctate and pubescent, its posterior margin concave for its entire length, its posterior angles without defined spines and not projecting outward. Forewings reaching apex of abdomen; broad; rather deeply smoky; marginal vein somewhat less than one-half as long as the submarginal; stigmal vein slender, long for the genus; one-fourth as long as the marginal; basal and median veins represented by yellow lines. Abdomen a little less than twice as long as its greatest width; segment 1 a little longer than its basal width, one-half wider posteriorly than basally; 2 one-third longer than 1; 3 one-third longer than 2, almost twice as

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wide as long; 4 less than one-half as long as 3; 5 and 6 quite short; 1 and 2 very strongly sparsely striate, smooth between the striae; 3 rather strongly longitudinally rugose-striate, which medially, especially toward base, runs to a curious wavy or zigzag rugose pattern, the lateral margins densely punctate; 4 and 5 densely punctate and pubescent, the punctures confluent laterally; lateral margins of 2 and 3 pubescent; 3-5 each with a smooth posterior path; 4 with a narrow smooth basal path.

♂. See remarks below.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, two females in February, A. P. Dodd.

Holotype in the Queensland Museum. Paratype in the author's collection.

A fine large species, distinguished by the pale apical antennal joints, and the sculpture of segment 3 of the abdomen.

A male from the Blackall Range, Qld., has similar sculpture on segment 3, but is much larger, 4 mm., and the posterior angles of the propodeum bear short stout teeth which project outward.

TRIMORUS PALLIDICLAVUS, n. sp.

♀. Length, 2.75 mm. Black, the thoracic sutures and teeth and the base of the abdomen dark red; coxae black, the trochanters and base of the femora bright yellow, the rest of the legs dusky-brown, the posterior tibiae and tarsi almost black; antennae brownish-black, the scape red at base, the apical five joints pale intense yellow; mandibles yellow, the teeth dark.

Head normal, the vertex thin; vertex behind the line of the ocelli irregularly transversely striate, finely densely punctate, and with short pubescence, the striae continued down the cheeks, which are densely punctate; frons densely rather finely longitudinally striate and with short whitish pubescence, hardly sculptured between the striae; median carina of frons complete; eyes large, weakly pubescent; mandibles large, tridentate; antennal scape long and slender; pedicel a little longer than its greatest width; funicle 1 fully twice as long as the pedicel, rather more than twice as long as wide; 2 as long as 1; 3 quadrate; 4 transverse; club compact, joints 1.5 wider than long. Scutum and scutellum rather strongly reticulate-punctate, the posterior half, except laterally, of the scutum with irregular longitudinal rugae; with fine pubescence; spine of metanotum very long, slender, pointed, its surface rugose; propodeum short, rugose-punctate and pubescent, its posterior margin not carinate, gently concave medially, straight laterally, its posterior angles with a stout subacute tooth which projects outwardly. Forewings reaching apex of abdomen; broad; smoky-black, the basal third subhyaline; venation dark; marginal vein hardly one-half as long as the submarginal, the stigmal vein slender; basal vein faintly marked; hindwings lightly smoky, the base hyaline. Abdomen two-thirds longer than its greatest width; segment 1 as long as its basal width, one-half wider posteriorly than basally; 2 one-third longer than 1; 3 one-third longer than 2, twice as wide as long; 4 one-half as long as 3; 5 and 6 very short; 1 and 2 strongly sparsely striate, smooth between the striae; lateral margins of 2 strongly punctate; 3 and 4 strongly confluent punctate with a longitudinal tendency, against lateral margins with dense pubescence; 5 confluent punctate at base; 4 and 5 with scattered long hairs; 3-5 each with a smooth posterior path.

♂. See remarks below.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, two females in February, A. P. Dodd.

Holotype in the Queensland Museum. Paratype in the author's collection.

A fine large species with very long metanotal spine; as in *tricoloricornis*, the antennae are pale apically, but in that species the sculpture of segment 3 of the abdomen is quite different, and the posterior margin of the propodeum is concave for its whole length and does not bear lateral spines.

A male taken by H. Hacker in January at Stanthorpe, Qld., probably belongs to this species. It measures 3.5 mm.; the head and abdomen are black; thorax bright chestnut-red, black ventrally; coxae black, the legs bright reddish-yellow; antennae black, the scape reddish-yellow. Behind the line of the vertex the sculpture is densely punctate medially, punctate and irregularly longitudinally striate laterally; there are no longitudinal rugae on the scutum; the wings are subhyaline; the much finer punctures of segment 3 of the abdomen are divided into longitudinal rows by blunt striae.

TRIMORUS NITESCENS Dodd.

Trans. Roy. Soc. S. Aust., 40, 1916, 29.

♀. Length, 1.40 mm. Shining black; antennae black, the scape reddish at extreme base; coxae fuscous, the legs dusky brownish-yellow.

Head normal, transverse, the frons somewhat convex so that the line of the vertex is rounded; frons and vertex smooth and shining with a few fine hairs; behind the line of the ocelli is a narrow path of fine impressed reticulation; median carina of frons delicate and complete; lower frons longitudinally striate, the lateral striae continued for some distance along inner margin of eyes; cheeks finely longitudinally striate; eyes large, with scattered short hairs. Antennal scape long and slender; pedicel one-third longer than its greatest width; funicle 1 as long and as wide as the pedicel, 2 slightly shorter than 1, 3 and 4 small and transverse; club compact, joints 1-5 each twice as wide as long. Thorax no longer than its greatest width; scutum more transverse than usual, smooth and shining, with scattered long hairs, the posterior margin of the median lobes with a row of punctures; parapsidal furrows consisting of a row of punctures, but widening posteriorly to form broad shallow rugose sulci; margins of parapsides foveate; scutellum large, smooth, its margins foveate; metanotum with a broadly triangular acute tooth or spine which is finely punctate; propodeum rather short, foveate along margins, smooth centrally, narrowly divided at meson, the posterior margin carinate and uniformly gently concave, the posterior angles acute in the form of short teeth. Forewings reaching apex of abdomen; moderately broad; somewhat less than the basal half subhyaline, the rest rather deeply clouded; marginal vein about two-thirds as long as the submarginal, the stigmal vein very short. Abdomen two-thirds longer than its greatest width; segment 1 one-half wider posteriorly than basally, a little shorter than its basal width; 2 one-third longer than 1; 3 one-half longer than 1 and 2 united, three times as long as 4-6 united, three-fourths as long as wide; 1 finely densely striate; 2 striate, smooth laterally and posteriorly; 3-5 smooth; scattered fine hairs are present on 4 and 5 and lateral margins of 3.

♂. Unknown.

Habitat.—New South Wales: Hawkesbury River, the holotype female taken in November by A. A. Girault.

Holotype in the South Australian Museum, I.5429.

Readily distinguished by the smooth scutum, and the broad rugose sulci at the posterior end of the parapsidal furrows.

TRIMORUS MYMABIPENNIS Dodd.

Trans. Roy. Soc. S. Aust., 38, 1914, 81.

♀. Length, 0.70 mm. Black, the base of the abdomen reddish; legs black, reddish at base and apex of femora and tibiae, the tarsi brown; antennae wholly black.

Head normal, transverse; eyes faintly pubescent; smooth, shining, with scattered fine hairs, without sculpture except for a narrow path of polygonal reticulation immediately behind the ocelli. Antennae short; scape moderately long and slender; pedicel one-half longer than its greatest width; funicle joints smaller than the pedicel. 1 slightly longer than wide, 2 as wide as long, 3 and 4 transverse; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum with fine pubescence and fine impressed reticulation; parapsidal furrows delicate but complete; scutellum with fine pubescence, smooth, finely sculptured at base; metanotum with a subacute, triangular, moderately short tooth; propodeum smooth, foveate along margins, the posterior margin gently concave and terminating in short subacute lateral angles. Forewings extending well beyond apex of abdomen; narrow, the apex sharply rounded, four times as long as their greatest width; longest marginal cilia equal to one-half the greatest wing width; distinctly brownish; venation terminating at one-half the wing length, the marginal vein somewhat shorter than the submarginal. Abdomen stout; one-third longer than its greatest width; segment 1 shorter than its basal width; 3 somewhat longer than 1 and 2 united; 4-6 short; 1 and 2 striate, the remainder smooth; 4 and 5, and 2 and 3 laterally, with fine scattered hairs.

♂. Antennae wholly black; somewhat longer than the body; pedicel no longer than wide; funicle 1 twice as long as wide; 2 a little longer than 1; 3 a little longer than 2; 3-9 subequal. Forewings rather more slender than in the female, the apex more pointed, the longest marginal cilia equal to the greatest wing width.

Habitat.—North Queensland: Cairns district, one male (type) in May, A. A. Girault. New South Wales: Sydney, several females in October, A. P. Dodd. Victoria: Dandenong Ranges, one female in December, A. P. Dodd.

Holotype in the South Australian Museum, I.2002.

A small black species, with very dark legs; distinguished by the slender wings with their long marginal cilia.

TRIMORUS NIGRINOTUM Dodd.

Pentacantha nigrinotum Dodd, *Proc. Roy. Soc. Q'land*, 26, 1914, 128.

♀. Length, 1.45-1.65 mm. Dull black; thorax dull red, the scutum and scutellum almost black; basal segment of abdomen, except its prominence, deep red; legs, including the coxae, golden-yellow; antennae fuscous, the scape reddish at base; mandibles yellow.

Head transverse, the vertex thin; with fine silvery pubescence; vertex finely densely cortaceous-reticulate; frons finely densely longitudinally striate, but almost smooth above the antennal insertion; cheeks with scattered minute punctures; eyes bare; mandibles large, apparently bidentate, the teeth acute.

Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 as wide as and slightly longer than the pedicel, almost twice as long as wide, 2 slightly shorter than 1, 3 and 4 small and transverse; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum finely densely pubescent, shallowly but rather strongly reticulate-punctate, the parapsidal furrows absent; scutellum more definitely reticulate-punctate and with less pubescence; metanotum medially with a short thin convex lamella in lieu of the usual tooth; propodeum densely punctate laterally, its posterior margin deeply concave to its base, the delimiting carinae of the margin widely separated at its base, the posterior angles subacute but not toothed. Forewings hardly extending beyond apex of abdomen; broad; lightly brownish; marginal vein plainly shorter than the submarginal, the stigmal vein short. Abdomen a little less than twice as long as its greatest width; segment 1 plainly longer than its basal width, almost twice as wide posteriorly as basally, at base with a suberect horn or prominence that projects forward as far as the base of the propodeum; 2 no longer than 1; 3 as long as 1 and 2 united, three-fourths as long as wide, twice as long as 4-6 united; 1 strongly striate, its horn smooth; 2 striate, but rather broadly smooth posteriorly; 3 smooth, with scattered pubescence laterally; 4-6 with scattered pubescence.

♂. Head and thorax black; abdomen fuscous, the basal segment brownish-yellow, 2 light brown except laterally, 3 brown except laterally and posteriorly; legs, including the coxae, golden-yellow, the femora and tibiae lightly washed with brown, the tarsi dusky; antennae black, the scape fuscous but reddish at base.

Frons with scattered fine pubescence, wholly regularly and rather strongly striate; scaly reticulation confined to the line of the ocelli, the declivous portion behind the ocelli to the occiput bearing numerous fine pubescent punctures. Punctuation of the scutum shallower and less reticulate, the lateral lobes almost smooth posteriorly; parapsidal furrows delicate, wide apart, well-marked but failing anteriorly; scutellum punctate, smooth posteriorly; metanotum medially with a short stout blunt tooth; propodeum short, its posterior margin gently concave, the delimiting carinae almost meeting at its base medially. Forewings very broad and long, extending well beyond apex of abdomen. Antennae one-half longer than the body; scape rather short and stout, no longer than funicle 4; pedicel no longer than wide; funicle 1-3 subequal, 4-9 subequal, each about one-fourth longer than 3.

Habitat.—Queensland: Herbert River, one female (type), A. P. Dodd; Brisbane, two females, two males, A. P. Dodd.

Holotype in the South Australian Museum, I.11037.

The male differs considerably from the female and may possibly represent a distinct species; as in *punctatus* and *varicornis*, the parapsidal furrows are evident in the male and absent in the female. The combination of the two characters, a striate frons and smooth third segment of abdomen, occurs in *nigrinotum* and *striatiscutum* only; the latter may be separated from *nigrinotum* by the absence of the basal prominence of the abdomen, the minute metanotal tooth, and the presence of striae on the scutum.

TRIMORUS STRIATISCUTUM, n. sp.

♀. Length: 1.50 mm. Black; antennae wholly black; legs fuscous, the trochanters, base of tibiae, and the tarsi, clear yellow.

Head normal, transverse, with scattered white hairs; eyes large, faintly pubescent; frons wholly, rather strongly, longitudinally striate, the median carina not showing; vertex behind the line of the ocelli more finely, subobliquely striate; cheeks finely longitudinally striate. Antennal scape moderately long and slender, its articulate joint long; pedicel twice as long as its greatest width; funicle 1 one-third longer than the pedicel, 2 plainly shorter than 1 and one-half longer than wide, 3 and 4 a little wider than long; club rather slender, not much wider than the funicle, joints 1-5 not greatly wider than long. Thorax stout; scutum rather strongly, somewhat irregularly, longitudinally striate and with scattered white hairs; scutellum striate laterally, smooth medially, with scattered white hairs; metanotum broadly smooth medially, with a very small acute tooth; propodeum clothed with dense silvery pubescence, divided medially by two straight carinae, the posterior margin uniformly concave, the posterior angles rounded and unarmed. Forewings reaching somewhat beyond apex of abdomen; moderately broad; smoky-brown; marginal vein two-thirds as long as the submarginal, the stigmal vein very long for the genus, one-third as long as the marginal vein. Abdomen two-thirds longer than its greatest width; segment 1 as long as its basal width, not much wider posteriorly than basally; 2 one-half longer than 1; 3 hardly longer than 1 and 2 united, less than twice as long as 4-6 united; 1 and base of 2 striate, the rest smooth; 4 and 5 and lateral margins of 2 and 3 with scattered white hairs.

♂. Unknown.

Habitat.—North Queensland; Innisfail, one female in April, A. P. Dodd.

Holotype in the Queensland Museum.

A distinct black species, with dark legs, strongly striate head and scutum, very small metanotal tooth, densely pubescent propodeum, and smooth third segment of abdomen.

TRIMORUS ATERRIMUS, n. sp.

♀. Length, 1.20 mm. Black; legs concolorous, the trochanters, knees, and tarsi testaceous; antennae black.

Head transverse, with a few scattered fine hairs; vertex, upper frons, and along eye margins of frons, with scaly reticulation, the middle frons smooth, the lower frons striate; cheeks narrow, finely reticulate against the eyes, smooth posteriorly and ventrally; median carina of frons complete; frons faintly convex; vertex precipitous behind the line of the ocelli; eyes large, bare. Antennal scape slender, as long as the next five joints combined; pedicel slender, two and a half times as long as its greatest width; funicle 1 as wide as and slightly shorter than the pedicel; 2 a little shorter than 1, but plainly longer than wide; 3 small, as wide as long; 4 wider than long; club rather slender, the joints less than twice as wide as long. Thorax as wide as long; parapsidal furrows faintly marked; scutum with scattered white hairs, with fine polygonal scaly reticulation, the posterior third, except laterally, with short strong longitudinal striae; scutellum smooth, with scattered fine hairs, the margins strongly foveate; metanotum foveate, very transverse, its posterior margin very broadly triangular to form a short acute tooth medially; propodeum short, smooth, foveate along its margins, shortly narrowly divided medially, the posterior margin gently concave, the posterior angles prominent in the form of short acute teeth. Forewings reaching well beyond apex of abdomen; moderately broad; distinctly smoky; longest marginal cilia equal to one-third the greatest wing-width; venation termin-

ating a little beyond middle of costa, the marginal vein somewhat shorter than the submarginal. Abdomen almost twice as long as its greatest width; segment 1 widening posteriorly, a little shorter than its basal width; 2 a little longer than 1; 3 a little longer than 1 and 2 united, less than twice as long as 4-6 united; 1 weakly striate at base and laterally, smooth posteriorly; 2 striate, but smooth posteriorly; 3-6 smooth; all segments with a few fine hairs.

♂. Unknown.

Habitat.—New South Wales: Sydney; four females in October, A. P. Dodd.

Holotype in the Queensland Museum. Paratypes in the author's collection.

A small black species with dark legs, distinguished by the sharp contrast between the scaly reticulation and strong striation on the mesoscutum.

TRIMORUS AUSTRALICUS Dodd.

Pentacantha australica Dodd, *Trans. Roy. Soc. S. Aust.*, 38, 1914, 32.

♀. Length, 1.00 mm. Dull black or brownish-black, the base of the abdomen yellow; legs, including the coxae, yellow or yellow-brown; antennae wholly dark.

Head smooth, with scattered fine hairs; a narrow line of polygonal sculpture immediately behind the ocelli; lower frons finely striate; frons more strongly convex than usual; eyes pubescent, small, not extending to the line of the vertex or behind the line of the lateral ocelli, their posterior margin straight. Antennal scape long and slender; pedicel one-third longer than its greatest width; funicle 1 as long and as wide as the pedicel, 2 a little shorter than 1, 3 and 4 small and transverse; club joint 1 small and transverse, 2-5 each twice as wide as long. Thorax stout; scutum with fine pubescence and shallow confluent punctures, on the posterior third with fine longitudinal striae which are obscure on account of the punctate sculpture; scutellum smooth, with fine pubescence; metanotum with a short acute tooth; propodeum short, punctate laterally, the posterior angles slender, subacute, curved a little inwardly. Forewings extending a little beyond apex of abdomen; lightly clouded; moderately broad; marginal vein distinctly shorter than the submarginal, the stigmal vein short. Abdomen two-thirds longer than its greatest width; segment 1 widening a little posteriorly, as long as its basal width, at base with a short blunt erect horn; 3 somewhat longer than 1 and 2 united, twice as long as 4-6 united; 1 and 2 striate, the horn smooth; 3 smooth; 4 and 5 with fine pubescence.

♂. Unknown.

Habitat.—North Queensland: Cairns district; a small series.

Holotype in the South Australian Museum, 1.2003.

A small species related to *sordidus*, *assimilis*, and their allies, but at once distinguished by the presence of the prominence on the basal abdominal segment; the sculpture of the scutum is stronger than in *atripes* and the striation less distinct.

TRIMORUS VARICORNIS Dodd.

Hoplogryon varicornis Dodd, *Trans. Roy. Soc. S. Aust.*, 38, 1914, 75.—*H. bicolor* Dodd, *ibid.*, p. 76.

♀. Length, 1.50-1.75 mm. Dull black, the base of the abdomen deep-red; legs, including the coxae, golden-yellow; antennal scape and pedicel fuscous, the scape yellowish at base, the next five joints golden-yellow, the apical five joints fuscous.

Head normal, transverse; eyes large, shortly pubescent; median carina of frons one-half complete from the antennal insertion; lower frons densely striate; upper frons, vertex and cheeks smooth, with a noticeable pubescence of fine short hairs; a very small coriaceous area on either side of the lateral ocelli. Antennal scape long and slender, as long as the next five joints combined; pedicel one-half longer than its greatest width; funicle 1 one-half longer than the pedicel; 2 one-third longer than 1, fully three times as long as wide; 3 slightly more than one-half as long as 2; 4 a little longer than wide; club slender, the joints not or hardly wider than long. Thorax stout; scutum densely pubescent and rather finely confluent punctate; scutellum pubescent and very finely punctate at base, smooth posteriorly; spine on metanotum slender, thorn-like, somewhat curved, suberect; propodeum moderately long, smooth, its margins foveate, narrowly divided medially by parallel carinae, the lateral carinae complete and distinct, the posterior margin carinate and uniformly concave, the posterior angles acute, but not definitely toothed. Forewings extending somewhat beyond apex of abdomen; moderately broad; lightly stained; marginal vein two-thirds as long as the submarginal, the stigmal vein very short. Abdomen a little less than twice as long as its greatest width; segment 1 one-half wider posteriorly than basally, as long as its basal width; 2 one-half longer than 1; 3 a little longer than 1 and 2 united, more than twice as long as 4-6 united; 1 and basal two-thirds of 2 strongly striate, the rest smooth; 4 and 5, and 2 and 3 laterally, with a noticeable fine pubescence.

♂. Differs from the female in the rich chestnut-red colour of the thorax, the scutellum and the median lobe of the scutum being black; punctuation of the scutum somewhat reticulate, the scutellum very narrowly punctate at base; parapsidal furrows very delicate but complete. Antennae black; almost twice as long as the body; pedicel short and stout; funicle 1 a little shorter than 2.

Habitat.—North Queensland; Cairns district, a small series.

Holotype in the South Australian Museum, 1.1958.

A medium-sized species with smooth head and third segment of abdomen, long funicle joints, and slender erect spine on the metanotum. The male, which differs markedly in colour, and in the presence of parapsidal furrows, was originally described as a distinct species.

TRIMORUS NICOLORICORNIS, n. sp.

♀. Length, 1.55 mm. Head and abdomen, except the first segment which is reddish, black; thorax dull reddish-brown, the scutum and scutellum dusky; antennal scape bright reddish-yellow, the pedicel brown, the funicle joints golden-yellow, the club black; legs, including the coxae, golden-yellow.

Head transverse; smooth and polished, with a pubescence of fine white hairs; lower frons longitudinally striate; median carina of frons strong and complete; eyes shortly pubescent. Antennal scape long and slender, as long as the next five joints combined; pedicel one-half longer than its greatest width; funicle 1 one-third longer than the pedicel; 2 a little, yet distinctly, longer than 1, almost three times as long as wide; 3 abruptly shorter, as wide as long; 4 wider than long; club compact, the joints not greatly wider than long. Thorax stout; scutum confluent punctate, the punctures of moderate size, and with some pubescence; scutellum with similar sculpture, but narrowly smooth posteriorly; spine on metanotum slender, thorn-like, rather long, suberect; propodeum moderately short, strongly longitudinally striate and sulcate, its posterior margin gently concave

medially, then, at half the distance to the posterior angles, obtusely angled, the posterior angles armed with a strong, oblique, suberect tooth. Forewings extending somewhat beyond apex of abdomen; moderately broad; lightly yellowish; marginal vein two-thirds as long as the submarginal, the stigmal vein short. Abdomen twice as long as its greatest width; segment 1 one-half wider posteriorly than basally, a little longer than its basal width; 2 a little longer than 1; 3 slightly longer than 1 and 2 united, twice as long as 4-6 united; 1 and 2 strongly striate, 2 smooth posteriorly and laterally; 3-5 smooth; 3-5. and 1 and 2 laterally, with scattered fine hairs.

♂. Unknown.

Habitat.—Queensland: locality unknown; one female taken by A. A. Girault. Holotype in the Queensland Museum.

A medium-sized species, with smooth head and third segment of abdomen; as in *varicornis*, funicle 1 is shorter than 2; distinguished from *varicornis* by the shape of the posterior margin of the propodeum with its strong lateral teeth.

TRIMORUS ATRIPES, n. name.

Trimorus nigripes Dodd, *Trans. Roy. Soc. S. Aust.*, 38, 1914, 79 (preoccupied by *T. nigripes* Ashmead = *Prosacantha nigripes* Ashm., 1893).

♀. Length, 1.20 mm. Dull black, the first abdominal segment reddish; coxae fuscous, the legs dusky yellow-brown; antennae black.

Mandibles broad, tridentate, the teeth subequal and acute. Antennal scape slender, longer than the next four joints united; pedicel one-third longer than its greatest width; funicle 1 as long and as wide as the pedicel, 2 as wide as long, 3 and 4 narrower than 2, transverse; club compact, joint 1 small, 2-5 each twice as wide as long. Thorax scarcely longer than its greatest width; scutum pubescent, with faint delicate parapsidal furrows, the lateral lobes almost smooth, the median lobe with fine raised polygonal reticulation and on the posterior third with fine longitudinal striae; scutellum smooth, with scattered hairs; metanotum armed medially with a short acute tooth; propodeum short, hardly sculptured except for the foveate margins, narrowly divided at base, the carinae curving away very obliquely to form the strongly margined posterior border which is gently concave, the posterior angles strong and acute but not toothed. Forewings lightly clouded; moderately broad, the apex rather broadly rounded; marginal vein somewhat shorter than the submarginal. Abdomen one-half longer than its greatest width; segment 1 plainly shorter than its basal width; 2 slightly longer than 1; 3 one-half longer than 1 and 2 united, three times as long as 4-6 united; 1 and 2 striate, 3 smooth, 4-6 with fine pubescence.

♂. Unknown.

Habitat.—North Queensland: Cairns district, the type female.

Holotype in the South Australian Museum, I.1997.

A small dark species related to *sordidus* from which it differs in the presence of fine striae on the scutum posteriorly and in the faint delicate parapsidal furrows.

TRIMORUS SORDIDUS Dodd.

Hoplogryon sordida Dodd, *Trans. Roy. Soc. S. Aust.*, 38, 1914, 76.

♀. Length, 0.90-1.10 mm. Head black; thorax and abdomen brownish-black, the first abdominal segment reddish-yellow; legs, including the coxae, testaceous; antennae fuscous, the scape yellowish at base.

Head transverse; eyes rather small, shortly pubescent; frons gently convex, smooth, with a noticeable fine pubescence; median carina of frons failing to reach the anterior ocellus; lower frons shortly striate; extreme line of the vertex finely sculptured, the declivous portion smooth and finely pubescent; cheeks smooth and not pubescent. Antennal scape moderately long and slender; pedicel a little longer than its greatest width; funicle 1 and 2 subequal, hardly longer than wide, 3 and 4 small and wider than long; club compact, the joints much wider than long. Thorax stout; scutum with fine pubescence and fine raised reticulation, the parapsidal furrows not showing; scutellum with similar sculpture but smooth posteriorly; metanotum with a short acute broadly-triangular tooth; propodeum short, finely striate, the posterior margin gently concave, the posterior angles not prominent or acute. Forewings extending well beyond apex of abdomen; moderately broad; lightly stained; marginal vein a little more than one-half as long as the submarginal, the stigmal vein very short. Abdomen one-half longer than its greatest width; segment 1 much wider posteriorly than basally, shorter than its basal width; 2 somewhat longer than 1; 3 as long as 1 and 2 united, more than twice as long as 4-6 united; 1 striate; 2 striate except laterally and posteriorly; 3 shortly striate at base, smooth for the rest, with scattered hairs laterally; 4 and 5 with scattered hairs.

♂. Unknown.

Habitat.—North Queensland: Cairns district, four females in May and June. Holotype in the South Australian Museum, 1.1989.

A small species with smooth head and third segment of abdomen, distinguished by the fine raised reticulation of the scutum.

TRIMORUS ARSMILIA Dodd.

Trans. Roy. Soc. S. Aust., 38, 1914, 79.—*T. auratus* Dodd, *id.*, 40, 1916, 30.—*T. lei* Dodd, *id.*, 48, 1924, 176.

♀. Length, 1.00-1.20 mm. Head black; thorax varying from yellow-brown to dull black; abdomen black or deep brown, the basal segment bright red or yellow; legs rarely clear yellow, generally more or less dusky; antennae black or piceous, the scape usually more or less yellowish.

Head transverse, slightly wider than the thorax, the frons lightly convex, the vertex shortly precipitous from immediately behind the ocelli; smooth and polished, with scattered fine hairs; extreme line of the vertex with a narrow transverse path of very fine polygonal sculpture; median carina of frons fine and complete; eyes faintly pubescent; lower frons with striae converging to the mouth. Antennal scape long and slender, as long as the next six or seven joints united; pedicel two-thirds longer than its greatest width; funicle 1 as long as or slightly longer than the pedicel, 2 hardly shorter than 1, 3 and 4 small, 3 as wide as long, 4 wider than long; club compact, joints 1-5 almost twice as wide as long. Thorax stout; parapsidal furrows delicate but complete; scutum with fine dense pubescence and numerous pin-punctures, the median lobe with very fine open impressed reticulation which fails posteriorly, the lateral lobes hardly sculptured, the sculpture coarser and punctate on the declivous anterior portion of the median lobe; scutellum smooth, with scattered fine hairs, with fine sculpture at its extreme base; metanotum with a small acute tooth medially; propodeum short, smooth except along the foveate margins, faintly concave posteriorly, the carinate posterior margin narrowly divided medially and running obliquely to the acute posterior angles. Forewings extending well beyond apex of abdomen; moderately

broad; marginal cilia short; lightly stained or noticeably brownish; marginal vein plainly shorter than the submarginal. Abdomen stout, hardly one-half longer than its greatest width; segment 1 widening posteriorly, not as long as its basal width; 3 one-half longer than 1 and 2 united, twice as long as 4-6 united; 1 and 2, except posteriorly, striate; 3 wholly smooth, or shortly striate at base, 4-6 with scattered pubescence.

♂. Scutum densely punctate anteriorly on the median lobe, smooth for the rest, except for pin-punctures bearing fine hairs; abdomen more slender, two-thirds longer than its greatest width, segment 1 as long as its basal width. Antennae not much longer than the body; black, the scape suffused with yellow; funicle 1 hardly one-half as long as the scape, 1 and 2 subequal, each slightly longer than 3, 3-9 subequal.

Habitat.—Queensland: Cairns district (type); Blackall Range; Brisbane: a small series. Norfolk Island, one female, A. M. Lea.

Holotype in the South Australian Museum, 1.1936.

A small species, variable in colour, and to a lesser degree in the size of the metanotal tooth, which however is always small, and the stoutness of the abdomen; segment 3 of the abdomen may be wholly smooth or shortly striate at base. The type is a male from Cairns; *aureus* is a yellow female from Cairns; *leai*, a female from Norfolk Island, does not seem distinct.

Trimorus aximilis is close to *sordidus*, but in the latter species the frons and eyes are noticeably pubescent, the parapsidal furrows are not marked, and the reticulate sculpture of the scutum and scutellum is coarser and raised.

TRIMORUS PULCHRITHORAX Dodd.

Hoplogryon pulchrithorax Dodd, *Trans. Roy. Soc. S. Aust.*, 35, 1914, 73.

♀. Length, 1.00 mm. Head dull black; thorax varying from bright chestnut-red with the scutellum and the centre of the scutum blackish to deep dull red; abdomen dull brownish-black, the first segment bright reddish-yellow; antennal scape yellow or somewhat dusky, the pedicel brown, the funicle and club fuscous.

Head normal, transverse, the frons gently convex; eyes moderately large, bare; upper frons and vertex with fine close reticulation and fine pubescence, the middle frons smooth, the lower frons striate, median carina of frons delicate, failing to reach the anterior ocellus; cheeks smooth, with a few fine hairs. Antennal scape long and slender, as long as the next six joints combined, pedicel one-half longer than its greatest width; funicle 1 as long as the pedicel, 2 a little shorter than 1, 3 and 4 small, wider than long; club compact, joints 1-5 each twice as wide as long. Thorax stout, scutum finely confluent punctate and with fine dense pubescence; scutellum with similar sculpture, but smooth posteriorly, metanotum with a rather short, subacute, broadly triangular tooth; propodeum foveate along its margins, short, the posterior margin gently concave, the posterior angles subacute but not truly toothed. Forewings extending well beyond apex of abdomen; lightly stained; moderately broad, marginal vein not greatly shorter than the submarginal, the stigmal vein short. Abdomen short and broad; one-third longer than its greatest width; segment 1 much wider posteriorly than basally, much shorter than its basal width; 2 almost twice as long as 1; 3 two-thirds longer than 1 and 2 united; 4-6 very short; 1 striate; 2 striate, except posteriorly and laterally; 3-5 smooth; 3 with scattered hairs laterally and posteriorly; 4 and 5 with fine hairs.

♂. Unknown.

Habitat.—Queensland: Cairns district, one female (type) in September; Brisbane, two females in December; Mt. Tambourine, six females in March.

Holotype in the South Australian Museum, 1.1994.

A small species with finely punctate scutum and reticulate upper frons, characters which separate it from *sordidus* and *assimilis*; very similar to *breviventris*, but in that species the upper frons is smooth and the metanotal spine or tooth is much longer.

TRIMORUS PUNCTATUS Dodd.

Hoplogryon punctata Dodd, *Trans. Roy. Soc. S. Aust.*, 38, 1914, 77.—*Trimorus niger* Dodd, *ibid.*, p. 79.—*T. nigrellus* Dodd, *ibid.*, p. 81.

♀. Length, 1.50–1.75 mm. Black; legs, including the coxae, golden-yellow, the femora and tibiae washed with brown; antennae fuscous, the scape reddish at base.

Head normal, transverse; vertex and upper half of frons densely finely punctate and pubescent; immediately behind the ocelli are traces of weak cross-striae; against the occiput the surface is smooth and shining; above the antennal insertion is a broad smooth area; lower frons with strong striae converging to the mouth, the lateral striae being continued on either side of the smooth area; median carina of frons strong and complete; cheeks with fine pubescence and sparse fine punctures; eyes large, shortly pubescent. Antennal scape long and slender; pedicel one-third longer than its greatest width; funicle 1 slightly longer than the pedicel, 2 hardly shorter than 1, 3 and 4 small, 3 wider than long, 4 transverse; club compact, joints 1–5 each less than twice as wide as long. Thorax stout; parapsidal furrows not evident; scutum finely confluent indefinitely punctate with a reticulate tendency, and with fine dense pubescence; scutellum with similar stronger sculpture, but smooth posteriorly; spine on metanotum long, narrowly triangular, acute, horizontal, projecting over basal segment of abdomen; propodeum short, densely punctate and with fine pubescence, its posterior margin not carinate, almost straight, armed at the posterior angles with a stout tooth that projects outwardly. Forewings hardly reaching beyond apex of abdomen; broad; subhyaline or lightly brownish; marginal vein a little more than one-half as long as the submarginal, the stigmal vein short. Abdomen two-thirds longer than its greatest width; segment 1 twice as wide posteriorly as basally, no longer than its basal width; 3 one-third longer than 1 and 2 united, twice as long as 4–6 united; 1 and 2 (except posterior margin) strongly striate; 3 shortly or about one-third striate; the rest smooth; 4 and 5, and 3 laterally and posteriorly, with scattered hairs.

♂. Femora, tibiae, and tarsi more dusky than in the female; upper frons and vertex with scattered hairs, almost devoid of sculpture except for a small area between the lateral ocelli and the eyes; parapsidal furrows complete and distinct; sculpture of scutum finer, that of the lateral lobes subobsolete; propodeum very narrowly divided at meson, the dividing carinae subparallel for a short distance, then curving sharply to form the almost straight posterior margin. Antennae one-half longer than the body; black, the scape red at base; scape rather short, no longer than funicle 3; pedicel as wide as long; funicle 1 and 2 subequal, 3 one-half longer than 2, 3–9 subequal.

Habitat.—Queensland: Cairns district (type), three females, two males, April–November; Westwood, three males in December and June; Brisbane, two females in September; Chinchilla, one male in January.

Holotype in the South Australian Museum, 1.1992.

As in *varicornis*, the parapsidal furrows are distinct in the male, obsolete in the female. In the specimens from Westwood, Brisbane, and Chinchilla, the metanotal spine is more slender and less horizontal, and the propodeum is more strongly pubescent.

TRIMORUS CONCOLORICORNIS, n. sp.

♀. Length, 1.90 mm. Black, the antennae concolorous; legs deep yellow-brown, the anterior coxae fuscous.

Head normal, transverse; eyes large, lightly pubescent; surface smooth, with a scattered pubescence of fine white hairs; behind the line of the vertex is a path of fine reticulation which is continued behind the eyes; frons above the antennal insertion broadly devoid of hairs; lower frons longitudinally striate; median carina of frons delicate; cheeks with fine pubescence. Antennal scape long and slender; pedicel almost twice as long as its greatest width; funicle 1 one-third longer than the pedicel, 2 as long as 1, 3 short, quadrate, 4 wider than long; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum finely confluent punctate and with fine dense pubescence; scutellum with scattered long hairs, punctate at base, smooth for the rest; metanotal spine long, slender, thorn-like, suberect; propodeum short, foveate along its margins, smooth centrally, the posterior margin gently concave or broadly oblique from the median line, the posterior angles projecting outwardly in the form of acute teeth. Forewings extending a little beyond apex of abdomen; moderately broad; lightly stained; marginal vein hardly more than one-half as long as the submarginal, the stigmal vein short. Abdomen twice as long as its greatest width; segment 1 not much wider posteriorly than basally, as long as its basal width; 2 one-half longer than 1; 3 as long as 1 and 2 united, almost twice as long as 4-6 united; 1 and basal two-thirds of 2 strongly striate, the rest smooth; 4 and 5, lateral and posterior margins of 3, and lateral margins of 1 and 2 with fine scattered hairs.

♂. Unknown.

Habitat.—Queensland: Brisbane, one female in February, A. P. Dodd.

Holotype in the Queensland Museum.

A medium-sized species with smooth head, slender erect metanotal spine, and smooth third segment of abdomen; differs from *punctatus* in the longer first and second funicle joints of the antennae, smooth upper frons, concave posterior margin of the propodeum, and segment 1 of abdomen not widening greatly posteriorly; differs from *brevicestris* in the longer abdomen and longer first and second funicle joints.

TRIMORUS BREVIVENTRIS, n. sp.

♀. Length, 1.35 mm. Black, the thorax showing dull reddish, the basal abdominal segment bright reddish-yellow; legs reddish-yellow, the coxae darker; antennae piceous, the first two joints washed with brown.

Head normal; line of the vertex narrowly coriaceous and pubescent, this sculpture continued for a short distance behind the eyes; between the coriaceous area and the posterior margin is a narrow smooth area; median carina of frons complete; frons smooth, shining, the upper frons with a few scattered pubescent punctures, the lower frons densely striate from just above the ventral end of the eyes to the mouth; cheeks smooth, with a few fine hairs. Antennal scape long

and slender; pedicel one-third longer than its greatest width; funicle 1 as wide as the pedicel and plainly longer, twice as long as wide, 2 a little longer than wide, 3 and 4 small and transverse; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum finely confluent punctate and pubescent, in some lights showing faint parapsidal furrows; scutellum finely punctate and pubescent at base, smooth posteriorly; metanotal spine rather long, triangular, slender and pointed at apex, from lateral aspect horizontal and situated high above the base of the abdomen; propodeum very short medially, its posterior border margined and rather deeply concave, its posterior angles in the form of subacute teeth that do not project outwardly. Forewings somewhat variable in length and width; reaching beyond or barely to apex of abdomen; moderately broad or rather narrow; marginal cilia rather short; marginal vein one-half as long as the submarginal, the stigmal vein short. Abdomen short and broad; one-third longer than its greatest width, much narrowed at base; segment 1 short, much wider posteriorly than basally, no longer than its basal width; 3 one-half longer than 1 and 2 united, twice as long as 4-6 united, three-fourths as long as wide; 1 and 2 strongly striate, the rest smooth; 4 and 5, and 2 and 3 laterally, with fine scattered hairs.

♂. Differs from the female as follows: thorax dorsally chestnut-red, the scutellum blackish; legs washed with brown, the posterior tibiae and tarsi dusky; parapsidal furrows delicate but distinct; lateral lobes of the scutum smooth with scattered punctures; scutellum smooth; metanotal tooth shorter, stouter, and suberect; propodeum longer, its posterior angles subacute but not toothed; segment 1 of abdomen one-half wider posteriorly than basally, but no longer than its basal width; forewings extending well beyond apex of abdomen. Antennae almost twice as long as the body; black, the scape brownish-yellow; funicle 1 and 2 each somewhat shorter than 3, which is as long as the scape: 3-9 about subequal.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, four females in March and April, A. P. Dodd; Bunya Mountains, 2,500 feet, one male in April, A. P. Dodd. Victoria: Dandenong Ranges, four females in December, A. P. Dodd.

Holotype and *allotype* in the Queensland Museum. *Paratypes* in the author's collection.

A medium-sized species, with smooth frons, densely punctate scutum, and smooth third segment of abdomen; differs from *punctatus* and *pulchrithorax* in the smooth upper frons; distinguished from *concoloricornis* in colour and the short broad abdomen.

TRIMORPHUS STRIATELLUS, n. sp.

2. Length, 1.00 mm. Deep brown or brownish-black, the basal abdominal segment reddish-yellow; antennae piceous, the scape suffused with yellow; legs, including the coxae, bright yellow a little suffused with dusky.

Head normal, the frons somewhat convex; frons very densely finely striate and with scattered fine hairs, smooth above the antennal insertion, the median carina delicate but complete; vertex to the posterior margin finely densely coriaceous; weak striae occur behind the eyes; cheeks smooth, with a few fine hairs. Antennal scape long and slender; pedicel one-third longer than its greatest width; funicle 1 as wide as the pedicel and slightly shorter, a little longer than wide, 2 as long as wide, 3 and 4 very small and transverse; club compact, joints 1-5 transverse. Thorax stout; scutum densely finely pubescent, the anterior half very finely transversely reticulate, the posterior half finely densely reticulate;

scutellum very finely densely reticulate-granulate; metanotal spine moderately long, broadly triangular, its apex slender and pointed; propodeum short, its posterior margin concave at meson, almost straight for most of its length, the posterior angles armed with a short acute tooth which projects somewhat outwardly. Forewings extending a little beyond apex of abdomen; moderately broad; lightly tinted; marginal vein hardly more than one-half as long as the submarginal, the stigmal vein rather long for the genus. Abdomen short and broad, one-half longer than its greatest width; segment 1 much wider posteriorly than basally, hardly as long as its basal width; 3 almost twice as long as 1 and 2 united; 4-6 united not one-half as long as 3; 1 and 2 strongly striate; 3 with fine dense striae which fail toward posterior and lateral margins; 4 and 5, and lateral margins of 3, with scattered hairs.

♂. Unknown.

Habitat.—South Queensland: Brisbane, two females, A. P. Dodd.

Holotype in the Queensland Museum. Paratype in the author's collection.

A small species with finely striate frons, distinguished by the regular striae of segment 3 of the abdomen.

TRIMORUS NOVISPINUS, n. sp.

♀. Length, 1.25 mm. Head black; thorax fuscous above, blackish laterally, the metanotum and its spine bright red; abdomen black, the first segment reddish; coxae blackish, the legs bright orange-yellow; antennae fuscous, the scape yellow for its basal half, brownish for apical half, the pedicel contrasting clear yellow.

Head normal, the frons a little convex; frons finely densely longitudinally striate and with a noticeable fine pubescence, the upper frons finely sculptured between the striae; above the antennal insertion is a rather small smooth area; median carina of frons complete; line of the vertex finely granulate-reticulate, this sculpture continued for a short distance behind the eyes; behind the granulate sculpture the surface is smooth and shining to the occiput; cheeks smooth, except for scattered fine pubescence; eyes very widely separated, small, shortly pubescent. Antennal scape long and slender; pedicel one-third longer than its greatest width; funicle 1 a little, yet distinctly, longer than the pedicel, two-thirds longer than wide; 2 a little shorter than 1; 3 and 4 small, wider than long; club compact, the joints transverse. Thorax stout; scutum and scutellum very densely finely reticulate-punctate and finely densely pubescent; spine of metanotum long, slender, and acute, with a median carina on its basal half, from lateral aspect the spine is curved and is situated high above the base of the abdomen; propodeum short, strongly reticulate, the posterior margin gently concave, the posterior angles in the form of strong acute teeth which curve obliquely outwardly; there is a small acute tooth on the lateral margins a little in front of the posterior angles. Forewings extending well beyond apex of abdomen; broad; lightly brownish; marginal vein one-half as long as the submarginal, the stigmal vein moderately short. Abdomen one-third longer than its greatest width; segment 1 less than one-half as wide basally as posteriorly, shorter than its basal width; 3 one-half longer than 1 and 2 united, much longer than 4-6 united, slightly more than one-half as long as wide; 1 and 2 strongly striate, polished; 3 finely irregularly longitudinally striate and indefinitely punctate, pubescent laterally, the sculpture failing medially toward the posterior margin; 4 smooth posteriorly, at base densely finely punctate and with long fine pubescence, the punctate area very short medially; 5 with a line of dense fine pubescent punctures at base.

♂. Unknown.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, one female in March, A. P. Dodd.

Holotype in the Queensland Museum.

A species with striate frons, long slender metanotal spine, and densely sculptured third segment of abdomen; the additional small tooth on the lateral margins of the propodeum, just in advance of the curved posterior-lateral tooth, will serve to separate it from similarly sculptured species.

TRIMORUS BUCULOSUS Dodd.

Hoplogryus rugulosa Dodd, *Trans. Roy. Soc. S. Aust.*, 38, 1914, 77.

♀. Length, 1.50-1.75 mm.

Head black; thorax deep red, the scutum and scutellum wholly or partly blackish, the pleurae sometimes more or less blackish; abdomen black, the basal segment red; legs bright reddish-yellow, the coxae fuscous; antennae fuscous or dusky-brown, the club sometimes lighter brown.

Head normal, transverse; eyes moderately large, lightly pubescent; frons longitudinally striate except for a smooth central area above the antennal insertion, and with fine pubescence, the upper frons indefinitely sculptured between the striae, the median carina complete; line of the vertex coriaceous; behind the line of the vertex the surface is smooth with fine suboblique striae, which are often faint or absent except laterally; cheeks finely striate, smooth between the striae dorsally, densely sculptured ventrally; mandibles broad, with three strong subequal teeth. Antennal scape long and slender, as long as the next six joints combined; pedicel one-third longer than its greatest width; funicle 1 somewhat longer than the pedicel, twice as long as wide, 2 hardly shorter than 1, 3 and 4 short, wider than long; club compact, joints 1-5 almost twice as wide as long. Thorax stout; scutum with fine pubescence, finely confluent punctate, the punctures falling toward the posterior margin and being replaced by rather strong somewhat irregular longitudinal striae; scutellum finely confluent punctate and pubescent, but smooth medio-posteriorly; spine of metanotum long, rather slender, narrowly triangular, acute, from lateral aspect situated high above base of the abdomen; propodeum short, shining, with several strong striae or carinae, the posterior margin carinate and almost straight, the posterior angles in the form of stout acute teeth that hardly project outwardly. Forewings extending well beyond apex of abdomen; broad; lightly stained brownish; marginal vein a little more than one-half as long as the submarginal, the stigmal vein oblique and moderately long for the genus. Abdomen one-third longer than its greatest width; segment 1 much wider posteriorly than basally, somewhat shorter than its basal width; 2 one-half longer than 1; 3 somewhat longer than 1 and 2 united, fully twice as long as 4-6 united; 1 and 2 strongly striate, smooth between the striae; 3 coarsely longitudinally irregularly striate, rugose-punctate between the striae, the sculpture somewhat variable, the posterior margin narrowly smooth, the surface with scattered hairs; 4 densely punctate or rugose-punctate and with fine pubescence, the posterior margin smooth; 5 narrowly punctate and pubescent at base.

♂. Like the female, but the thorax is mainly bright chestnut-red, the scutum and scutellum somewhat blackish; the posterior tibiae and tarsi are dusky; sculpture of segment 2 of abdomen much finer, 4 and 5 with fine close impressed

reticulation, indefinite punctures and long fine hairs. Antennae almost twice as long as the body; black, the scape dusky-brown, red at base, the pedicel reddish; scape short and stout, no longer than funicle 3; pedicel no longer than wide; funicle 1 and 2 subequal; 3 a little yet distinctly longer than 2; 3-9 subequal.

Habitat.—Queensland: Cairns district (type); Blackall Range; Brisbane; Mt. Tambourine; many females, one male.

Holotype in the South Australian Museum, 1.1991.

A medium-sized species with striate frons and coarsely sculptured third segment of abdomen; distinguished by the irregular strong striae on the scutum posteriorly.

TRIMORUS FILICORNIS, n. sp.

♀. Length, 1.50 mm. Black; thorax deep dull red, the scutum and scutellum blackish; basal segment of abdomen reddish; antennae fuscous, the scape reddish-yellow; legs dull yellow-brown, the coxae darker.

Head transverse, the frons gently convex, the vertex convex from eye to eye; eyes rather small, very wide apart, sparsely pubescent; frons wholly strongly sparsely longitudinally striate and with sparse fine hairs, the median carina complete; behind the line of the vertex the surface is smooth and shining, with a few fine hairs; cheeks smooth, with a few fine hairs. Antennal scape long and slender; pedicel two-thirds longer than its greatest width; funicle 1 as long as the pedicel, 2 hardly shorter than 1, 3 and 4 small, wider than long; club compact, joints 1-5 much wider than long. Thorax stout; scutum and scutellum coarsely reticulate-punctate or rugose-punctate; spine on metanotum long, slender, narrowly triangular, acute, from lateral aspect curved and situated high above base of abdomen; propodeum short, declivous, smooth with several strong striae or carinae, the posterior margin straight, the posterior angles produced in the form of strong acute teeth which do not project outwardly. Forewings reaching well beyond apex of abdomen; broad; faintly stained; marginal vein two-thirds as long as the submarginal, the stigmal vein long for the genus. Abdomen one-third longer than its greatest width; segment 1 much wider posteriorly than basally, a little shorter than its basal width; 2 a little longer than 1; 3 somewhat longer than 1 and 2 united, fully twice as long as 4-6 united; 1 and 2 strongly striate; 3 strongly foveate-striate at base and without punctures for median third, the lateral third on either side with numerous moderate-sized punctures bearing fine hairs and with traces of impressed striae; 4 and 5 densely punctate and pubescent; 3-5 each with a smooth posterior path.

♂. Agrees with the female, but the punctures on segment 3 of the abdomen are small and scattered, the median striae or foveae very short; segments 4 and 5 with one row of setigerous punctures at base; segment 1 fully as long as its basal width, one-half wider posteriorly than basally. Antennae one-half longer than the body; black, the scape and pedicel testaceous; funicle joints with a pubescence of rather long hairs without a regular arrangement; scape rather short and stout; pedicel no longer than wide; funicle joints subequal, each two-thirds as long as the scape.

Habitat.—Queensland: one female, without further locality, A. A. Girault; Cairns district, one male in August, A. P. Dodd.

Holotype and allotype in the Queensland Museum.

A medium-sized species with striate frons, smooth vertex, coarsely sculptured scutum and scutellum, and long slender metanotal spine; the punctuation of segment 3 of the abdomen readily distinguishes it; the long pubescence of the male antennae is an unusual feature.

TRIMORUS FUSCICOXA Dodd.

Hoplogryon fuscicoxa Dodd, *Trans. Roy. Soc. S. Aust.*, 39, 1915, 450.

♀. Length, 1.50 mm. Head black; thorax red-brown, blackish on the pleurae, the scutum medially, and the scutellum; abdomen black, reddish at base; coxae fuscous, the legs reddish-yellow, the tibiae a little dusky apically; antennae wholly black.

Head normal, transverse; vertex and upper frons finely closely reticulate-punctate, without pubescence; median carina of frons strong and complete; lower half of frons smooth, narrowly striate laterally, densely striate against the mouth; cheeks finely densely punctate. Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 one-half longer than the pedicel, two and a half times as long as its greatest width; 2 as long as 1; 3 one-third as long as 2, slightly longer than wide; 4 wider than long; club rather slender, the joints not greatly wider than long. Thorax stout; scutum and scutellum very densely finely reticulate-punctate and with light pubescence, the posterior margin of the scutellum narrowly smooth; tooth of metanotum rather long, moderately slender, acute, its surface finely sculptured; propodeum finely punctate and pubescent, smooth medially, its posterior angles armed with a suberect tooth that projects slightly outwardly. Forewings extending well beyond apex of abdomen; broad; rather deeply smoky; stigmal vein rather long for the genus. Abdomen stout, one-half longer than its greatest width; segment 1 twice as wide posteriorly as basally, shorter than its basal width; 3 two-thirds as long as wide; 1 and 2 strongly striate; 3 densely punctate and pubescent laterally, the median half with strong striae which, except at the median line, are convex outwardly, the striae failing broadly toward the posterior margin which is broadly semi-circularly smooth; 4 and 5 densely punctate and pubescent at base, smooth posteriorly.

♂. Unknown.

Habitat.—North Queensland: Cairns district, 2,500 feet, two females in May, A. P. Dodd.

Holotype in the South Australian Museum, 15171.

This species may be recognized by the sculpture of segment 3 of the abdomen, in conjunction with the non-striate upper frons.

TRIMORUS DELICATUS, n. sp.

♀. Length, 1.25 mm. Head and abdomen black, the base of the abdomen reddish-yellow; thorax fuscous or dull reddish-brown; legs reddish-yellow, the coxae fuscous; antennae dull brown or fuscous, the scape dusky yellow.

Head normal; frons rather sparsely striate and with scattered pubescence, broadly smooth above the antennal insertion, with fine indefinite punctures between the striae on the upper frons, the median carina complete; vertex densely reticulate-granulate and pubescent, smooth toward the foveate posterior margin; cheeks smooth except for a few minute pubescent punctures; eyes very wide apart, rather small, sparsely pubescent. Antennal scape long and slender; pedicel one-

half longer than its greatest width; funicle 1 as long as the pedicel, 2 a little shorter than 1, 3 and 4 very small and transverse; club compact, the joints transverse. Thorax stout; scutum and scutellum densely, rather finely, reticulate-punctate and pubescent, the sculpture more open and inclined to fall medially against the posterior margin of the scutellum; metanotal spine moderately long, acute, rather narrowly triangular, its surface rugose, from dorsal surface projecting beyond the posterior margin of the propodeum, from lateral aspect horizontal and situated rather well above the base of the abdomen; propodeum short, rugose-striate, its posterior margin uniformly rather deeply concave, its posterior angles blunt and curved a little inwardly. Forewings extending a little beyond apex of abdomen; moderately broad; lightly stained; marginal vein one-half as long as the submarginal, the stigmal vein short. Abdomen a little less than twice as long as its greatest width; segment 1 one-half as wide basally as posteriorly, as long as its basal width; 3 two-thirds as long as wide, a little longer than 1 and 2 united, twice as long as 4-6 united; 1 and 2 strongly striate; 3 with fine striae, between which are fine shallow punctures, the sculpture weaker and inclined to fall medially, without pubescence except for scattered hairs toward lateral margins which are broadly smooth, the posterior margin narrowly smooth, but broadly smooth medially; 4 densely finely granulate and with long pubescence, smooth along posterior margin and narrowly at meson; 5 at base finely granulate and pubescent.

♂. Like the female, but the legs are suffused brownish, delicate parapsidal furrows are evident, and segment 3 of the abdomen is more broadly smooth laterally and posteriorly. Antennae black, the scape dusky-yellow; somewhat longer than the body; pedicel short and stout; funicle 1 one-half as long as the scape; funicle joints, except the last which is distinctly longer, subequal or almost so.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, five females, two males, in March, A. P. Dodd.

Holotype and allotype in the Queensland Museum. Paratypes in the author's collection.

A rather small species with striate frons and rather long metanotal spine; distinguished by the sculpture of segment 3 of the abdomen, fine striae between which are shallow punctures.

TRIMORUS IMPRESSUS, n. sp.

♀. Length, 1.60 mm. Head black; thorax dull reddish-brown; abdomen brownish-black, reddish-yellow at base; antennal scape golden-yellow, the next five joints brownish-yellow, the club fuscous; legs golden-yellow, the coxae brown.

Head transverse, the frons distinctly convex; eyes rather small, widely separated, shortly pubescent; frons very finely densely longitudinally striate and with scattered fine hairs, broadly smooth above the antennal insertion; median carina of frons delicate; vertex narrowly granulate-reticulate, smooth toward the occipital margin; cheeks smooth, with a few hairs. Antennal scape long and slender; pedicel two-thirds longer than its greatest width; funicle 1 plainly shorter than the pedicel, slightly longer than wide, 2 as wide as long, 3 and 4 small and transverse; club stout, compact, the joints transverse. Thorax stout; scutum and scutellum finely densely reticulate-punctate and with fine pubescence; spine of metanotum moderately long, acute, rather narrowly triangular; propodeum short, finely sculptured, the posterior margin gently concave, the posterior angles subacute

and not projecting outwardly. Forewings extending slightly beyond apex of abdomen; moderately broad; faintly tinted; marginal vein one-half as long as the submarginal, the stigmal vein normally short. Abdomen two-thirds longer than its greatest width; segment 1 much wider posteriorly than basally, hardly as long as its basal width; 3 almost twice as long as 1 and 2 united, three times as long as 4-6 united, almost as long as wide; 1 and 2 striate; 3 with a network of impressed polygonal reticulation, broadly smooth and with scattered hairs laterally, narrowly smooth posteriorly; 4 smooth posteriorly and narrowly medially, with fine reticulation and fine hairs at base; 5 with a basal line of similar sculpture.

♂. Unknown.

Habitat.—South Queensland: Bunya Mountains, 2500 feet, two females in April, A. P. Dodd.

Holotype in the Queensland Museum. Paratype in the author's collection.

A small species with finely striate frons, distinguished by the impressed reticulation of segment 3 of the abdomen.

TRIMORUS ACUTISPINUS, n. sp.

♀. Length, 200 mm. Head black; thorax deep dusky reddish-brown, the scutum more or less bright red around its margins; abdomen black, the basal segment reddish; coxae fuscous, the legs bright golden-yellow; antennal scape and pedicel dusky-brown, the scape red at base, the funicle joints contrasting golden-yellow, the club black.

Head normal, transverse, the eyes large and faintly pubescent; median carina of frons complete; frons rather strongly longitudinally striate, without a smooth area above the antennal insertion; between the ocelli the surface is rugose-reticulate; behind the line of the vertex to the occipital margin medially are irregular transverse striae, but laterally there are strong suboblique striae which are continued behind the eyes down the cheeks; cheeks strongly sparsely striate; frons, except medially above the antennae, vertex and cheeks with a pubescence of very fine short white hairs. Antennal scape long and slender, as long as the next six joints combined; pedicel one-half longer than its greatest width; funicle 1 one-half longer than the pedicel, more than twice as long as its greatest width, 2 slightly shorter than 1, 3 somewhat wider than long, 4 transverse; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum rather finely confluent or reticulately punctate, the sculpture coarser against the posterior margin medially, with fine pubescence; scutellum with similar punctation and pubescence; metanotal spine subhorizontal, situated high above the base of the abdomen, long, rather narrowly triangular, narrowly acute at apex; propodeum densely finely pubescent and punctate, the posterior margin gently concave at meson, then obtusely angled and straight to the posterior angles which are armed with a strong suberect acute tooth which projects obliquely outwardly. Forewings extending beyond apex of abdomen; broad; lightly brownish; marginal vein one-half as long as the submarginal, the stigmal vein perpendicular, long for the genus, one-fourth as long as the marginal. Abdomen two-thirds longer than its greatest width; segment 1 almost twice as wide posteriorly as basally, no longer than its basal width; 2 one-half longer than 1; 3 slightly longer than 1 and 2 united, somewhat longer than 4-6 united; 1 and 2 strongly striate, their extreme lateral margins punctate and pubescent; 3 uniformly

strongly confluent punctate with a slight longitudinal tendency, the lateral margins densely finely punctate and pubescent, the posterior margin narrowly smooth; 4 with similar large confluent punctures but narrowly smooth at the median line, smooth posteriorly; 5 with rather large punctures at base; 4 and 5 with fine pubescence.

♂. Scutum and scutellum bright chestnut-red; posterior tarsi dusky, the tibiae dusky toward apex. Surface between and behind the ocelli irregularly longitudinally striate and somewhat rugose, but laterally behind the line of the vertex the striae are strong, regular, somewhat oblique and continued down the cheeks; pubescence of propodeum stronger, white and conspicuous, the teeth at the posterior angles shorter than in the female; segment 1 of abdomen one-half wider posteriorly than basally; 3 not as long as 1 and 2 united; 1 and 2 striate, the latter smooth laterally; 3 for its basal two-thirds medially with small dense or confluent punctures, on either side with a few striae, the lateral margins rather broadly smooth except for scattered punctures; 4 and 5 with numerous scattered setigerous punctures, densely coriaceous and pubescent laterally, smooth posteriorly; lateral margins of 1-3 with scattered fine hairs. Antennae very long, twice as long as the body; black, the scape and pedicel reddish-yellow; scape moderately long and stout, no longer than funicle 1; funicle joints almost subequal, 2 and 3 slightly the longest.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, one male, three females in February, A. P. Dodd.

Holotype and allotype in the Queensland Museum. Paratypes in the author's collection.

A moderately large species with striate frons and strongly confluent punctate segment 3 of the abdomen. The sculpture of segment 3 is similar in *crassispinus*, but in that species the metanotal spine is of a different shape and is not placed high above the base of the abdomen, the posterior margin of the propodeum is uniformly gently concave and its toothed posterior angles are not suberect, and funicle joints 1 and 2 of the antennae are shorter.

TRIMORUS CASTANEITHORAX Dodd.

Hoplogryon castaneithorax Dodd, *Trans. Roy. Soc. S. Aust.*, 39, 1915, 450.

♀. Length, 1.85 mm. Head black; thorax brownish-black, reddish along the margins of some of the sclerites; abdomen black; coxae fuscous, the legs reddish-yellow, the femora a little dusky; antennae wholly fuscous.

Head normal, transverse; eyes large, wide apart, shortly pubescent; frons striate and with fine scattered hairs, the upper frons definitely punctate between the striae; a broad smooth area occurs above the antennal insertion; median carina of frons distinct and complete; vertex medially between and behind the ocelli finely reticulate-punctate; extending from just behind each lateral ocellus to the eyes is a narrow coriaceous-reticulate area; toward the occipital margin the surface is smooth with scattered long hairs, but laterally weak oblique striae are continued behind the eyes; cheeks smooth with numerous pubescent punctures of moderate size. Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 somewhat longer than the pedicel, almost twice as long as wide, 2 a little longer than wide, 3 and 4 small and transverse; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum and scutellum rather finely confluent reticulate-punctate and with fine pubescence; metanotal tooth strongly

reticulate, large, stout, blunt at apex, projecting a little over the base of the abdomen, from lateral aspect horizontal and not situated high above the base of the abdomen; propodeum short, densely punctate and hardly pubescent, the posterior border margined, uniformly distinctly but not deeply concave, the posterior angles acute in the form of stout teeth which do not project outwardly. Forewings extending a little beyond the apex of the abdomen; broad; rather deeply brownish; marginal vein one-half as long as the submarginal, the stigmal vein rather long and oblique for the genus. Abdomen two-thirds longer than its greatest width; segment 1 one-half as wide basally as posteriorly, as long as its basal width, slightly raised at base; 2 one-half longer than 1; 3 almost twice as long as 2, one-half longer than 4-6 united; 1 strongly striate, with large punctures between the striae laterally; 2 irregularly striate and strongly punctate medially, more definitely punctate laterally; 3 confluent punctate with a marked tendency toward longitudinal arrangement, the punctures moderately large, the median line with small punctures but rather broadly smooth on the posterior third, the posterior margin narrowly smooth, the lateral margins broadly pubescent; 4 with dense moderate-sized punctures bearing long hairs, smooth at the median line and along the posterior margin; 5 densely punctate, shortly so medially, and with long hairs.

♂. Thorax dorsally rich chestnut-red, the scutum and scutellum dusky medially; first segment of abdomen bright red; antennae black, the scape and pedicel brownish-yellow.

Posterior angles of the propodeum subacute, without teeth; segment 1 of abdomen not widening greatly posteriorly, as long as its basal width; 2 wholly striate; 3 with rather dense small punctures, broadly smooth medio-posteriorly and along the posterior margin, smooth laterally except for scattered punctures. Antennae almost twice as long as the body; funicle joints long and subequal, each two-thirds as long as the scape.

Habitat.—North Queensland: Cairns district, 2,500 feet, several males, one female in April and May, A. P. Dodd.

Holotype in the South Australian Museum, 15175.

Very close to *crassispinus*, but the females differ in several particulars: in *crassispinus* the median carina of the frons is not distinct for its entire length, there is no coriaceous area on the vertex, the punctuation of the scutum and scutellum is coarser, segment 2 of the abdomen is not punctate medially, and segment 3 is not smooth medio-posteriorly.

TRIMORUS CRASSISPINUS, n. sp.

♀. Length, 1.75-2.00 mm. Head black; thorax deep dusky reddish-brown, the scutum and scutellum almost black; abdomen black, deep reddish at base; coxae fuscous, the legs clear reddish-yellow; antennal scape and pedicel dusky-brown, the scape reddish at base, the funicle joints contrasting rather clear yellow, the club fuscous.

Head normal, transverse; eyes large, wide apart, shortly pubescent; frons rather strongly striate, smooth between the striae except for fine punctures bearing fine hairs; a smooth area is present above the antennal insertion; median carina of frons delicate above, not showing on the smooth area; vertex with long fine hairs, medially between and behind the eyes reticulate-punctate, laterally the surface is smooth with a few oblique striae which are continued behind the eyes; cheeks striate and with fine scattered hairs. Antennal scape long and slender;

pedicel one-half longer than its greatest width; funicle 1 as wide and a little longer than the pedicel, 2 as long as the pedicel, 3 and 4 abruptly short, wider than long; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum and scutellum rather strongly confluent reticulate-punctate, with a slight longitudinal tendency on the scutum, and with fine pubescence; metanotal tooth strongly reticulate, large, stout, blunt at apex; projecting beyond the posterior margin of the propodeum, from lateral aspect horizontal and not situated high above the base of the abdomen; propodeum short, densely punctate and finely pubescent; its posterior margin not carinate, uniformly gently concave, the posterior angles in the form of short acute teeth which hardly project outwardly. Forewings extending a little beyond apex of abdomen; broad; rather deeply brownish; marginal vein one-half as long as the submarginal, the stigmal vein long and oblique for the genus, one-fourth as long as the marginal. Abdomen two-thirds longer than its greatest width; segment 1 hardly one-half as wide basally as posteriorly, as long as its basal width; 2 one-half longer than 1; 3 twice as long as 2, one-half longer than 4-6 united; 1 and 2 strongly striate, the latter reticulate-punctate latero-posteriorly; 3 rather strongly regularly confluent punctate with a slight longitudinal tendency, narrowly smooth against the posterior margin, and small punctures are present medially against this smooth path; 4 and 5 with similar punctures, but the smooth posterior path is relatively longer, 5 being very shortly punctate medially; 4 and 5 and lateral margins of 2 and 3 with fine pubescence.

♂. Thorax dorsally rich chestnut-red, the scutum and scutellum dusky medially; antennae black, the scape and pedicel clear yellow.

Frons wholly striate, without a smooth area above the antennal insertion, the median carina complete; posterior border of propodeum delicately margined, the posterior angles subacute but without teeth; forewings extending well beyond apex of abdomen; segment 1 of abdomen not greatly wider posteriorly than basally, as long as its basal width; 2 wholly striate; 3 with small dense punctures which are sometimes divided into longitudinal rows by fine striae, broadly smooth laterally and posteriorly, with scattered hairs laterally; 4 and 5 with larger punctures bearing long hairs, smooth posteriorly. Antennae one-half longer than the body; funicle joints almost subequal in length, each two-thirds as long as the scape.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, a series, December-March, A. P. Dodd; Bunya Mountains, 2,500 feet, one female in April, A. P. Dodd.

Holotype and allotype in the Queensland Museum. Paratypes in the author's collection.

The contrast between the sculpture of segment 3 of the abdomen in the sexes is striking.

TRIMORUS VALDISPINUS, n. sp.

♀. Length, 1.75-2.00 mm. Head black; thorax deep dusky brown, marked here and there with dull red; abdomen fuscous, showing reddish at base; coxae fuscous, the legs reddish-yellow, the tibiae a little dusky; first six antennal joints dusky brown, the scape reddish at base, the club fuscous.

Head normal, transverse; eyes large, wide apart, shortly pubescent; frons rather strongly striate and with scattered hairs, the upper frons definitely shallowly punctate between the striae; a rather narrow smooth area occurs above the antennal insertion; median carina of frons not evident; vertex between

the ocelli and medially to the occipital margin densely reticulate-punctate and with irregular short longitudinal striae, laterally the surface is smooth with oblique striae continued behind the eyes; cheeks densely punctate and with some irregular striae. Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 somewhat longer than the pedicel, almost twice as long as wide, 2 a little longer than wide, 3 and 4 transverse; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum and scutellum moderately-strongly confluent punctate or reticulate-punctate, and with fine pubescence; metanotal tooth as in *crassispinus* and *castaneithorax*; propodeum densely punctate and faintly pubescent, its posterior border lightly margined and deeply concave to receive the base of the abdomen, the posterior angles subacute and not projecting outwardly. Forewings extending a little beyond apex of abdomen; broad; somewhat brownish; venation as in *crassispinus*. Abdomen three-fourths longer than its greatest width; segment 1 much wider posteriorly than basally, as long as its basal width, with a short suberect horn or prominence at base; 2 somewhat longer than 1; 3 twice as long as 2, one-half longer than 4-6 united; 1 strongly striate; 2 strongly striate medially, strongly shallowly punctate laterally; 3 with moderately large confluent punctures with a tendency toward longitudinal arrangement, the extreme median line with some small punctures, pubescent toward lateral margin; 4 and 5 densely strongly punctate and with long hairs, the posterior margin, and sometimes the median line of 4, narrowly smooth.

♂. Unknown.

Habits.—South Queensland: Bunya Mountains, 2,500 feet, three females in April. A. P. Dodd; Mt. Tambourine, 2,000 feet, one female in February, A. P. Dodd.

Holotype in the Queensland Museum. Paratypes in the author's collection.

It is doubtful whether this species is distinct from *crassispinus* which occurs in the same localities; the main difference lies in the posterior margin of the propodeum, which is broad and feebly concave in *crassispinus*, deeply concave in *validispinus*; the horn or prominence on the base of the abdomen in the latter would seem a specific character; the funicle joints of the antennae are dusky-brown in *validispinus*, but in the other species are paler than the scape and pedicel.

TRIMORUS TENUIPUNCTATUS, n. sp.

♀. Length, 1.40 mm. Head black; abdomen black, the first segment red; thorax dusky reddish-brown, the margins of the scutum and scutellum, and the metanotum, bright reddish; antennae piceous, the scape and pedicel dusky yellow-brown; legs bright orange-yellow, the coxae fuscous, the tarsi dusky.

Head normal; frons regularly striate up to the line of the vertex, and with scattered pubescence; between the ocelli the surface is reticulate; vertex behind the line of the ocelli obliquely striate, the striae stronger behind the eyes; median carina of frons complete and rather strong; a smooth non-striate area occurs above the antennal insertion on either side of the median carina; cheeks smooth, with scattered hairs; eyes large, lightly pubescent. Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 distinctly longer than the pedicel, fully twice as long as wide, 2 a little shorter than 1, 3 as wide as long, 4 transverse; club compact, joints 1-5 transverse. Thorax stout; scutum and scutellum densely rather finely reticulate-punctate and pubescent, the scutellum with a small smooth area medially against the posterior margin; spine of

metanotum moderately long, acute, very broadly triangular, plainly shorter than its basal width, from lateral aspect suberect; propodeum foveate-striate, very short medially, the posterior border margined, gently concave medially, almost straight for its lateral two-thirds, the posterior angles with suberect teeth which project outwardly somewhat. Forewings extending beyond apex of abdomen; moderately broad; distinctly stained with brown; marginal vein one-half as long as the submarginal, the stigmal vein long for the genus. Abdomen one-half longer than its greatest width; segment 1 one-half wider posteriorly than basally, no longer than its basal width; 3 one-half longer than 1 and 2 united, fully twice as long as 4-6 united; 1 and 2 strongly striate, 2 smooth posteriorly; 3 with dense fine non-pubescent punctures, broadly smooth and impunctate laterally, more narrowly smooth posteriorly; 4 densely finely punctate at base, smooth medially and posteriorly; 4 and 5, and lateral margins of 3, with scattered fine hairs.

♂. Like the female except that the femora and tibiae are lightly washed with brown; the teeth at the posterior angles of the propodeum are small; segment 3 of the abdomen is no longer than 1 and 2 united and is more broadly smooth posteriorly. Antennae one-half longer than the body; black, the scape and pedicel brownish-yellow; funicle joints subequal, each about two-thirds as long as the scape.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, five females, two males, in February and March, A. P. Dodd.

Holotype and allotype in the Queensland Museum. Paratypes in the author's collection.

A medium-sized species with striate frons and densely finely punctate third segment of abdomen; very similar to *rufithorax*, but larger, the thorax, coxae, and antennal scape darker, the posterior margin of the propodeum not deeply concave, its posterior angles with projecting teeth.

TRIMORUS RUFITHORAX Dodd.

Hoplogryon rufithorax Dodd, *Trans. Roy. Soc. S. Aust.*, 38, 1914, 77.

♀. Length, 1.00 mm. Head black; thorax bright orange or brownish-yellow, the scutum and scutellum a little dusky; abdomen brownish-black, bright yellow at base; antennal scape yellow, the pedicel and funicle dusky-brown, the club fuscous; legs, including the coxae, bright golden-yellow.

Head normal; frons finely longitudinally striate, with scattered short fine setae, smooth above the antennal insertion; median carina of frons fine and complete; vertex finely reticulate-punctate, behind the eyes showing a few transverse striae, with scattered pubescence; cheeks smooth, with a few fine short hairs. Antennal scape slender, fully as long as the next five joints united; pedicel one-third longer than its greatest width; funicle 1 a little longer than the pedicel, 2 slightly shorter than 1, 3 wider than long, 4 transverse; club compact, the joints transverse. Thorax stout; scutum and scutellum densely finely reticulate-punctate; metanotal tooth short, broadly triangular, finely pointed at apex, its surface finely punctate; from lateral aspect the tooth is situated high above the base of the abdomen; propodeum very short at meson, its posterior margin deeply concave, the posterior angles blunt and not projecting outwardly. Forewings reaching well beyond apex of abdomen; moderately broad; sub-hyaline; marginal vein two-thirds as long as the submarginal, the stigmal vein moderately long and somewhat oblique. Abdomen stout, one-half longer than its greatest

width; segment 1 much wider posteriorly than basally, shorter than its basal width; 2 somewhat longer than 1; 3 somewhat longer than 1 and 2 united, twice as long as 4-6 united; 1 and 2 strongly striate; 3 finely densely punctate, the punctures without a reticulate tendency and without pubescence, with a slight tendency toward arrangement in longitudinal lines, the posterior and lateral margins smooth, with fine hairs laterally; 4 finely sculptured at base and with a few fine hairs.

♂. Unknown.

Habitat.—North Queensland: Cairns district, four females in April-July. A. P. Dodd.

Holotype in the South Australian Museum. I.1993.

A small species with striate frons and finely punctate third segment of abdomen; distinguished from the related species, except *tenuipunctatus*, by the regular punctuation of segment 3 without larger punctures or striae laterally.

TRIMORUS CONDENSUS, n. sp.

♀. Length, 1.25-1.40 mm. Head black; thorax deep dusky red-brown, blackish dorsally; abdomen brownish-black, reddish at base; mandibles red; coxae fuscous, the legs golden-yellow; first six antennal joints dusky brown, the scape reddish at base, the club fuscous.

Head transverse, the vertex descending sharply to the occipital margin, the frons gently convex; eyes large, shortly pubescent; frons finely densely striate and with scattered fine hairs, broadly smooth above the antennal insertion, the median carina delicate on the upper frons, absent on the smooth area; vertex immediately behind the lateral ocelli with a few fine transverse striae which are continued behind and against the eyes; behind these striae the surface is smooth, with numerous fine pubescent punctures which are absent laterally; cheeks smooth, with scattered fine hairs. Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 as long and as wide as the pedicel, 2 a little shorter than 1, 3 wider than long, 4 transverse; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum and scutellum finely pubescent, rather strongly reticulate-punctate, with a tendency toward longitudinal arrangement on the scutum; metanotal tooth reticulate, moderately long, broadly triangular, acute at apex, from lateral aspect horizontal and not situated high above the base of the abdomen; propodeum short, finely sculptured, its posterior margin rather deeply concave, its posterior angles not toothed and not projecting outwardly. Forewings hardly extending beyond apex of abdomen; moderately broad; lightly cloudy; marginal vein two-thirds as long as the submarginal, the stigmal vein normally short. Abdomen one-half longer than its greatest width; segment 1 twice as wide posteriorly as basally, as long as its basal width; 2 slightly longer than 1; 3 one-half longer than 1 and 2 united, twice as long as 4-6 united; 1 and 2 striate; 3 with fine dense non-pubescent punctures which give way laterally to fine longitudinal striae between which are shallow pubescent punctures, the lateral margins narrowly smooth and pubescent, the posterior margin rather broadly smooth; 4 and 5 finely densely punctate and pubescent, smooth posteriorly and at the median line.

♂. Metanotum, margins of scutum and scutellum, and segment 1 of abdomen, bright chestnut-red; coxae fuscous, the legs brownish-yellow.

Posterior margin of propodeum gently concave; abdomen two-thirds longer than its greatest width; segment 1 one-half wider posteriorly than basally, fully

as long as its basal width; 3 no longer than 1 and 2 united, more broadly smooth laterally and posteriorly, the lateral striae fine and faint; forewings extending well beyond apex of abdomen. Antennae two-thirds longer than the body; black, the scape and pedicel brownish-yellow; funicle 1 two-thirds as long as the scape, 2 a little shorter than 1, 3 as long as 1, 3-9 subequal.

Habitat.—South Queensland: Mt. Tambourine, 2,000 feet, many females, two males, in February and March, A. P. Dodd.

Holotype and allotype in the Queensland Museum. Paratypes in the author's collection.

This species may be distinguished from *tenuipunctatus* and *rufithorax* by the presence of lateral striae on segment 3 of the abdomen, the lateral margins not being broadly smooth; from *nigriventris* it differs in its smaller size, absence of a basal prominence on the abdomen, shorter first and second funicle joints, and the greater width of segment 1 of the abdomen posteriorly; it differs from *latispinus* in the absence of the basal abdominal hump, in funicle 1 being no longer than the pedicel, in the shorter abdomen, and the finer punctures of segment 4 and of segment 3 laterally. The male is very similar to *nigriventris* and *crassispinus*, but differs in the absence of strong striae behind the eyes.

TRIMORUS LATISPINUS, n. sp.

♀. Length, 1.80 mm. Black; antennae fuscous, the scape reddish at base; coxae fuscous, the legs reddish-yellow.

Head normal, transverse; eyes large, wide apart, lightly pubescent; frons and vertex shining and with sparse fine pubescence; frons rather strongly striate, indefinitely punctate between the striae on the upper frons, broadly smooth above the antennal insertion; median carina of frons delicate on the smooth area, not discernible on the upper frons; cheeks with scattered punctures bearing fine hairs, with several striae against the eye margins; behind the line of the vertex the surface is punctate and with a few fine subcircular striae, laterally are several strong striae continued behind the eyes, smooth between the striae; between the ocelli the surface is reticulate-punctate. Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 distinctly longer than the pedicel, twice as long as wide, 2 a little yet distinctly shorter than 1, 3 and 4 short and transverse; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum and scutellum rather strongly reticulate-punctate and with fine pubescence; metanotal tooth strongly reticulate, large, stout, as long as its basal width, from lateral aspect horizontal, projecting over and close to the base of the abdomen; propodeum short, finely densely punctate, its posterior margin uniformly rather deeply concave to receive the base of the abdomen, the posterior angles finely acute and not projecting outwardly. Forewings not extending beyond apex of abdomen; moderately broad; lightly clouded; marginal vein one-half as long as the submarginal, the stigmal vein rather long and oblique for the genus. Abdomen three-fourths longer than its greatest width; segment 1 twice as wide posteriorly as basally, as long as its basal width, with a raised hump at base; 2 one-half longer than 1; 3 twice as long as 2 or as 4-5 united; 1 striate; 2 striate but strongly reticulate-punctate laterally; 3 at median third with small close punctures which fail on the posterior third medially, on either side with somewhat larger punctures separated by fine irregular longitudinal striae, the lateral margins

broadly punctate and pubescent, the posterior margin narrowly smooth; 4 and 5 with dense moderate-sized pubescent punctures, smooth along the posterior margin.

♂. Unknown.

Habitat.—Victoria: Dandenong Ranges, two females in December, A. P. Dodd.

Holotype in the Queensland Museum. Paratype in the author's collection.

Close to *nigriventris*, from which it differs in the colour and shorter length of the funicle joints, the less coarse sculpture without a longitudinal arrangement on the scutum, and the shorter basal abdominal segment widening greatly posteriorly; the metanotal tooth is regularly triangular in *latispinus*, its lateral margins diverging broadly from the apex, whereas in *nigriventris* the lateral margins are hardly divergent from the apex, but suddenly diverge toward its base.

TRIMORUS NIGRIVENTRIS Dodd.

Hoplogryon nigriventris Dodd, *Proc. Roy. Soc. Q'land.* 26, 1914, 127.

♀. Length, 2.00 mm. Head black; thorax deep dusky red-brown, touched with red here and there, blackish laterally, the scutum more or less broadly red laterally; coxae fuscous, the legs clear reddish-yellow or lightly washed with brown; antennal scape and club fuscous, the scape reddish at base, the pedicel and funicle joints contrasting clear yellow.

Head normal, transverse; eyes large, wide apart, sparsely pubescent; frons and vertex shining, with scattered fine hairs; median carina of frons present, but not stronger than the striae; frons regularly longitudinally striate, without sculpture between the striae; between the ocelli the surface is reticulate-punctate; behind the line of the ocelli laterally there are oblique striae continued behind the eyes, but medially the surface may be densely punctate with short irregular longitudinal striae to the occipital margin, or sparsely punctate with fine transverse striae; cheeks largely smooth, with a few punctures and traces of fine striae. Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 very distinctly longer than the pedicel, two and a half times as long as wide, 2 a little shorter than 1, 3 abruptly shorter, a little wider than long, 4 transverse; club compact, joints 1.5 each twice as wide as long. Thorax stout; scutum and scutellum with fine pubescence; scutum rather strongly reticulate-punctate with a pronounced longitudinal arrangement; spine of metanotum rather long, stout, reticulate-punctate, blunt at apex, its sides subparallel, but broadly diverging at base, from lateral aspect horizontal, situated close to and projecting over the base of the abdomen; propodeum short, finely reticulate and pubescent, the posterior margin regularly moderately deeply concave, the posterior angles subacute and curved a little inwardly. Forewings long, but hardly extending beyond apex of abdomen; broad; rather deeply clouded; marginal vein one-half as long as the submarginal, the stigmal vein normally short. Abdomen twice as long as its greatest width; segment 1 one-half wider posteriorly than basally, a little longer than its basal width, with a raised prominence or horn at base; 2 one-third longer than 1; 3 almost twice as long as 2 or as 4-6 united, three-fourths as long as wide; 1 strongly striate, its prominence smooth at apex; 2 striate, smooth between the striae; 3 with small dense punctures, laterally with irregular longitudinal striae, between which are shallow punctures bearing fine hairs, the lateral margins smooth, the posterior margin narrowly smooth, but more broadly smooth medially; 4 and 5 densely punctate and pubescent, smooth posteriorly and narrowly at the median line.

♂. Agreeing with the female, but the metanotum is bright reddish; segment 1 of abdomen with sub-parallel lateral margins, a little longer than its greatest width, without a prominence; 3 more broadly smooth posteriorly, the punctures somewhat less dense and separated by fine irregular striae, the lateral striae absent, the lateral margins more broadly smooth; punctures on 4 and 5 somewhat sparser. Antennae a little longer than the body; black, the scape and pedicel clear testaceous; funicle 1 a little more than one-half as long as the scape; 2-9 very slightly decreasing in length.

Habitat.—New South Wales: Tweed River, the type male in May. South Queensland: Mt. Tambourine, three females in December; Bunya Mountains, one female in April.

Holotype in the South Australian Museum. I.11036.

TRIMORUS AUSTRALIS Dodd.

Trans. Roy. Soc. S. Aust., 38, 1914, 79.

♂. Length, 1.40 mm. Dull black; antennal scape and the legs, including the coxae, dull yellow-brown; first abdominal segment reddish.

Frons not striate, except against the mouth. Antennae no longer than the body; scape moderately long and stout; pedicel short, no longer than wide; funicle 1 about three times as long as wide, 2 as long as 1, 3 slightly shorter than 2, 4 a little yet plainly shorter than 3, 4-9 subequal, 10 almost twice as long as 9, one-third longer than 1, a little shorter than the scape. Thorax one-third longer than its greatest width; parapsidal furrows very delicate, wide apart; median lobe of scutum with fine raised longitudinal striae which give way anteriorly to dense fine punctures, the lateral lobes almost smooth; scutellum smooth, except for a few hairs and anterior and posterior foveate lines; metanotum very transverse, not raised, its posterior margin straight, with short straight delimiting lateral carinae, and a short raised median carina in lieu of the usual tooth; propodeum moderately long, densely punctate, its posterior border rather deeply concave, medially with two delicate well-separated carinae that form obtuse angles with the posterior margin, the posterior angles subacute. Forewings broad; lightly brownish; marginal vein somewhat shorter than the submarginal, the stigmal vein normally short. Abdomen two-thirds longer than its greatest width; segment 1 one-third wider posteriorly than basally, as long as its posterior width; 2 slightly longer than 1; 3 as long as 1 and 2 united, somewhat longer than 4-6 united; 1 and 2 striate; 3 smooth but with faint striae at base; 4-6 with scattered hairs.

♀. Unknown.

Habitat.—North Queensland: Cairns district, several males.

Holotype in the South Australian Museum, I.11995.

This species may be the male of either *australicus* Dodd or *atrinus* Dodd, which are both from the same locality.

TRIMORUS SPECIOSUS Dodd.

Trans. Roy. Soc. S. Aust., 38, 1914, 80.

♂. Length, 1.75 mm. Head black; thorax rich chestnut-red, the scutum jet black; abdomen dusky-black, segment 1, 2 except laterally, and 3 except lateral and posterior margins, bright yellow-brown; legs bright orange-yellow; antennae black, the scape deep brown.

Mandibles large, tridentate, the middle tooth small, the outer teeth long and acute. Antennae twice as long as the body; scape moderately long, one-half longer than funicle 1; pedicel no longer than wide; funicle joints very long, 1-4 gradually lengthening, 4 one-third longer than 1, 4-10 subequal. Thorax stout, slightly longer than its greatest width; parapsidal furrows delicate, complete, wide apart; median lobe of scutum with dense rather small punctures, posteriorly with also a few fine irregular longitudinal striae, the lateral lobes punctate anteriorly, smooth posteriorly; scutellum confluent punctate at base, smooth for the rest; metanotal tooth rather stout, acutely triangular; propodeum short, finely rugose, rather narrowly divided at base, the carinate posterior margin running straight and very obliquely from its base medially, the posterior angles not prominent or armed. Forewings very broad, as in *pulcherrimus*. Abdomen three-fourths longer than its greatest width; segment 1 widening posteriorly, a little longer than its basal width; 2 hardly longer than 1; 3 no longer than 1 and 2 united, two-thirds longer than 4-6 united; 1 and 2 striate, the rest smooth; 4-6 and lateral margins of 3 with scattered pubescence.

♀. Unknown.

Habitat.—North Queensland: Cairns district; the type male in September, A. P. Dodd.

Holotype in the South Australian Museum, 1.2000.

This species is very similar to *pulcherrimus*, but differs in the black scutum, the denser punctures of the scutum, the punctate base of the scutellum, the different form of the metanotal tooth, and the longer antennae. No female that can be associated with *speciosus* is known. The head of the unique example is mounted on a slide, hence the sculpture could not be ascertained.

TRIMORUS PULCHERRIMUS Dodd.

Trans. Roy. Soc. S. Aust., 38, 1914, 80.

♂. Length, 1.70 mm. Head black; thorax uniform rich chestnut-red; abdomen yellow-brown at base, segments 2 and 3 bright yellow, segments 4-6 and lateral margins of 2 and 3 brownish-black; legs bright orange-yellow; antennae black, the scape yellow-brown, dusky at apex.

Mandibles large, tridentate, the middle tooth small, the outer teeth long and acute. Antennae one-half longer than the body; scape moderately stout, one-half longer than funicle 1; pedicel hardly longer than wide; funicle joints elongate, 1-4 gradually increasing in length, 4 one-third longer than 3, 4-10 subequal. Thorax stout, a little longer than its greatest width; parapsidal furrows delicate, complete, wide apart; scutum with light pubescence, with numerous small rather scattered punctures, the lateral lobes smooth for their posterior half; posteriorly on the median lobe are a few fine irregular longitudinal striae; scutellum smooth, polished, with foveate margins; metanotum very transverse, rugose, armed medially with an excavated lamella whose posterior margin is raised and projects slightly in the form of a very short blunt tooth; propodeum short, finely rugose, rather narrowly divided at base, the delimiting carinae of the posterior margin straight and running very obliquely from the base medially, the posterior angles rounded and unarmed. Forewings long, very broad, two and a half times as long as their greatest width; lightly stained yellowish; marginal vein plainly shorter than the submarginal, the stigmal vein rather long for the genus. Abdomen one-half longer than its greatest width; segment 1 much wider posteriorly than basally, almost as long as its basal width; 2 one-half longer than

1; 3 a little longer than 1 and 2 united, one-half longer than 4-6 united; 1 and 2, except posteriorly, striate, the rest smooth; 4-6 and lateral margins of 3 with scattered pubescence.

♀. Unknown.

Habitat.—North Queensland: Cairns district, the type male in September. A. P. Dodd.

Holotype in the South Australian Museum, 1.1999.

The type is unique; no female is known that can be referred to this species. As the head of the only specimen is mounted on a slide, its sculpture could not be ascertained.

PARAGRION Kieffer.

Ann. Soc. Sci. Brussels, 32, 1908, 199.

This genus differs from *Trimorus* Forster only in the fact that the metanotum is unarmed; however, as the spine of the metanotum may be reduced to a minute tooth, the character would hardly appear of generic significance. Kieffer (1926) includes in the genus twelve species, in eight of which the wings are wanting or vestigial; the genotype is *P. pedestris* Kieffer (1908), a wingless insect from Europe. In the one Australian species, the wings are well developed; the metanotum is quite flat, and without a tooth or even a median carina.

PARAGRION GRACILIPENNIS Dodd.

Trans. Roy. Soc. S. Aust., 38, 1914, 33.

♀. Length, 1.00-1.50 mm. Black, the base of the abdomen bright reddish-yellow; legs, including the coxae, bright golden-yellow, the posterior tibiae and tarsi somewhat dusky; antennal scape yellow at base, dusky toward apex, the antennae otherwise black.

Head normal, transverse, slightly wider than the thorax; smooth and shining, with a few scattered fine hairs; on either side between the lateral ocelli and the eyes there is a small finely reticulate area; frons without a median carina; mouth with a few short converging striae; eyes large, bare, wide apart. Antennal scape long and slender, its articulate joint long, one-third as long as the scape; pedicel twice as long as its greatest width; funicle 1 one-third longer than the pedicel, 2 slightly longer than 1, 3 less than one-half as long as 2, but plainly longer than wide, 4 quadrate; club slender, joints 1-5 slightly wider than long. Thorax stout, from lateral aspect no longer than high, from dorsal aspect a little longer than its greatest width; scutum with scattered fine hairs, with fine surface reticulation, smooth laterally and posteriorly, foveate along lateral and anterior margins; parapsidal furrows absent; scutellum smooth, with a few hairs, its margins foveate; metanotum very transverse, not raised or armed, foveate at base, smooth posteriorly; propodeum moderately short, with rather dense white pubescence, narrowly divided at base medially, the posterior margin gently concave, the posterior angles not armed or prominent. Forewings very long, projecting far beyond apex of abdomen; slender, four and a half times as long as their greatest width, the apex broadly rounded; longest marginal cilia equal to one-fourth the greatest wing width; marginal vein somewhat shorter than the submarginal, the stigmal vein very oblique for the group. Legs slender, the tibiae and tarsi long. Abdomen strongly narrowed at base; three-fifths longer than its greatest width, which is somewhat distinctly greater than that of the

thorax; segment 1 shorter than its basal width, not much wider posteriorly than basally; 2 one-half longer than 1; 3 twice as long as 2, three-fourths as long as wide; 4-6 short, together one-half as long as 3; 1 strongly striate, 2 strongly striate but smooth along lateral and posterior margins; 3 shortly striate at base; remainder of the abdomen smooth; 4 and 5, and 2 and 3 laterally, with scattered fine hairs.

♂. Unknown.

Habitat.—Queensland: Cairns district, the holotype female in May, A. P. Dodd; Chinchilla, one female in February, A. P. Dodd.

Holotype in the South Australian Museum, 12004.

The Chinchilla specimen is smaller than the holotype, but agrees in other characters.

TRIACANTHA Ashmead.

Entom. Americana, 3, 1887, 101.—*Pentacantha* Ashmead, *Canad. Entom.*, 20, 1888, 51.—*Propentacantha* Kieffer, *Das Tierreich*, 1926, 241.

This genus may be distinguished from *Trimorax* Forster by the fact that the metanotum bears three teeth. As in certain species of *Trimorax*, it is possible that the parapsidal furrows are present in the male and absent in the female of the same species; the four species previously included in the genus were described from males only. Kieffer (1926) recognized four species, all from North America, and twenty-two species of *Propentacantha* from Europe, Africa, North America, and Australia; the two Australian species, *P. nigritum* Dodd and *P. australica* Dodd, are transferred in this paper to *Trimorax*, and possibly certain other species should be similarly treated. The genotype is *T. americana* Ashmead (1887).

My collection contains six specimens, four males and two females, that are described herewith as three species. These forms are closely related, but it is to be noted that in *T. asperata* the lateral teeth of the metanotum are so reduced that the species could be included in *Trimorax* without altering materially the limits of that genus. There are minor characters in the three species that are not found in the Australian species of *Trimorax*; thus, the lateral margins of the propodeum are oblique and converge distinctly toward the posterior angles, and the marginal vein is less than one-half as long as the submarginal; these two characters occur in *Gryonella*, but in *Trimorax* the propodeum is not greatly wider across the anterior angles than at the posterior angles, and the marginal vein is longer.

Key to the Species.

1. Lateral teeth of the metanotum hardly developed; segment 3 of abdomen punctate for at least its basal half *asperata*
- Lateral teeth of metanotum apparent; segment 3 of abdomen punctate at base only 2
2. Size larger, scutellum partly sculptured; lateral teeth of metanotum stout *trifurcata*
- Size smaller; scutellum smooth; lateral teeth of metanotum small *simulata*

TRIACANTHA ASPERATA, n. sp.

♀. Length, 1.60 mm. Head black; thorax reddish-brown, the scutum and scutellum dusky-black; abdomen dull reddish-brown, blackish laterally and posteriorly, its basal prominence dark; legs, including the coxae, clear testaceous; antennal scape and pedicel brownish-yellow, the funicle joints dusky-brown, the club fuscous.

Head normal, transverse, the frons a little convex; eyes moderately large, very wide apart, sparsely pubescent; line of the vertex with a delicate transverse groove extending across from the posterior margin of the eyes through the lateral ocelli; frons up to the transverse groove strongly longitudinally striate, smooth between the striae, with a few fine hairs; median carina of frons complete; between the ocelli the surface is reticulate-punctate; vertex behind the transverse groove smooth, with scattered hairs; temples and cheeks smooth with scattered hairs. Antennal scape moderately long and slender; pedicel one-half longer than its greatest width; funicle 1 as long as the pedicel, 2 somewhat shorter and as long as wide, 3 and 4 small and transverse; club compact, joints 1-5 each twice as wide as long. Thorax stout; scutum and scutellum very strongly reticulate and with scattered hairs; metanotum very transverse, rugose, its posterior border straight and finely margined, its posterior angles rounded and faintly prominent, armed medially with a fine rather short suberect acute tooth which bears a median carina; propodeum very short, broad posteriorly, punctate and faintly pubescent, the posterior margin gently concave, the posterior angles acute in the form of very short teeth. Forewings hardly extending beyond apex of abdomen; moderately broad; lightly brownish; marginal vein short for the group, one-third as long as the submarginal, the stigmal vein oblique and moderately short. Abdomen two-thirds longer than its greatest width; segment 1 twice as wide posteriorly as basally, as long as its basal width, with a short suberect blunt prominence at base; 2 no longer than 1; 3 three times as long as 2, twice as long as 4-6 united, three-fourths as long as wide; 1 closely striate, its prominence reticulate, but smooth apically; 2 rather sparsely striate, smooth between the striae; 3 with small dense non-pubescent punctures, laterally with a few fine longitudinal striae, the lateral margins punctate and pubescent, the posterior margin smooth; 4 and 5 densely finely punctate and pubescent, smooth at the median line and along the posterior margin.

♂. Differs from the female as follows: abdomen black, the first two segments reddish; sculpture of scutum densely reticulate-punctate, not as coarse as in the female, the punctures sparse against the lateral margins; parapsidal furrows indicated but obscure; scutellum with confluent punctures on the basal half, smooth on the posterior half; forewings extending well beyond apex of abdomen; segment 1 of abdomen without a prominence, a little longer than its basal width; segment 3 twice as long as 2, punctate for its basal half at the median line, the punctate area laterally and the few lateral striae extending for two-thirds its length, the lateral margins broadly smooth, except for a few pubescent punctures and a small coriaceous area toward the posterior margin; punctures on 4 and 5 sparser than in the female. Antennae one-half longer than the body; black, the scape brownish-yellow; pedicel no longer than wide; funicle joints about subequal, each two-thirds as long as the scape.

Habitat.—South Queensland: Brisbane, one female, A. P. Dodd; Mt. Tambourine, one female in March, A. P. Dodd; Blackall Range, one male in January, A. P. Dodd.

Holotype and allotype in the Queensland Museum. Paratype in the author's collection.

Distinguished from *trifurcata* and *simulata* by the greater extent of the punctuation of segment 3 of the abdomen, and the non-development of the lateral teeth of the metanotum. In the key to the species of *Trimorus*, this species would

fall near *nigri-ventris*, *condensus* and *latispinus*, from which it may be distinguished by the slender metanotal spine, abruptly smooth head behind the line of the vertex, the strongly reticulate scutum, and the shorter marginal vein.

TRISSACANTHA TRIFURCATA, n. sp.

♂. Length, 2.15 mm. Black, the base of the abdomen showing reddish; coxae fuscous, the legs bright reddish-yellow; antennae black, the scape dusky-brown, red at base; mandibles red.

Head slightly wider than the thorax, very transverse; vertex thin, descending sharply to the occipital margin; frons hardly convex; eyes moderately large, bare, very wide apart; mandibles very large, tridentate, the middle tooth small; frons strongly striate and with scattered white hairs, the striae diverging somewhat from the delicate median carina; line of the vertex with two or three fine transverse striae, behind these striae with numerous scattered punctures bearing fine hairs, the punctures smaller laterally; cheeks with scattered pubescent punctures and, against the eyes, with fine striae. Antennae one-half longer than the body; pedicel no longer than wide; funicle 1 two-thirds as long as the scape, a little yet distinctly longer than 2, 2-9 subequal. Thorax stout; scutum very strongly reticulate-punctate and with scattered fine hairs, the punctures smaller medio-anteriorly; scutellum strongly reticulate-punctate laterally, densely punctate at base, smooth medio-posteriorly; metanotum reticulate, transverse, with three teeth, the middle tooth slender and moderately long, the lateral teeth stouter, shorter and blunt; propodeum short, reticulate, with three short longitudinal carinae on either side of the median line, shortly narrowly divided at base, the posterior margin carinate and gently concave, terminating at the lateral angles in a short acute upturned tooth. Forewings extending well beyond apex of abdomen; broad; lightly brownish, more deeply clouded beneath the marginal vein; marginal vein two-fifths as long as the submarginal, three times as long as the stigmal vein, which is long and oblique for the group. Abdomen a little less than one-half longer than its greatest width; segment 1 as long as its basal width, almost twice as wide posteriorly as basally; 2 a little longer than 1; 3 twice as long as 2, or as 4-6 united; 1 and 2 strongly striate, the striae failing laterally on 2; 3 broadly smooth laterally, except for a few pubescent punctures, shortly punctate and with a few fine striae at base, the punctures small, close, and arranged in longitudinal rows, the rest of the segment smooth and shining; 4 and 5 with numerous punctures bearing fine hairs.

♀. Unknown.

Habitat.—South Queensland: Chinchilla, one male in January, A. P. Dodd. Holotype in the Queensland Museum.

This species differs from *simulata* in its larger size, the well-developed lateral teeth of the metanotum, the scutum not being smooth laterally, and the scutellum being partly sculptured.

TRISSACANTHA SIMULATA, n. sp.

♂. Length, 1.55 mm. Black, the metanotum, margins of the pleurae, and base of abdomen showing reddish; coxae dusky yellow-brown, the legs bright yellow washed with brown, the tarsi dusky; antennae black, the scape and pedicel dusky-brown, the former reddish at base; mandibles yellow.

Head transverse, the frons a little convex, the line of the vertex thin, thence descending abruptly to the occipital margin; eyes large, with a few scattered

hairs, very wide apart; mandibles very large, tridentate; frons strongly striate and with scattered fine hairs, the striae diverging somewhat from the median carina which is complete; vertex to the occipital margin smooth, with scattered fine hairs, and with traces of fine transverse striae at the line of the lateral ocelli; cheeks smooth, with scattered fine hairs. Antennae one-half longer than the body; scape moderately long and slender; pedicel no longer than wide; funicle joints subequal in length, each two-thirds as long as the scape, with short dense pubescence. Thorax stout; scutum with numerous long fine white hairs, and with open shallow reticulate punctures or open reticulation, the sculpture closer and more definitely punctate anteriorly, absent against the lateral margins; parapsidal furrows not evident; scutellum smooth, with scattered indefinite punctures bearing long fine hairs, with a few punctures on either side at its base; metanotum transverse, the posterior angles prominent and obtuse, the posterior margin finely carinate and somewhat concave to the slender short median tooth, from lateral aspect the posterior angles are raised in the form of blunt teeth; propodeum short, pubescent laterally, with several short striae or carinae medially, shortly narrowly divided at the median line, the posterior margin gently concave and terminating laterally in a short tooth. Forewings extending well beyond apex of abdomen; broad; lightly brownish; marginal vein two-fifths as long as the submarginal, three times as long as the stigmal vein which is rather long and oblique. Abdomen stout, one-half longer than its greatest width; segment 1 two-thirds wider posteriorly than basally, as long as its basal width; 2 one-fourth longer than 1; 3 as long as 1 and 2 united, twice as long as 4-6 united; 1 and 2 rather finely striate, the latter smooth laterally and against its posterior margin; 3 at base medially shortly punctate, the punctures small and close, on either side finely striate for about one-half its length, otherwise smooth, including the lateral margins broadly; 4 and 5, and lateral margins of 2 and 3, with numerous long fine white hairs arising from small punctures.

♀. Unknown.

Habitat.—Queensland: Gogango, 40 miles west of Rockhampton, two males in November. A. P. Dodd.

Holotype in the Queensland Museum. Paratype in the author's collection.

GYRONELLA Dodd.

Trans. Roy. Soc. S. Aust., 38, 1914, 84.

This genus differs from *Teleas* Latreille in having the metanotum bidentate. The large mandibles, swollen posterior femora, and spiny legs distinguish it from the other Australian genera. Five species are recognized here; of these, four are known in the female sex, and one in the male sex; it is possible, however, that *G. cruefordi* may be the male of either *G. bruesi* or *G. affinis*. The genotype is *G. cruefordi* Dodd.

Key to the Species

1. Vertex broadly rounded; scutum and scutellum with fine sculpture; forewings rather narrow *platythorax*
- Vertex sharp; scutum strongly reticulate or with large punctures; forewings broad 2
2. Femora yellow; punctures of scutum not reticulate; metanotal teeth large *magnum*
- Femora dark; punctures of scutum reticulate; metanotal teeth small 3
3. Frons longitudinally striate; male *cruefordi*
- Frons transversely striate; females 4

4. Posterior margin of propodeum gently concave; segment 1 of abdomen less than twice as wide posteriorly as basally; segment 3 with weak striae at base *brucei*
 Posterior margin of propodeum rather deeply concave; segment 1 of abdomen more than twice as wide posteriorly as basally; segment 3 with weak punctures at base *offinis*

GRYONELLA CRAWFORDI Dodd.

Trans. Roy. Soc. S. Aust., 38, 1914, 84.

♂. Length, 1.40-1.80 mm. Black; antennae wholly black; coxae black, the femora and tibiae dusky-black, the tarsi dusky-yellow, the trochanters and base and apex of femora and tibiae bright yellow; mandibles yellowish.

Head transverse, no wider than the thorax, the vertex thin and descending sharply to the occiput, the frons gently convex; ocelli rather large, close together; eyes very wide apart, bare; frons rather finely longitudinally striate, the striae converging above towards the ocelli; on the lower half of the frons several of the inner striae encircle the antennal insertion; line of the vertex with irregular transverse striae; behind the ocelli to the occiput the surface is smooth; cheeks smooth; head with scattered long fine hairs; mandibles long, bidentate. Antennae slightly longer than the body; scape rather short, one-third longer than funicle 1; pedicel no longer than wide; funicle 1 slightly longer than 2, 2-3 almost subequal. Thorax stout, a little longer than wide; pronotum narrowly visible at the lateral angles; scutum with scattered hairs, the parapsidal furrows delicate, complete, wide apart, and a little curved; lateral lobes of scutum finely shallowly rugose inwardly, almost smooth laterally; median lobe of scutum with an open network of very large shallow reticulate punctures, but on the posterior half on either side laterally there are two or three irregular striae or rugae parallel with the parapsidal furrows; scutellum reticulate at base, smooth for the rest, with scattered hairs; metanotum punctate, transverse, its posterior margin concave and bidentate, the teeth small and well-separated; propodeum short, hidden medially by the metanotum, broad at base and sloping inwardly to the posterior angles, the posterior margin uniformly concave, the posterior angles subacute or shortly toothed. All femora somewhat swollen; posterior femora much swollen, two and a half times as long as their greatest width, their tibiae spinose at apex, their tarsi short. Forewings reaching well beyond apex of abdomen; moderately broad, the apex broadly rounded; lightly stained brownish; venation dark; marginal vein somewhat less than one-half as long as the submarginal, about four times as long as the short stigmal vein. Abdomen hardly wider than the thorax, one-half longer than its greatest width; segment 1 narrowed at base, as long as its basal width, almost twice as wide posteriorly as basally; 2 no longer than 1; 3 two-thirds as long as wide, as long as 1 and 2 united, less than twice as long as 4-6 united; 1 and 2 densely striate, the lateral and posterior margins of 2 smooth; 3 smooth, its basal one-third to one-half medially with rather dense short narrow longitudinal punctures; 4-6 smooth, with scattered long fine hairs; similar scattered hairs occur on 1-3 laterally and 3 posteriorly.

♀. Unknown.

Habitat.—Queensland: Proserpine, the type male in October; Westwood, two males in November and December. New South Wales: Muswellbrook, four males in October.

Holotype in the South Australian Museum, I.2003.

CRYNELLA BRUESI Dodd.*Trans. Roy. Soc. S. Aust.*, 38, 1914, 85.

♀. Length, 1.50 mm. Black; antennae wholly black, the prominence yellow; coxae and femora black or fuscous, the tibiae and tarsi clear yellow.

Head transverse, the vertex thin and descending sharply to the occipital margin, the frons somewhat convex; eyes moderately large, very wide apart, lightly pubescent; frons transversely striate, the striae curving sharply to become longitudinal laterally, dense on the lower frons, on the upper frons sparse and with shallow punctures between, bearing fine white hairs; line of the vertex with transverse striae, the declivous area behind the ocelli smooth, with scattered fine punctures bearing fine white hairs and with traces of fine striae; cheeks smooth, with a few hairs; mandibles very long, bidentate. Antennal scape moderately long; pedicel one-half longer than its greatest width; funicle 1 a little longer than wide, 2 as wide as long, 3 and 4 small and transverse; club six-jointed, compact, the joints much wider than long. Thorax hardly longer than its greatest width, somewhat convex above; pronotum narrowly visible at the lateral angles; scutum with an open network of large reticulate punctures and laterally on either side with several irregular longitudinally-oblique striae; scutellum with similar reticulate punctures and with irregular longitudinal striae; punctures of scutum and scutellum bearing long fine white hairs; metanotum reticulate-punctate, transverse, its lateral margins oblique, its posterior margin gently concave and shortly bidentate, the teeth well apart; propodeum finely sculptured, short, very short medially, the posterior margin gently concave, the posterior angles subacute, the lateral margins sloping obliquely inwardly to the posterior angles. Posterior femora much swollen, about twice as long as their greatest width. Forewings hardly extending beyond apex of abdomen; moderately broad, lightly stained brownish; venation distinct, the marginal vein one-third as long as the submarginal. Abdomen somewhat wider than the thorax, one-third longer than its greatest width; segment 1 almost as long as its basal width, less than twice as wide posteriorly as basally; 3 a little longer than 1 and 2 united, two-thirds as long as wide, twice as long as 4-6 united; 1 and 2 rather strongly striate; 3 weakly striate at base, the rest smooth; 4 and 5, 2 and 3 laterally, and 3 posteriorly, with scattered long fine hairs.

♂. Unknown.

Habitat.—North Queensland: Cairns district, the holotype female in January. Holotype in the South Australian Museum, 1.2009.

CRYNELLA AFFINIS, n. sp.

♀. Length, 1.50 mm. Black; antennae wholly black; coxae and femora dusky-black, the tibiae and tarsi bright yellow; antennal prominence and the mandibles yellow.

In general appearance and structure very similar to *bruesi*. Vertex of head more rounded than in *bruesi* and descending less sharply to the occiput; sculpture of frons similar; vertex smooth laterally from the ocelli; behind the ocelli to the occiput smooth, with scattered minute punctures bearing fine white hairs; cheeks smooth with a few hairs. Antennal scape moderately long; pedicel one-half longer than its greatest width; funicle 1 a little longer than its greatest width, 2 as wide as long, 3 and 4 transverse; club compact, the joints much wider than long. Scutum with the reticulate punctures much larger and less numerous than in *bruesi* and with about two irregular oblique striae on either side laterally;

scutellum with large reticulate punctures; scutum and scutellum with sparse long fine white hairs; metanotum very transverse, armed posteriorly with two short blunt teeth which are widely separated, the posterior margin deeply concave; posterior margin of propodeum rather deeply concave, the posterior angles fine but not toothed. Forewings hardly extending beyond apex of abdomen; moderately broad; lightly brownish; venation thick, deep brown; marginal vein one-third as long as the submarginal. Abdomen distinctly wider than the thorax, one-third longer than its greatest width; segment 1 as long as its basal width, greatly widening posteriorly, where it is more than twice as wide as at base; 2 no longer than 1; 3 plainly longer than 1 and 2 united; 1 rather finely densely striate; 2 finely densely striate, but smooth laterally; 3 at base medially with a number of weak narrow punctures; the rest smooth; 4 and 5, 2 and 3 laterally, and 3 posteriorly, with scattered long fine hairs.

♂. Unknown.

Habitat.—North-west New South Wales: Moonie River, one female in October. A. P. Dodd.

Holotype in the Queensland Museum.

Differs from *bruesi* in several minor characters, namely: the smooth area between the lateral ocelli and the eyes; the larger less numerous reticulate punctures on the scutum; the more deeply concave metanotum with the teeth more pronounced; the rather deeply concave posterior margin of the propodeum; the greater width of the first abdominal segment posteriorly; and the absence of striae at the base of segment 3.

GRYONELLA MAGNIDENS, n. sp.

♀. Length, 1.85 mm. Black; antennal scape bright reddish-yellow, the pedicel and funicle joints suffused with yellow, the club black; legs bright reddish-yellow, the coxae fuscous; mandibles red.

From lateral aspect the frons is gently convex to the line of the ocelli, the vertex precipitous from the ocelli to the occiput; from frontal aspect, the head is one-third wider than long, the frons very broad; head shining; lower half of frons transversely striate, the striae curving laterally to the ventral margin; upper frons with broad sub-obsolete transverse striae between which are numerous small punctures bearing fine short hairs; behind the line of the vertex the surface bears fine transverse striae between which are fine scattered punctures bearing fine hairs; cheeks smooth with scattered pubescence; mandibles very large; eyes large, very wide apart, with a few hairs. Antennal scape moderately long and stout; pedicel one-half longer than its greatest width; funicle 1 somewhat distinctly longer than the pedicel, twice as long as its greatest width; 2 shorter than 1, scarcely longer than wide; 3 and 4 transverse; club compact, six-jointed, joints 1-5 transverse. Thorax as wide as long, its dorsal surface somewhat convex; scutum with numerous hairs, medially with large shallow sub-obsolete punctures, which are small, dense, and distinct toward the declivous anterior margin, and with a few irregular transverse striae toward the posterior margin; laterally there are irregular longitudinally-oblique striae and shallow punctures, the innermost striae on either side almost meeting at the posterior margin; scutellum smooth, with a few pubescent punctures; metanotal plate with two stout blunt coarsely-striate teeth, the posterior margin rather deeply concave almost to its base; propodeum very short, hidden medially by the metanotum, its lateral margins oblique, its posterior

margin uniformly gently concave to the subacute posterior angles, its surface finely sculptured. Forewings not extending beyond apex of abdomen; moderately broad; lightly brownish; venation fuscous, distinct; marginal vein one-fourth as long as the submarginal. Posterior femora greatly swollen. Abdomen one-third longer than its greatest width, a little wider than the thorax; segment 1 broad, its basal width almost twice its length and two-thirds its posterior width; 2 no longer than 1; 3 one-third longer than 1 and 2 united, two-thirds longer than 4-6 united, two-thirds as long as wide; 1 strongly densely striate, reticulate at base; 2 densely striate, smooth posteriorly, with dense pubescence laterally; 3 densely minutely punctulate at base medially, smooth for the rest, with scattered short fine hairs posteriorly, with longer denser pubescence laterally; 4 and 5 smooth basally and posteriorly, in between the smooth areas with dense pubescence and fine surface sculpture.

♂. Unknown.

Habitat.—South Queensland: Bunya Mountains, 2,500 feet. Dalby district, one female in April. A. P. Dodd.

Holotype in the Queensland Museum.

Distinguished from *crucifordi*, *bruesi*, and *affinis*, by the yellow femora, non-reticulate scutum, large stout metanotal teeth, and the broad base of the abdomen.

GRYONELLA PLATYTHORAX, n. sp.

♀. Length, 1.30 mm. Black; antennal scape black, the remaining joints dusky yellow-brown; mandibles red; coxae and femora black, tibiae dusky-brown, trochanters, base and apex of tibiae, and the tarsi, bright reddish-yellow.

Vertex of head rounded, not sloping sharply behind the lateral ocelli; from frontal aspect the head is one-half wider than long; frons very gently convex; vertex finely densely transversely striate and coriaceous, and with an extremely short inconspicuous fine pubescence, the striae failing toward the occipital margin; frons densely transverse-circularly striate, coriaceous above, shining on the lower half, on either side ventrally with a patch of longer pubescence; cheeks with similar fine sculpture to the vertex, but the striation is longitudinal; mandibles very long. Antennal scape long and slender; pedicel one-half longer than its greatest width; funicle 1 distinctly longer than the pedicel, twice as long as its greatest width, 2 slightly longer than wide, 3 and 4 very transverse; club compact, six-jointed, joints 1-5 very transverse. Thorax flat dorsally, no longer than its greatest width; pronotal angles rounded and prominent; parapsidal furrows absent; pronotum, scutum, and scutellum very densely finely reticulate and with a number of small scattered punctures, without pubescence; metanotal plate broad, projecting, its lateral margins oblique, its posterior margin lightly concave and bidentate, its surface densely longitudinally striate; propodeum short, visible laterally, finely sculptured, the posterior margin concave, the posterior angles acute and tooth-like. Forewings not reaching beyond apex of abdomen; rather narrow, three and a half times as long as their greatest width, the apex broadly rounded; lightly stained brownish; marginal cilia extremely short; venation deep brown, the marginal vein one-fourth as long as the submarginal. Posterior femora much swollen. Abdomen no wider than the thorax, one-third longer than its greatest width; segment 1 broad at base, one-half wider posteriorly than basally, one-half as long as its basal width; 2 one-half longer than 1; 3 one-half as long as wide, no longer than 1 and 2 united, one-half longer than 4-6 united; 1 densely,

rather finely, striate, but finely pubescent laterally; 2 with a median basal area of short very strong striae; rest of 2, and 3, smooth, with a rather dense pubescence of fine short hairs arising from minute punctures; pubescence longer on 4 and 5.

♂. Unknown.

Habitat.—Queensland: Gogango, 40 miles west of Rockhampton, one female in February, A. P. Dodd.

Holotype in the Queensland Museum.

A very distinct species, readily distinguished by the more rounded vertex of the head, the flat dorsal surface and fine sculpture of the thorax, and the narrower forewings.

XENOMERUS Walker.

Entom. Mag., London, 3, 1836, 355.

Walker erected this genus on the male sex of *X. ergenna* Walker from England; the female of this species has apparently not yet been discovered; the genus is unknown outside England and Australia. *Xenomerus* can be distinguished from *Trimorus* by the pedicellate-nodose flagellar joints of the male antennae, and the deep abbreviated parapsidal furrows. The Australian species are closely related, and can be separated by means of the following key:

1. Thorax brownish; scutum smooth *flavicornis*
- Thorax black; scutum with impressed reticulation, except posteriorly 2
2. Head much wider than the thorax; metanotal tooth rather long; funicle 2 in female plainly shorter than 1 *laticeps*
- Head a little wider than the thorax; metanotal tooth short; funicle 2 in female hardly shorter than 1 *varipes*

XENOMERUS VARIPES Dodd.

Trans. Roy. Soc. N. Aust., 33, 1914, 83.—*X. dubius* Dodd, *ibid.*, p. 84.

♂. Length, 1.25 mm. Black; coxae fuscous, the legs golden-yellow, the posterior tibiae and tarsi dusky; antennal scape and pedicel yellow, the flagellar joints fuscous with their stalks pale yellow; mandibles yellow.

Head somewhat wider than the thorax, very transverse, smooth or nearly so; lower half of frons longitudinally striate; eyes large, bare, wide apart; mandibles rather long, tridentate. Antennae long and slender, somewhat longer than the body; scape long and slender; pedicel a little longer than wide; funicle joints pedicellate-nodose, bearing very long hairs which are twice as long as the joints; funicle 1 one-half longer than wide, slightly swollen but without a stalk; 2 twice as long as 1, 2.4 subequal, 5.9 subequal, each a little longer than 2; 2.4 each with a slender basal stalk and terminal node; 5 with a shorter stalk at each end, the node depressed medially; 6.9 without a basal stalk, with two nodes separated by a short stalk and with a long terminal stalk; apical joint no longer than the penultimate, a little swollen at its base. Thorax no longer than its greatest width, a little longer than high; scutum sharply declivous anteriorly, foveate along the lateral margins, its surface with fine impressed reticulation, but smooth for the posterior third; parapsidal furrows present on the posterior half, as deep abbreviated grooves wide apart; scutellum smooth, foveate along anterior and posterior margins; metanotum transverse, armed medially with a short acute broadly triangular tooth; propodeum short, unarmed, pubescent, narrowly divided medially, the posterior margin gently concave. Legs slender,

the tibiae and tarsi long. Forewings extending well beyond apex of abdomen; broad; hyaline; discal cilia fine and sparse; venation terminating at one-half the wing length, the marginal vein somewhat shorter than the submarginal, the stigmal vein rather oblique. Abdomen one-third longer than its greatest width, no wider than the thorax; segment 1 much wider posteriorly than basally, hardly as long as its basal width; 3 one-half longer than 1 and 2 united, twice as long as 4-6 united; 1 strongly striate; 2 striate at base, smooth laterally and posteriorly; 3 shortly striate at base; the rest smooth; 4-6, and 2 and 3 laterally, with scattered hairs.

♀. Length, 1.35 mm. Posterior tibiae and tarsi clear yellow; discal cilia of forewing moderately coarse and dense. First six antennal joints yellow, the club black; scape long and slender, as long as the next five joints combined; pedicel twice as long as its greatest width; funicle joints a little narrower than the pedicel; 1 somewhat shorter than the pedicel, twice as long as its greatest width; 2 hardly shorter than 1; 3 and 4 abruptly shorter, quadrate; club compact, six-jointed, joint 2 the largest, 1 and 2 slightly wider than long, 3-5 each twice as wide as long.

Habitat.—North Queensland: Cairns district, one male, two females, in May-August, A. P. Dodd.

Holotype in the South Australian Museum, 1.2005.

The sexes were originally described as distinct species.

XENOMERUS LATICEPS Dodd.

Trans. Roy. Soc. S. Aust., 40, 1916, 28.

♀. Length, 1.20 mm. Black, the abdomen reddish at extreme base, the tip of the metanotal spine whitish; legs golden-yellow; antennae wholly black.

Head very transverse, distinctly wider than the thorax, the vertex very thin and descending abruptly to the posterior margin; frons smooth and shining, with a strong median carina; lower frons with longitudinal striae; behind the line of the vertex the surface bears fine scaly reticulation; cheeks smooth. Antennal scape long and slender; pedicel two and a half times as long as its greatest width; funicle joints narrower than the pedicel; 1 two-thirds as long as the pedicel; 2 two-thirds as long as 1, one-half longer than wide; 3 and 4 a little wider than long; club six-jointed, as in *varipes*. Thorax stout, as wide as long, from lateral aspect somewhat higher than long; parapsidal furrows and sculpture of scutum and scutellum as in *varipes*; metanotal tooth rather long and acute; propodeum short, declivous, densely punctate, without noticeable pubescence. Forewings normal; hyaline; discal cilia moderately dense and coarse; venation as in *varipes*. Abdomen one-third longer than its greatest width; segment 1 a little shorter than its basal width, much wider posteriorly than basally; 2 slightly longer than 1; 3 twice as long as 2; 1 and 2 strongly striate; 3 striate medially for about two-thirds its length, smooth laterally and posteriorly; 4 and 5 finely reticulate at base.

♂. Unknown.

Habitat.—New South Wales. Hawkesbury River, the type female in October, A. A. Girault.

Holotype in the South Australian Museum, 1.5428.

Differs from *varipes* in the wider head, dark antennae, shorter second funicle joint, and the longer metanotal tooth.

XENOMERUS FLAVICORNIS Dodd.

Trans. Roy. Soc. S. Aust., 38, 1914, 84.

♀. Length, 1.20 mm. Head black; thorax dusky-brown; abdomen black, the basal segment yellow; legs golden-yellow, the coxae fuscous; first six antennal joints yellow, the scape and pedicel somewhat dusky, the club black.

Head smooth, or nearly so, the lower frons with striae converging to the mouth. Antennae as in *varipes*, except that the funicle joints are more distinctly narrower and shorter than the pedicel. Scutum and scutellum, according to the original description, smooth with a few scattered pin-punctures. Forewings hyaline, the discal cilia moderately coarse and dense. Abdomen stout, one-fourth longer than its greatest width; segment 1 distinctly shorter than its basal width; striation of segments as in *varipes*.

♂. Unknown.

Habitat.—North Queensland: Cairns district, the holotype female in September, A. P. Dodd.

Holotype in the South Australian Museum, I.2007.

The holotype is mounted on a slide; hence the sculpture of the thorax could not be re-examined. The species is very close to *varipes*, but differs apparently in the smooth scutum and the colour of the thorax and the base of the abdomen.