

REVISION OF THE AUSTRALIAN PHORACANTHINI (FAM.
CERAMBYCIDAE), WITH NOTES, AND DESCRIPTIONS
OF NEW SPECIES OF THIS GROUP AND
OF ALLIED GENERA.

By H. J. CARTER, B.A., F.E.S.

(Six Text-figures.)

[Read 29th May, 1929.]

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The insects of this group are in many cases common and widely distributed over the continent as "borers" in various species of *Eucalyptus*. The adult imagines occur frequently under the loose bark, so characteristic of these trees, and indeed are often known as "firewood" beetles, from their prevalence in this; but they also frequent the flowers of these trees, as also of *Leptospermum* and *Angophora*. Some of the species have been introduced into other countries, no doubt with their associated species of *Eucalyptus*. Thus *Phoracantha semipunctata* F., has now a wide distribution through South Africa (Zululand, Transvaal and Rodriguez specimens in British Museum), while *Coptocercus trimaculatus* Hope appears to have been redescribed by Fauvel as a New Caledonian species (*vide infra*).

The chief characters of the group are: Head short, antennae with at least the third segment spinose, eyes coarsely granulate, pronotum more or less nodulose on disc, generally spinose or tuberculate at sides; anterior coxal cavities open, the intermediate closed behind.

The line dividing the subfamilies Phoracanthini and Callidiopini is not easy to define. A spine on the third antennal segment is present in *Acyrysa*, in the insect described by Blackburn as *Bethelium spinicorne* (recently taken by the author in

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the Queensland National Park, MacPherson Range), and in two species of *Sisyrium* before me that are otherwise inseparable from the genus. Further, *Acyrusa* and *Bethelium spinicorne* appear more nearly related to the Phoracanthini than are either *Porithodes* or *Skeletodes*. Lacordaire stated that only the close likeness between *Acyrusa* and *Sisyrium* prevented his inclusion of *Acyrusa* under the Phoracanthides. This likeness is intensified in the case of *A. tasmanica* Gah., while the two species of *Sisyrium* before me having the third antennal segment spinose still further increase this affinity. Again, *Porithodes* is near *Bethelium* in its comparatively short prothorax, simply rounded at sides without lateral spines or tubercles, and the elytra without eburneous elevations. In this last character *Bethelium spinicorne* approaches the Phoracanthini.

Without undue splitting of genera on the single character of the spinose antennal segment it appears best to adhere to the combination of characters mentioned above as limiting the subfamily, which in my opinion includes only the genera of my tabulation as follows; though, in the light of certain species of *Sisyrium* having spinose antennae, there seems to be some claim for this genus also to be included:

Australian Genera of the Phoracanthini.

1. Femora linear, or gradually thickened	2
Femora clavate, pedunculate at base	7
2. Antennal segments bispinose	3
Antennal segments unispinose	4
3. Sides of prothorax spinose or pustulose	<i>Tryphocaria</i>
Sides of prothorax lightly rounded	<i>Yorkeica</i>
4. Sides of prothorax bispinose	<i>Demelius</i>
Sides of prothorax unispinose	5
Sides of prothorax pustulose	6
5. Apices of elytra bispinose	<i>Phoracantha</i>
Apices of elytra truncate	<i>Coleocoptus</i>
6. Anterior tibiae arched, antennal segments 3-7 or 8 spinose	<i>Epithora</i>
Anterior tibiae straight, antennal segment 3 only spinose	<i>Atesta</i>
7. Antennal spines well developed on 3 to 6 or 7	<i>Coptocercus</i>
Antennal spines little developed on 3-5 at most	8
8. Elytra with eburneous elevations arranged transversely	<i>Allotisis</i> , subgen.
Elytra with round eburneous elevations arranged longitudinally	<i>Thoris</i>
Elytra without eburneous elevations	<i>Skeletodes</i>

The distinction between *Coptocercus* and *Allotisis* is very finely drawn, the latter being at most a subgenus. The very different facies of *Thoris* and *Skeletodes*, however, warrants their separation. In the latter I find the antennal segments 3-5 clearly bispinose. Pascoe, in describing *Elete*, mentions only the spine on the third segment.

Tryphocaria Pasc. Genotype, *T. hamata* Newm.—Pascoe distinguished this genus from *Phoracantha* by (1) its small prothorax in proportion to elytra, (2) more linear femora, (3) forehead more narrowed in front, (4) shorter antennae, (5) antennal segments 3-8 bispinose at apices (in *Phoracantha* 3-6 simply spinose). To these Blackburn appended "It may be added that the antennae have a more or less distinct indication of a twelfth joint." (These PROCEEDINGS, 1888, p. 1457).

The last statement is erroneous. Both in *Phoracantha* and *Tryphocaria* the eleventh segment (the term "joint" should be limited to the "articulation" between segments, though long carelessly employed as synonymous with segment) has an apical portion compressed, this portion sometimes emphasized by a ring of minute

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setae, that at a casual glance does give a suggestion of an extra segment, but there is no articulation at this ring and the binocular microscope clearly shows the nature of this pseudo-segment.

In the description of *T. punctipennis*, Blackburn goes further to state "antennae . . . having 12th joint well developed and perfectly distinct from the rest; it is about $\frac{1}{3}$ as long as the 11th joint." (These PROCEEDINGS, 1888, p. 1462). Now I have before me an example from the South Australian Museum labelled in Blackburn's handwriting as *T. punctipennis* Blackb., that is most probably the ♀ from Fowler's Bay described in his note under *punctipennis*. In this example the typical pseudo-segment is not more strongly developed than in many examples of *T. hamata* Newm. Of the five characters above, said to distinguish *Tryphocaria*, only (1) and (5) are of wide application or of practical use, the others varying with the species and (3) being of doubtful occurrence.

With regard to (1) the relatively small prothorax, I have taken measurements of all the *Tryphocaria* and of several *Phoracantha* and find that of the eleven species regarded as valid in my tabulation, six can be definitely so distinguished, namely, *hamata*, *mastersi*, *odewahni*, *longipennis*, *punctipennis* and *frenchi*, the other four differing little or not at all in this respect from *Phoracantha*. Thus the only real generic distinction of *Tryphocaria* lies in the nature of the antennae, unless a special genus be raised for these four, which seems undesirable. As to the number of spinose segments, there is some specific and even individual variability throughout the whole group. Pascoe says of *Phoracantha*, "3-6 apice spinosis", but his genotype *P. semipunctata* F., has 3-7 spinose, as also have the majority of species. Of *Tryphocaria* Pascoe says "3-8 apice bispinosis", but the eighth is often obsoletely spined in the genotype *hamata*, while in examples of *T. mastersi* before me only 3-6 are spined.

Xypeta Pasc.—The author distinguished this genus from *Tryphocaria* by (1) forehead widened in front, (2) short anterior legs and the unusual length and slenderness of the remainder. Again, in his note under *X. grallaria*, he states "one of the most remarkable of the whole subfamily, owing to its very short anterior legs and the unusual length and slenderness of the remainder."

As regards slenderness, I find no distinction from *Tryphocaria*, nor is there anything in the width of the front that deserves special distinction; there remains then only the length of the legs, or rather the ratio of the respective lengths of the front to the hind legs. I have, therefore, made careful measurements of typical specimens of *X. grallaria*, *T. hamata* and *Ph. gigas* Hope (= *tricuspis* Newm.), the last of which has been placed under *Xypeta* by Dr. Aurivillius in the Junk Catalogue, a position suggested by Blackburn. The following are the results:

	Dimensions of example in mm.	Front femur.	Front tibia.	Hind femur.	Hind tibia.
<i>X. grallaria</i> ♂	42 × 14	9	8	17	14.5
<i>T. hamata</i> ♂	36 × 11	10	8	17.5	14
<i>Ph. tricuspis</i> ♂*	45 × 12	12.5	10	21	17

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If these results be standardized for an insect of common length, 36 mm. long, we get:

	Dimensions of example in mm.	Front femur.	Front tibia.	Hind femur.	Hind tibia.	Ratio front : hind leg.
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Clearly there is so little to distinguish the first two of these that I can only consider *Xypeta* as synonymous with *Tryphocaria*, or at most, a subgenus.

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Tryphocaria punctipennis Blkb.—Seven examples (4 ♂, 3 ♀) are before me, including a ♂ that has been compared with type, and the ♀ (from the South Australian Museum) that is probably the specimen described by Blackburn from Fowler's Bay. It is named and labelled by this author. The males are rather like some examples of *T. odewahni* but are less convex, the elytral costae are less defined and the apices are clearly bispinose. I think it is a good species.

Tryphocaria princeps Blkb.—Mr. Lea has lately, while visiting Sydney, very kindly brought the type of this for my examination. It might be considered a variety of *T. hamata* Newm., but there are certain differences which warrant its separation until further material is obtainable. These differences are (1) prothoracic spines shorter and straight, (2) elytra with dark basal fascia, (3) pre-apical fascia replacing the usual oval macula. The following species are undescribed:

TRYPHOCARIA IMMACULATA, n. sp. Text-fig. 1.

♀. Elongate, subcylindric, subnitid. Head, pronotum and underside brownish-black, elytra and appendages reddish-brown, the former darker at shoulders, base and basal two-thirds of suture. Head and pronotum sparsely, elytra very sparsely, underside finely and densely clothed with pale pubescence.

Head finely rugose-punctate, sulcate on front, antennae extending to about two-thirds the length of elytra; segments 3-6 bispinose at apex, the exterior much more evident than the interior, in 7-10 the apices only a little produced; 3-10 successively shorter than preceding, 11 slightly longer than 10. *Prothorax* 4 × 5 mm., with strong lateral spines slightly recurved at apex; disc with 5 nitid tubercles, the medial one elongate, interspaces rugose-punctate. *Scutellum* dark brown, pubescent, triangular with rounded sides. *Elytra* 30 × 11 mm., subcylindric; shoulders rather prominent and nitid, apices subtruncate between two short spines (in one example the exterior spine subobsolete); basal half of elytra coarsely subreticulately punctate, the two feebly indicated costae forming wider intervals along their length, these disappearing at apical third, punctures gradually decreas-

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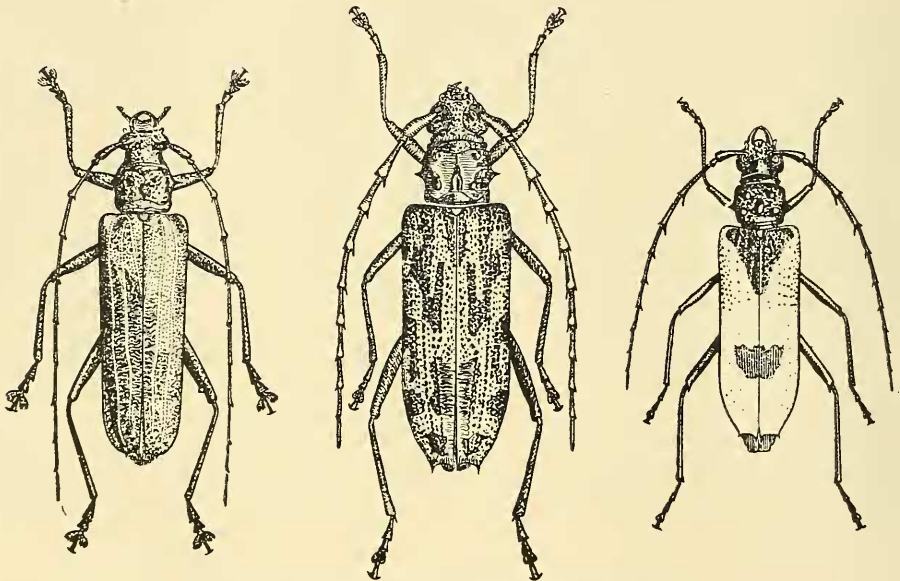
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Dim.—40-41 × 11 mm.

Hab.—Australia (Parry and Fry Collections in British Museum).

Two examples, both ♀, are amongst the Phoracanthini sent from the British Museum. One has a label on which what appears to be 'Goulburn River' is illegibly written. It is nearest in form to some examples of *T. odewahni* Pasc., but besides the absence of any dark spot, or pattern on the elytra, the lateral spines are longer than in Pascoe's species and slightly recurved. In *T. odewahni* these spines are usually very short, sometimes mere tubercles, while the elytral



Text-fig. 1.—*Tryphocaria immaculata*, n. sp.

Text-fig. 2.—*Tryphocaria placenta*, n. sp.

Text-fig. 3.—*Tryphocaria triangularis*, n. sp.

apices are often rounded off externally. The sculpture of *odewahni* differs, always showing the two subcostae much more distinctly, with an even closer rugose-punctate surface, more cellulose-punctate at base, with less defined punctures on apical half. Such examples of *odewahni* as are most nearly concolorous are very dark, almost black, whereas the general coloration of *immaculata* is that of the ground colour of *T. hamata* Newm. The ratio of the length of prothorax to that of elytra is at its minimum in this species.

Holotype in British Museum.

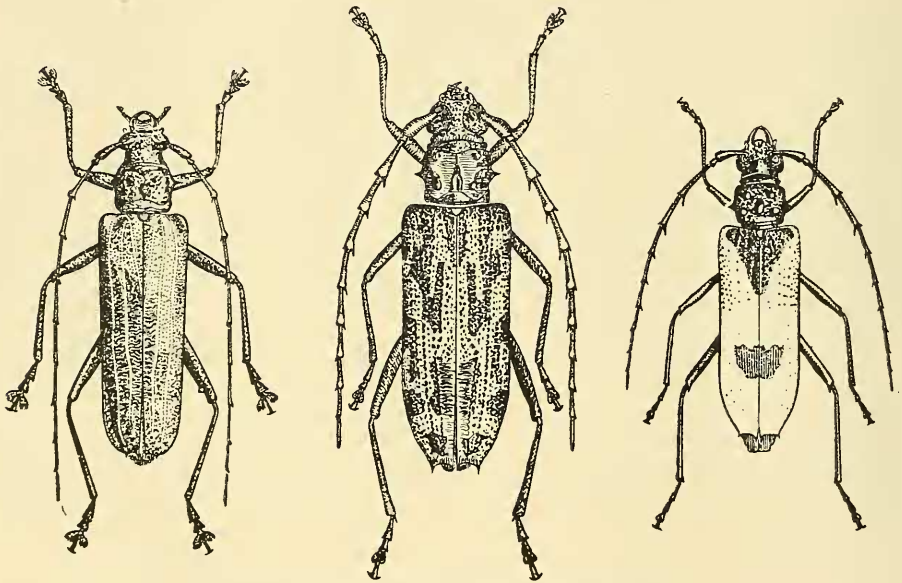
Note.—Since mailing the British Museum specimens for return, I have seen a male example of the above from the collection of Mr. F. E. Wilson, taken by him in the Grampians, Victoria. The antennae are longer than the body, the colour differs in the almost total absence of "black" from the upper surface;

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the apical structure is as noted in the second example above (exterior spine subobsolete), and the dimensions 35×9 mm.

TRYPHOCARIA PLACENTA, n. sp. Text-fig. 2.

♂. Elongate-oblong; above opaque brownish-black, elytra mottled with vague pale markings; beneath black, rather densely clad with pale grey recumbent pile; antennae and femora black, the former with apices of segments red, the apices of tibiae and the whole tarsi red.

Head rugose, antennae not as long as body, segments 3-7 bispinose. *Prothorax* very sparsely pilose, with lateral conical spines, disc with four irregular nitid tubercles, the middle area with a longitudinal carina bifurcating behind. *Scutellum* black, triangular. *Elytra* considerably wider than and more than four times as long as prothorax; apices bidentate, the external spine the longer; disc coarsely cellulose-punctate, the punctures large and deep, smaller only at extreme apex, interstices very narrow, slightly widened only at the pale markings.

Dim.— 38×10 mm.

Hab.—Queensland: Townsville (F. P. Dodd in British Museum), Mulgrave (French Collection in National Museum, Melbourne).

Two examples examined show a very distinct species, the general colour of which is that of a dull mottled plum-cake, which has suggested its name. The only tendency to arrangement of colour lies in an ill-defined preapical fascia, preceded by a black rectangular sutural blotch, the apex itself black. The usual subcostiform impressions seen on most species are here scarcely traceable. The Melbourne Museum example has only three legs, though otherwise perfect.

Holotype in British Museum.

TRYPHOCARIA TRIANGULARIS, n. sp. Text-fig. 3.

♀. Elongate oblong. Head, pronotum, underside and elytral markings chocolate-brown; antennae, legs and ground colour of elytra testaceous; the dark elytral markings consisting of (1) a basal triangle extending longitudinally to the basal third, with apex at suture, its base not extending to shoulders, (2) a postmedial squarish patch extending laterally about half-way over each elytron (in three examples this broken up into two more or less widely separate maculae), (3) suture, narrow margins, and apical spines.

Head lightly punctate, medial frontal channel well marked, antennae not quite the length of body, segments 3 to 7 or 8 bispinose. *Prothorax* nitid and impunctate, very sparsely pubescent, with two straight lateral spines, disc embossed with five smooth tubercles, four being round, the fifth (medial) elongate-ovate. *Scutellum* triangular, pilose. *Elytra* parallel, about four times as long as prothorax, apices truncate between two long spines, surface punctures not very close, moderately large at base, soon decreasing in size behind and subobsolete on apical third, intervals not at all rugose, two evident subcostiform lines on each. Whole underside with a fine, dense, recumbent pile; femora linear, their apices sharply spinose.

Dim.— $25\text{-}30 \times 8\text{-}9$ mm.

Hab.—Queensland: Stanthorpe (National Museum, Melbourne), Townsville (Dodd) and Brisbane (in British Museum); two without locality label (Relton bequest in Queensland Museum).

Five examples examined are in size and general character nearer *T. mitchelli* Hope than any other, but, besides clear distinction in their elytral pattern, they

the apical structure is as noted in the second example above (exterior spine subobsolete), and the dimensions 35×9 mm.

TRYPHOCARIA PLACENTA, n. sp. Text-fig. 2.

♂. Elongate-oblong; above opaque brownish-black, elytra mottled with vague pale markings; beneath black, rather densely clad with pale grey recumbent pile; antennae and femora black, the former with apices of segments red, the apices of tibiae and the whole tarsi red.

Head rugose, antennae not as long as body, segments 3-7 bispinose. *Prothorax* very sparsely pilose, with lateral conical spines, disc with four irregular nitid tubercles, the middle area with a longitudinal carina bifurcating behind. *Scutellum* black, triangular. *Elytra* considerably wider than and more than four times as long as prothorax; apices bidentate, the external spine the longer; disc coarsely cellulose-punctate, the punctures large and deep, smaller only at extreme apex, interstices very narrow, slightly widened only at the pale markings.

Dim.— 38×10 mm.

Hab.—Queensland: Townsville (F. P. Dodd in British Museum), Mulgrave (French Collection in National Museum, Melbourne).

Two examples examined show a very distinct species, the general colour of which is that of a dull mottled plum-cake, which has suggested its name. The only tendency to arrangement of colour lies in an ill-defined preapical fascia, preceded by a black rectangular sutural blotch, the apex itself black. The usual subcostiform impressions seen on most species are here scarcely traceable. The Melbourne Museum example has only three legs, though otherwise perfect.

Holotype in British Museum.

TRYPHOCARIA TRIANGULARIS, n. sp. Text-fig. 3.

♀. Elongate oblong. Head, pronotum, underside and elytral markings chocolate-brown; antennae, legs and ground colour of elytra testaceous; the dark elytral markings consisting of (1) a basal triangle extending longitudinally to the basal third, with apex at suture, its base not extending to shoulders, (2) a postmedial squarish patch extending laterally about half-way over each elytron (in three examples this broken up into two more or less widely separate maculae), (3) suture, narrow margins, and apical spines.

Head lightly punctate, medial frontal channel well marked, antennae not quite the length of body, segments 3 to 7 or 8 bispinose. *Prothorax* nitid and impunctate, very sparsely pubescent, with two straight lateral spines, disc embossed with five smooth tubercles, four being round, the fifth (medial) elongate-ovate. *Scutellum* triangular, pilose. *Elytra* parallel, about four times as long as prothorax, apices truncate between two long spines, surface punctures not very close, moderately large at base, soon decreasing in size behind and subobsolete on apical third, intervals not at all rugose, two evident subcostiform lines on each. Whole underside with a fine, dense, recumbent pile; femora linear, their apices sharply spinose.

Dim.— $25\text{-}30 \times 8\text{-}9$ mm.

Hab.—Queensland: Stanthorpe (National Museum, Melbourne), Townsville (Dodd) and Brisbane (in British Museum); two without locality label (Relton bequest in Queensland Museum).

Five examples examined are in size and general character nearer *T. mitchelli* Hope than any other, but, besides clear distinction in their elytral pattern, they

have less robust antennae with more elongate spines, while the apical spines of the femora are peculiar. All the examples are ♀, the two Queensland Museum specimens having mutilated antennae.

Holotype in the National Museum, Melbourne.

Table of Tryphocaria.

1. Elytra quite or nearly concolorous	2
Elytra more or less patterned	5
2. Each elytron with two evident costae	3
Elytra without costae	<i>placenta</i> , n. sp.
3. Elytra subnitid, concolorous rufo-fuscous	<i>immaculata</i> , n. sp.
Elytra subopaque, darker, or if paler, showing two dark spots	4
4. Elytral apices spinose only at suture	<i>odewahni</i> Pasc.
Elytral apices clearly bispinose	<i>punctipennis</i> Blkb.
5. Apical area widely obfusate	6
Apical area not so	7
6. Sides of prothorax spinose	<i>frenchi</i> Blkb.
Sides of prothorax tuberculose	<i>mastersi</i> Pasc.
7. Form narrow, margins narrowly dark	8
Form wider, margins concolorous with disc	9
8. Premedial markings (if present) longitudinal	<i>longipennis</i> Hope
Premedial markings consist of a basal triangle	<i>triangularis</i> , n. sp.
9. Elytra about six times as long as prothorax	10
Elytra about four and a half times as long as prothorax	11
10. Lateral spines of prothorax recurved	<i>hamata</i> Newm.
Lateral spines of prothorax straight	<i>princeps</i> Blkb.
11. Elytra largely testaceous, post medial markings cruciform	<i>mitchelli</i> Hope
Elytra deep red, heavily blotched with black	<i>solida</i> Blkb.*

Synonymy.—(a) *T. hamata* Newm. = *Phoracantha acanthocera* Hope = *uncinata* Blkb. (b) *T. longipennis* Hope = *superans* Pasc. = *hamata* Blkb.

With regard to (a), the only examples labelled *acanthocera* that I have seen are in the Macleay Museum Collection as from Swan River. These are possibly the examples from which Hope published his description (*Proc. Zool. Soc. Lond.*, 1840, p. 40), attributed by him to Macleay, and terminating with the words "In Mus. Dom. Macleay." This description gives no dimensions, nor locality. The examples are undoubtedly *T. hamata* Newm.

The other synonyms have been previously recorded, except that of *T. superans* Pasc. In this case the close similarity of description, and the fact that both are described as from Tasmania, point to the synonymy of Pascoe's species with *longipennis* Hope. I have seen many examples from Tasmania and have taken it myself, but have not met with any other species from that region. No two examples of this are quite alike, the apical third being sometimes brownish, this darker area tending to disappear to a varying degree.

Phoracantha Newm.—Genotype *P. semipunctata* F.—The Junk Catalogue, edited by Dr. Aurivillius, records twenty-one species and four synonyms. I think I have identified all these except *P. imperialis* Perroud from New Caledonia and *P. tunicata* W. S. Macl. From information courteously sent by Dr. Marshall and by Mr. Blair, *P. imperialis* Perr., from its different prothorax, *inter alia*, is clearly not a *Phoracantha*, and probably requires a new genus for its reception.

P. tunicata W. S. Macl.—The description of this is very imperfect, chiefly referring to colour and omitting dimensions and habitat. Hope (*Proc. Zool. Soc. Lond.*, 1840) placed this under his Sect. 2. Tubericolles. "Antennis spinosis, thorace tuberculato, haud spinosa, apicibus elytrorum bidentatis femoribus que

* Colour, pattern and size very like *Phoracantha synonyma* Newm.

have less robust antennae with more elongate spines, while the apical spines of the femora are peculiar. All the examples are ♀, the two Queensland Museum specimens having mutilated antennae.

Holotype in the National Museum, Melbourne.

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1. Elytra quite or nearly concolorous	2
Elytra more or less patterned	5
2. Each elytron with two evident costae	3
Elytra without costae	<i>placenta</i> , n. sp.
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8. Premedial markings (if present) longitudinal	<i>longipennis</i> Hope
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Elytra about four and a half times as long as prothorax	11
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* Colour, pattern and size very like *Phoracantha synonyma* Newm.

incrassatis", whereas the description contains the words "thorace subcylindricis utrinque unidentato". If, then, Hope merely copied the description without seeing the type one must conclude that it was wrongly included in this Section. Though Hope stated that it was in "Mus. Dom. Macleay" I can find no specimen bearing this name in the Macleay Museum. If, however, Hope's classification be correct, the words "femoribus incrassatis" suggest *Coptocercus* for this species.

P. savesi Fauv. = *Coptocercus trimaculatus* Hope, as recorded by Mr. C. J. Gahan for New Caledonian examples in the British Museum; evidently introduced, as *P. semipunctata* F. has been introduced into South Africa (Zululand, Transvaal and Rodriguez in British Museum). Omitting these, as well as four other synonyms noted below, and three species which belong to other genera, my tabulation contains eleven valid species to which three new species are appended, bringing the total number to thirteen (omitting the doubtful *P. tunicata* Macl.).

Always, or nearly always, associated with the *Eucalyptus* tree, the species of the genus have a wide continental distribution and, as is almost invariably the case in such distribution, there are great and puzzling variations which appear to connect different species by gradual slight differences. Thus six of my names belong to species having in common the following dark elytral markings: (1) a premedial zig-zag fascia; (2) a dark preapical fascia or blotch; (3) variable basal markings. Of these six two, *semipunctata* F. and *tricuspis* Newm., are distinct and well-known in collections. The other four, *synonyma* Newm., *impavida* Newm., *lata* Hope and *elegans* Blkb., might be considered as merely well graded subspecies. *P. synonyma* Newm. has ground colour dark red, the darker markings heavier and more extensive, especially at base. In the other three the form is more generally elongate, the ground colour testaceous or pale, and may be distinguished as follows: *P. lata* Hope has the post-medial markings limited to an isolated oval or oblong sutural macula (This is the form figured by Tillyard, R.63, Insects of Australia and New Zealand); *P. impavida* Newm. is a western race of more opaque pale colour and of narrower form (the only example that I have seen definitely labelled *impavida*, in the South Australian Museum, is, I consider, *lata* Hope); of *P. elegans* Blkb., besides an example compared with type, sent by Mr. Blair, I have only seen one other (in Mr. Lea's collection, from Geraldton, W.A.) which differs from *impavida* in smaller size, and the prevalence of testaceous ground colour, the only dark markings being a very narrow zig-zag premedial fascia and a narrow post-medial fascia vaguely extending to the sides. This species very doubtfully deserves distinction and may probably be found to merge into *impavida* Newm.

The monotypic subgenus *Diospides* Pascoe is distinguished from *Phoracantha* by the linear femora and tibiae of *D. obscura* Don.

PHORACANTHA ALTERNATA, n. sp. Text-fig. 4.

Elongate-oblong. Head, prothorax and underside dark brown, sometimes castaneous, the first very sparsely pubescent, the last densely so; elytra castaneous, subnitid and glabrous, with three wide, nearly straight bands testaceous, the first basal, the second post-medial, the third apical; antennae and legs castaneous, the latter testaceous beneath.

Head coarsely, unevenly punctate, medial sulcus wide, antennae longer than body in ♂, not quite extending to apex in ♀, segments 3-6 unispinose. *Prothorax*:

incrassatis", whereas the description contains the words "thorace subcylindricis utrinque unidentato". If, then, Hope merely copied the description without seeing the type one must conclude that it was wrongly included in this Section. Though Hope stated that it was in "Mus. Dom. Macleay" I can find no specimen bearing this name in the Macleay Museum. If, however, Hope's classification be correct, the words "femoribus incrassatis" suggest *Coptocercus* for this species.

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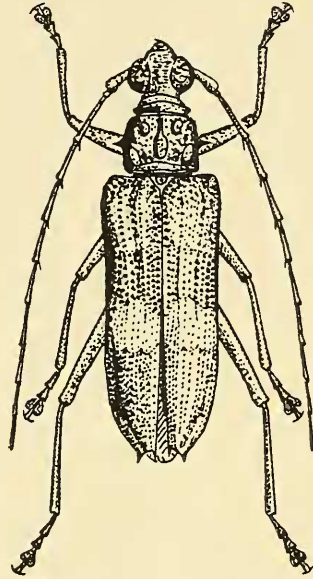
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Head coarsely, unevenly punctate, medial sulcus wide, antennae longer than body in ♂, not quite extending to apex in ♀, segments 3-6 unispinose. *Prothorax*:

Sides strongly spinose, disc with four well-raised, rounded tubercles and a medial, nitid, elongate, tuberculate prominence having a depression within it, interspaces rugulose. *Elytra* parallel, apices strongly bispinose, external spine the longer, disc coarsely reticulate-punctate on basal half, the punctures gradually diminishing in size from base to apex, the apical third still distinctly and closely punctate;



Text-fig. 4.—*Phoracantha alternata*, n. sp.

the usual subcostiform impressions subobsolete or indicated only by wavy lines of intervals slightly wider than the rest. Metasternum lightly punctate, rest of underside finely pubescent. Legs very long, hind femora almost extending to apex of abdomen.

Dim.—♂. 25-28 × 6-7 mm.; ♀. 28-33 × 7-10 mm.

Hab.—New South Wales: Monaro (Macleay Museum); Victoria: Mt. Macedon, Gisborne (National Museum, South Australian Museum, and Mr. Lea's collection), Mallee District (National Museum), Diamond Creek (South Australian Museum).

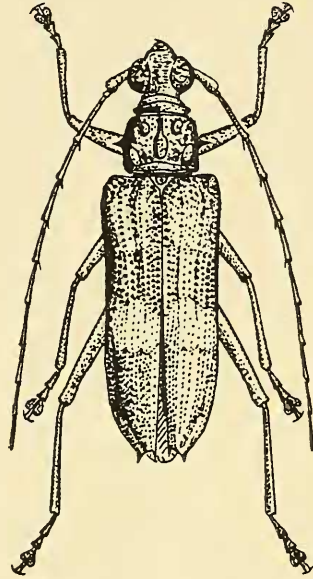
Thirteen examples examined are unusually uniform in form and colour. The species can only be confused with *flavopicta* Pasc., from which the following comparison will distinguish it:

<p style="text-align: center;"><i>flavopicta</i> Pasc.</p> <p><i>lateral spines of prothorax</i> very short <i>pronotum</i> opaque, strongly pubescent <i>medial pale markings of elytra</i> "somewhat oblique to form a rough cross" <i>apical pale markings</i> an elongate, isolated oblong</p>	<p style="text-align: center;"><i>alternata</i>, n. sp.</p> <p>unusually robust nitid, sparsely pubescent wider and straight more or less covering apex</p>
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P. flavopicta Pasc. appears to have the wider distribution, specimens before me bearing labels as from Cunnamulla (Q.), Gunning (N.S.W.), Mulwala and Mallee District (Vict.), Kangaroo Island, Port Augusta and Ardrossan (S. Aust.).

Holotype ♂ in Macleay Museum; allotype ♀ in National Museum, Melbourne.

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<i>flavopicta</i> Pasc.	<i>alternata</i> , n. sp.
<i>lateral spines of prothorax</i> very short	unusually robust
<i>pronotum</i> opaque, strongly pubescent	nitid, sparsely pubescent
<i>medial pale markings of elytra</i> "somewhat oblique to form a rough cross"	wider and straight
<i>apical pale markings</i> an elongate, isolated oblong	more or less covering apex

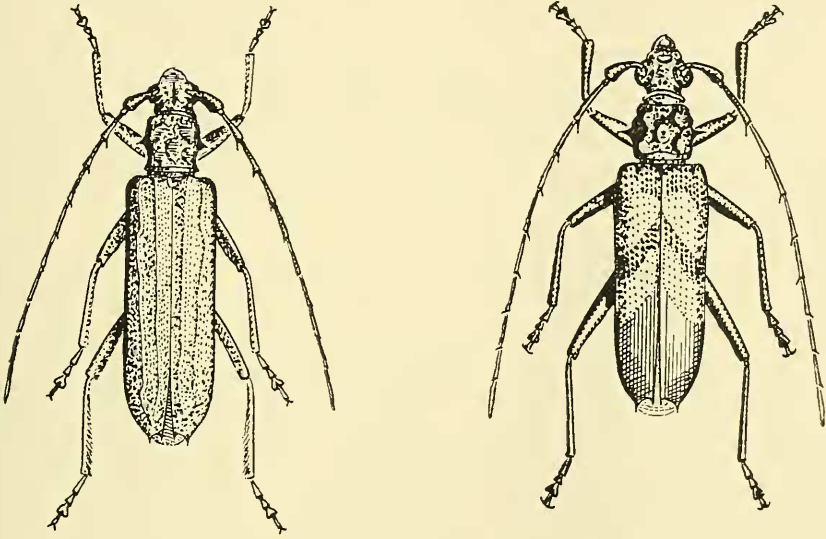
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Holotype ♂ in Macleay Museum; allotype ♀ in National Museum, Melbourne.

PHORACANTHA CONCOLOR, n. sp. Text-fig. 5.

Elongate-oblong. Head and pronotum black, elytra dark brown, subnitid, sometimes paler towards apex. Head and pronotum moderately, elytra very sparsely, underside densely and finely pubescent.

Head finely and closely rugose, antennae not quite as long as body in ♂, shorter in ♀, segments 3-6 simply spined on the outside, 3-11 subequal in length, successively narrower, 11 much narrower than 10, and showing pseudo-segment marked by ring of setae. *Prothorax* with lateral conical spines; sulcate and constricted at apex and base, disc with four nitid, somewhat rounded and flattened tubercles, a fifth (medial) more or less elongate; interspaces irregularly rugose.

Text-fig. 5.—*Phoracantha concolor*, n. sp.Text-fig. 6.—*Phoracantha porosa*, n. sp.

Scutellum triangular, pubescent. *Elytra* wider than, and at least four and a half times as long as, prothorax, apices strongly bispinose, exterior spine the longer; disc coarsely and subseriately punctate at basal third, the punctures thence gradually diminishing in size, becoming denser and less regular but clearly visible to extreme apex; two well-raised costiform lines on each underside, the sculpture hidden by dense recumbent pubescence.

Dim.—♂. 25 × 7 mm.; ♀. 29 × 8 mm.

Hab.—New South Wales: Blue Mountains (H. J. Carter, in National Museum and Macleay Museum; G. E. Bryant, in British Museum), Goulburn (in South Australian Museum).

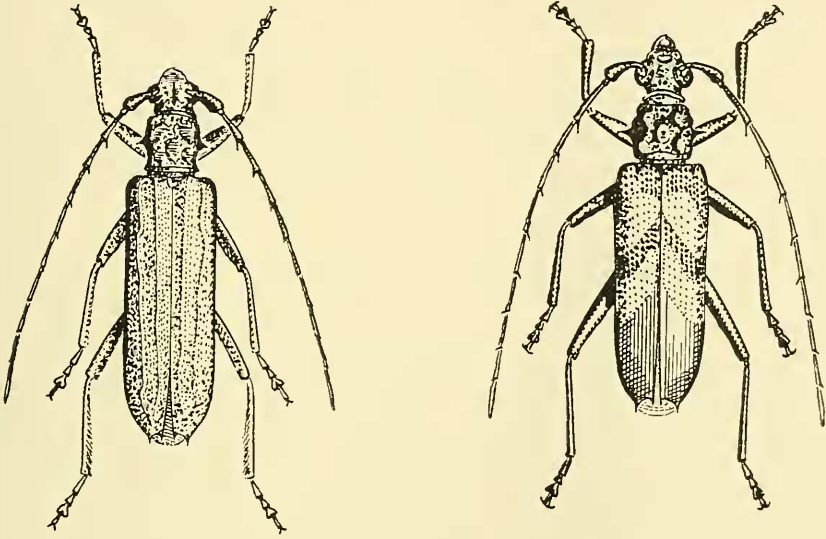
Five examples before me show a rather narrow parallel species, readily distinguished by the absence of any pale marking or pattern on the elytra.

Holotype ♂ in Macleay Museum; allotype ♀ in the National Museum, Melbourne; paratype in British Museum.

PHORACANTHA CONCOLOR, n. sp. Text-fig. 5.

Elongate-oblong. Head and pronotum black, elytra dark brown, subnitid, sometimes paler towards apex. Head and pronotum moderately, elytra very sparsely, underside densely and finely pubescent.

Head finely and closely rugose, antennae not quite as long as body in ♂, shorter in ♀, segments 3-6 simply spined on the outside, 3-11 subequal in length, successively narrower, 11 much narrower than 10, and showing pseudo-segment marked by ring of setae. *Prothorax* with lateral conical spines; sulcate and constricted at apex and base, disc with four nitid, somewhat rounded and flattened tubercles, a fifth (medial) more or less elongate; interspaces irregularly rugose.

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Scutellum triangular, pubescent. *Elytra* wider than, and at least four and a half times as long as, prothorax, apices strongly bispinose, exterior spine the longer; disc coarsely and subseriately punctate at basal third, the punctures thence gradually diminishing in size, becoming denser and less regular but clearly visible to extreme apex; two well-raised costiform lines on each underside, the sculpture hidden by dense recumbent pubescence.

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Five examples before me show a rather narrow parallel species, readily distinguished by the absence of any pale marking or pattern on the elytra.

Holotype ♂ in Macleay Museum; allotype ♀ in the National Museum, Melbourne; paratype in British Museum.

PHORACANTHA POROSA, n. sp. Text-fig. 6.

Oblong, glabrous above. Head and prothorax nitid, dark castaneous brown, elytra red with wide apical area and a narrow medial fascia black, or nearly so; antennae, legs and underside pale red, the last with fine, dense, recumbent pubescence.

Head closely punctate, medial frontal sulcus distinct; antennae longer than body in ♂, about as long as body in ♀, segments 3-7 strongly spined on outside; 3 longer than 4, 4-11 subequal in length, gradually lessening in width, 11 very narrow, with short inconspicuous apical pseudo-segment. *Prothorax* with two well-developed lateral spines, disc with four rounded and nitid tubercles, a fifth (medial) elongate and sulcate; interspaces coarsely and irregularly punctate, the punctures often invading the tubercles. *Scutellum* triangular with rounded sides, pubescent. *Elytra* wider than, and about four times as long as, prothorax, apices truncate, between two long spines, exterior the longer; shoulders prominent, sides slightly narrowing to the dark posterior region, thence arcuately narrowed to apex; disc very coarsely and subseriatly cellulose-punctate, the punctures round and contiguous except where lines of slightly wider intervals form vague subcostiform lines; the large punctures rather abruptly ceasing at the dark apical area, this sublaevigate and nitid. Legs very long, in ♂ the hind femora extending to the apex of body.

Dim.—♂. 19-21 × 5 mm.; ♀. 25 × 6.5 mm.

Hab.—South Australia: Gawler (Pascoe Collection in British Museum), Quorn (South Australian Museum).

Three examples (one merely labelled Australia, in British Museum) show a rather short species that is very distinct by reason of its characteristic coarse sculpture as well as by its elytral markings. The dark markings are a narrower fascia extending from the middle of the sides and directed obliquely forward to form an acute angle at the suture; a large apical area of which the middle part is extended forward, so that its anterior margin is roughly parallel to the fascia. On the ♂ examples there is a small indistinct paler area that includes the exterior spine and its immediate vicinity. In the ♀ example the dark apical patch tends to become reddish towards apex. In colour the species is most like *P. synonyma* Newm., from which it may be readily separated by (1) different markings, (2) coarser punctures of elytra, (3) sublaevigate apical area, (4) longer antennae and legs.

Holotype ♂ in British Museum; allotype ♀ in South Australian Museum.

Table of Phoracantha.

1. Dark elytral markings as mentioned for six species above	2
Dark elytral markings otherwise	7
2. Elytra having a more or less square testaceous area between wide and straight bands of black (or dark brown)	<i>semipunctata</i> F.
Elytral pattern otherwise	3
3. Size very large, 35 mm. long or more, legs very long	<i>tricuspis</i> Newm.
Size less than 35 mm. long	4
4. Postmedial markings an isolated macula	<i>lata</i> Hope
Postmedial markings irregularly fasciate	5
5. Ground colour of elytra castaneous or red	<i>synonyma</i> Newm.
Ground colour more or less testaceous	6
6. Dark markings of elytra wider, size larger	<i>impavida</i> Newm.
Dark markings of elytra very narrow, size smaller	<i>elegans</i> Btkb.
7. Elytral pattern consists of three pairs of testaceous maculae	8
Elytral pattern otherwise	11

PHORACANTHA POROSA, n. sp. Text-fig. 6.

Oblong, glabrous above. Head and prothorax nitid, dark castaneous brown, elytra red with wide apical area and a narrow medial fascia black, or nearly so; antennae, legs and underside pale red, the last with fine, dense, recumbent pubescence.

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Table of Phoracantha.

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Dark elytral markings otherwise	7
2. Elytra having a more or less square testaceous area between wide and straight bands of black (or dark brown)	<i>semipunctata</i> F.
Elytral pattern otherwise	3
3. Size very large, 35 mm. long or more, legs very long	<i>tricuspis</i> Newm.
Size less than 35 mm. long	4
4. Postmedial markings an isolated macula	<i>lata</i> Hope
Postmedial markings irregularly fasciate	5
5. Ground colour of elytra castaneous or red	<i>synonyma</i> Newm.
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6. Dark markings of elytra wider, size larger	<i>impavida</i> Newm.
Dark markings of elytra very narrow, size smaller	<i>elegans</i> Btkb.
7. Elytral pattern consists of three pairs of testaceous maculae	8
Elytral pattern otherwise	11

8. Ground colour black, testaceous markings very narrow, anterior pair often sub-obsolete *quinaria* Newm.
 Ground colour castaneous, pale markings wider 9
9. All markings with nearly straight margins *alternata*, n. sp.
 Premedial dark fascia undulate 10
10. Pale markings oblique forming a rough X *flavopicta* Pasc.
 Pale markings more extensive, medial pale fascia with straight hind margins
 *laetabilis* Blkb.
11. Spines on third segment of antennae recurved *recurva* Newm.
 Spines on third segment of antennae normally straight 12
12. Apical area widely dark, surface coarsely reticulate-punctate *porosa*, n. sp.
 Elytra concolorous, not closely punctate *concolor*, n. sp.

Synonymy.

- (1) *quinaria* Newm. = *punctata* Don. = *fallax* Pasc. = *hospita* Pasc. = var *posticalis* Blkb.
 (2) *semipunctata* F. = *inscripta* Germ.
 (3) *synonyma* Newm. = *punctata* Kirby (*nec* Don.).
 (4) *tricuspis* Newm. = *gigas* Hope = *gigas* Angas = *robusta* Germ.

With regard to (1), *punctata* Don. holds the claim for priority, but there is some uncertainty associated with it; the figure given by Donovan is not very accurate. The synonymy is based on Mr. Blair's note attached to a typical example of *quinaria* Newm. "= *punctata* Don. according to a specimen so named in Hope Coll. as from sale of Donovan's insects." *P. hospita* Pasc., is only a small form, while *posticalis* Blkb. (a cotype is before me labelled by Blackburn) is only a *quinaria* in which the apical pale marking is absent. My series shows every gradation towards this tendency.

(4). I have little doubt of this from the series examined. The sexual distinction is strongly marked, not only in the longer antennae, but also in the longer legs of the ♂.

Coptocercus Hope.—"Caput antice rugosum, antennis spinoso-tomentosis. Thorax fere cylindricus, tuberculatus. Elytra parallela, thorace latior, ad apicem parum contracta, transversa fissa, haud spinosa. Corpus infra connexum, antennis pedibusque fere ut in *sten*: *Roei* conformatis." (This species included under his Sect. 2. Tubericolles "femoribus incrassatis."). Genotype *C. biguttatus* Don. Later authors have included in *Coptocercus*, species having spined elytral apices; indeed, in some species, e.g. *pedator* Pasc. and *nigritulus* Blkb., it is not easy to say whether the apices are more spinose than truncate, the inner spine being absent and the outer angle dentate rather than spinose. The species *undulatus* Hope was included by Hope in his Sect. 1, "armigeri", "Antennis thoraceque spinosis, apicibus elytrorum bidentatis", but it is a true *Coptocercus*, the lateral tubercle of the prothorax being somewhat conical, though not spinose, the femora thickened and pedunculate and the elytra "haud spinosa", which difficulty of classification Hope evaded by an appeal to the imagination—"I imagine, therefore, as the insect is unique and much damaged that probably they" (the apical spines) "have been broken off". Six examples are before me showing a wide distribution: Western Australia, Victoria and Queensland. I should include it under the truncate apex section, two examples showing little exterior production.

I have followed Lacordaire's tabulation of this genus and take the pedunculate femora as the separating character of *Coptocercus* from *Phoracantha*.

C. pubescens Pasc.—I have examples before me from Queensland, New South Wales and South Australia. A cotype of *C. fraternus* Blkb., in the South Australian Museum, is merely a large example of this.



8. Ground colour black, testaceous markings very narrow, anterior pair often sub-obsolete *quinaria* Newm.
 Ground colour castaneous, pale markings wider 9
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10. Pale markings oblique forming a rough X *flavopicta* Pasc.
 Pale markings more extensive, medial pale fascia with straight hind margins
 *laetabilis* Blkb.
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12. Apical area widely dark, surface coarsely reticulate-punctate *porosa*, n. sp.
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C. pubescens Pasc. Var. 1.—An example sent from the British Museum and another in the South Australian Museum show a pale subapical macula. Var. 2. An example in the latter Museum has the medial pale markings almost obliterated, and showing a small, vague, subapical spot on each elytron.

C. decorus Perroud.—The description of this reads very much like that of *C. biguttatus* Don. with which its author compares it, but the distinctions he gives are scarcely specific and are of the kind that occur throughout the whole group.

C. vicinus Hope is of a pattern very like *biguttatus* Don., but is clearly distinguished by its spinose elytra. I have only seen this from Queensland and Northern New South Wales.

C. assimilis Hope.—The long series of *C. rubripes* Boisd. before me, occurring from New South Wales to Western Australia, link up Hope's species with *rubripes*, of which it is a large form.

Dr. Aurivillius has described and figured three species from Queensland (*Arkiv. for Zool.*, 1916, pp. 5-7). Of these *C. vittatus* Auriv., almost certainly = *C. vicinus* Hope (placed under *Phoracantha* in his catalogue); *C. truncatus* Auriv. seems to be little more than a dark variety of *biguttatus* Don., the frontal structure mentioned being not uncommon in the genus; *C. rugicollis* Auriv. is probably distinct and valid with an unusual prothorax "utrinque in medio leviter convexo nec spinoso nec tuberculato." I think four specimens before me answer the description, two in the British Museum labelled Groote Eylandt and Australia respectively, one in the Queensland Museum from Cape York, and one from Ourimbah, New South Wales, in my own collection. If I am correct in this the elytral pattern is very similar to that of *Phoracantha semipunctata* F., the two pale fasciae being divided by a dark zig-zag band.

C. validus Gah.—This species, described from N.W. Australia, has a wide distribution, though not common in collections, probably being often confused with the common *P. quinaria* Newm., which it closely resembles. I have examples before me from Queensland and New South Wales (Wagga). Two of these (in the Macleay Museum) have the elytral apices subtruncate; in one example the external spine is merely a slight tooth, in the other a rather longer tooth, the internal spine being obsolete in both.

Table of *Coptocercus*.

1. Elytral apices truncate	2
Elytral apices bispinose	6
2. Apical region of elytra immaculate	<i>pubescens</i>
Apical region of elytra maculate	3
3. Pale apical macula small and isolated	4
Pale apical macula large, continuous to apex	5
4. Ground colour red, medial marking vaguely fasciate	<i>biguttatus</i> Don.
Ground colour fuscous, medial markings, two oblique fasciae connected and widely extended at sides	<i>undulatus</i> Hope
5. 17-21 mm. long, elytral pattern near <i>Ph. semipunctata</i> F.	<i>rugicollis</i> Auriv.
10 mm. long, elytral pattern near <i>Ph. quinaria</i> Newm.	<i>nigritulus</i> Blkb.
6. More than 25 mm. long, form robust, pattern as in <i>P. quinaria</i>	<i>validus</i> Gahan
Less than 25 mm. long, form narrower	7
7. Elytral apices wholly white, this white area connected laterally with medial white fascia	8
Apical white macula clearly separated from medial fascia	9
8. Preapical dark marking with straight anterior margin, punctures fine	
.....	<i>crucigerus</i> Hope

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Table of *Coptocercus*.

1. Elytral apices truncate	2
Elytral apices bispinose	6
2. Apical region of elytra immaculate	<i>pubescens</i>
Apical region of elytra maculate	3
3. Pale apical macula small and isolated	4
Pale apical macula large, continuous to apex	5
4. Ground colour red, medial marking vaguely fasciate	<i>biguttatus</i> Don.
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6. More than 25 mm. long, form robust, pattern as in <i>P. quinaria</i>	<i>validus</i> Gahan
Less than 25 mm. long, form narrower	7
7. Elytral apices wholly white, this white area connected laterally with medial white fascia	8
Apical white macula clearly separated from medial fascia	9
8. Preapical dark marking with straight anterior margin, punctures fine	
.....	<i>crucigerus</i> Hope

- Preapical dark marking angulately produced forward, punctures coarse *trimaculatus* Hope
9. Prothorax laterally dentate or spinose *aberrans* Newm.
 Prothorax laterally tuberculate 10
10. Apical third of elytra sublaevigate 11
 Apical third of elytra clearly punctate *rubripes* Boisd.
11. Ground colour black, or nearly so, apical white macula small *pedator* Pasc.
 Ground colour reddish, apical white macula elongate *vicinus* Hope

Synonymy.

- (1) *C. crucigerus* Hope = *politus* Pasc. (*Fide* K. G. Blair from examples in the British Museum).
- (2) *C. pubescens* Pasc. = *fraternus* Blkb. (Cotype of *fraternus* Blkb. examined).
- (3) *C. rubripes* Boisd. = *allapsus* Newm. = *roei* Hope = *assimilis* Hope. The first two already recorded, *assimilis* Hope is added after an examination of long series.
- (4) *C. viguttatus* Don. = *decorus* Perr. var. *truncatus* Auriv. (From similarity of description).
- (5) *C. trimaculatus* Hope = *savesi* Fauv. (Recorded by C. J. Gahan, *vide* above).
- (6) *C. vicinus* Hope = *vittatus* Auriv. (From description and figure of *vittatus* compared with examples compared with type of *vicinus* Hope).

Atesta Pasc.—Genotype *A. balteata* Pasc.—The antennal spines are reduced to a minimum in this genus. The third segment is only feebly spinose, even in *A. tatei* Blkb., the largest recorded species. In *A. dixoni* Oke I can only clearly make out this spine at all in the minority of a fairly long series before me. Pascoe makes the above remark of *Allotisis*, but in my series of the three species I can generally quite clearly discern spines on segments 3-5, though Pascoe's description says "tertio et quarto apice sub-spinosis."

The distinction between *Allotisis* and *Atesta* is not very clear. The only three distinguishing characters of *Allotisis* that can be gleaned from the author are (1) wider head, (2) truncate apices, (3) slender form. (1) is, I think, mythical; (2) has been set aside (I think correctly) in the inclusion of *tatei* Blkb. and *besti* Oke under *Atesta*; (3), however, remains as a good distinction, the species of *Atesta* being more depressed, parallel, and wider; of *Allotisis* more convex, with a narrower more tapering form. There is, moreover, a distinctive elytral pattern, which seems to have some generic value in the Cerambycidae (see also under *Thoris*). I have examined the type of *A. eremita* Blkb. and a cotype of *A. tatei* Blkb., and the following comparison may be helpful:

<i>Atesta tatei.</i>	<i>A. eremita.</i>
1. Size larger, colour darker	size smaller, colour paler
2. Apices of elytra subtruncate, with suture spinose	rounded
3. Pronotum very nitid	subopaque except on nodules
4. Elytra with or without premedial pale marking.*	with premedial pale marking
5. Apical pale mark not extending to apex.	at apex
6. Elytral punctures coarser.	finer

* Blackburn said he had not seen this in any example of *tatei*. It occurs in two out of five examples before me.

- Preapical dark marking angulately produced forward, punctures coarse *trimaculatus* Hope
9. Prothorax laterally dentate or spinose *aberrans* Newm.
 Prothorax laterally tuberculate 10
10. Apical third of elytra sublaevigate 11
 Apical third of elytra clearly punctate *rubripes* Boisd.
11. Ground colour black, or nearly so, apical white macula small *pedator* Pasc.
 Ground colour reddish, apical white macula elongate *vicinus* Hope

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- (3) *C. rubripes* Boisd. = *allapsus* Newm. = *roei* Hope = *assimilis* Hope. The first two already recorded, *assimilis* Hope is added after an examination of long series.
- (4) *C. viguttatus* Don. = *decorus* Perr. var. *truncatus* Auriv. (From similarity of description).
- (5) *C. trimaculatus* Hope = *savesi* Fauv. (Recorded by C. J. Gahan, *vide* above).
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<i>Atesta tatei.</i>	<i>A. eremita.</i>
1. Size larger, colour darker	size smaller, colour paler
2. Apices of elytra subtruncate, with suture spinose	rounded
3. Pronotum very nitid	subopaque except on nodules
4. Elytra with or without premedial pale marking.*	with premedial pale marking
5. Apical pale mark not extending to apex.	at apex
6. Elytral punctures coarser.	finer

* Blackburn said he had not seen this in any example of *tatei*. It occurs in two out of five examples before me.

ATESTA ANGASI Pasc. var. UNICOLOR, n. var.

Two examples under examination both, I think, males, are wholly dark brown without any elytral pale markings. I can find no structural or even superficial difference in these from the very common *A. angasi* Pasc. The antennae have the third segment with a strong spine at the exterior apex, the other segments are unarmed. The elytral apices are subtruncate with the sutural angle slightly produced. The elytral punctures are largest near the middle, diminishing in size and depth hindward, but traceable to the apex. One example is labelled "Mallee, Victoria" in the National Museum, and is of a dark, nitid brown colour. The other, in the Macleay Museum, is fusco-castaneous, and is labelled "South Australia." (Pascoe omitted any reference to antennal spines in his description of *angasi*).

Dim.—15-19 × 4.5 mm.

Table of Atesta.

1. Apices spinose at suture, with subapical yellow spot; more than 20 mm. long *tatei* Blkb.
Apices subtruncate (sometimes a little produced at suture), subobsoletely yellow at apex; less than 20 mm. long *angasi* Pasc.
Apices rounded 2
2. Elytra with post-basal mark yellow, besides medial and apical spot .. *eremita* Blkb.
Elytra without such post-basal mark 3
3. Pronotum and elytra (predominantly) reddish, elytra sometimes with vague apical pale mark *balteata* Pasc.
Pronotum and elytra dark, apices more or less widely yellow 4
4. Feebly pubescent, medial fascia wide and straight *bifasciata* Pasc.
Strongly pubescent, medial fascia narrowed at suture and produced along it anteriorly *dixonii* Oke*

N.B.—Besides those bred by Mr. Dixon from wood brought from Lake Hattah, Victoria, one example before me is labelled "Sydney. N.S.W. (W. Duboulay)" and another, in the Macleay Museum is labelled "Port Denison, Q'land"; a specimen from the British Museum is labelled "Rockhampton (Pascoe Coll.)". I have examined a considerable number of this species and find that the antennal spine, always small, is entirely absent in the ♀ examples examined and is apparently a sexual character, an observation which may possibly need confirmation. I have not been able to include *A. vesti* Oke, described from a unique example, since the description is not very lucid, the following note somewhat contradicting the colour description, while the truncate apex does not sufficiently distinguish it, both *angasi* and *dixonii* sometimes showing this.

Table of Allotisis.

1. Apices of elytra without yellow spot *unifasciata* Hope
Apices of elytra with yellow spot 2
2. Surface subopaque, elytra with two well-marked zig-zag fasciae *scitula* Pasc.
Surface subnitid, elytral fasciae reduced to spots *discreta* Pasc.

Examples of the only three recorded species are before me, *A. unifasciata* Hope from New South Wales and Victoria being apparently the commonest. *A. discreta* Pasc., I have only from New South Wales and *A. scitula* Pasc., only from Queensland. The last is the genotype.

* *A. dixonii* is readily distinguishable by its smaller size and the distinct form of the medial fascia, omitted from the description, but present in eleven examples before me.

ATESTA ANGASI Pasc. var. UNICOLOR, n. var.

Two examples under examination both, I think, males, are wholly dark brown without any elytral pale markings. I can find no structural or even superficial difference in these from the very common *A. angasi* Pasc. The antennae have the third segment with a strong spine at the exterior apex, the other segments are unarmed. The elytral apices are subtruncate with the sutural angle slightly produced. The elytral punctures are largest near the middle, diminishing in size and depth hindward, but traceable to the apex. One example is labelled "Mallee, Victoria" in the National Museum, and is of a dark, nitid brown colour. The other, in the Macleay Museum, is fusco-castaneous, and is labelled "South Australia." (Pascoe omitted any reference to antennal spines in his description of *angasi*).

Dim.—15-19 × 4.5 mm.

Table of Atesta.

1. Apices spinose at suture, with subapical yellow spot; more than 20 mm. long *tatei* Blkb.
Apices subtruncate (sometimes a little produced at suture), subobsoletely yellow at apex; less than 20 mm. long *angasi* Pasc.
Apices rounded 2
2. Elytra with post-basal mark yellow, besides medial and apical spot .. *eremita* Blkb.
Elytra without such post-basal mark 3
3. Pronotum and elytra (predominantly) reddish, elytra sometimes with vague apical pale mark *balteata* Pasc.
Pronotum and elytra dark, apices more or less widely yellow 4
4. Feebly pubescent, medial fascia wide and straight *bifasciata* Pasc.
Strongly pubescent, medial fascia narrowed at suture and produced along it anteriorly *dixonii* Oke*

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Subgenus ALLOTISIS Pasc.

The distinction between *Allotisis* and *Coptocercus* only applies to the less developed antennal spines, though in this character they are more marked than in *Atesta*. Pascoe's remark on this (*Proc. Linn. Soc. Lond.*, 1866, p. 99) might well be transferred to *Atesta*.

THORIS Pasc.

Lacordaire considered *Thoris* very slightly differentiated from *Coptocercus*. The distinction from *Allotisis* is even slighter. Blackburn (*Proc. Roy. Soc. Vict.*, 1900, p. 228) suggested that, from their descriptions, *Allotisis* and *Thoris* "may well be synonyms". The very distinct facies of *Thoris* would, I think, deserve its separation, as in the longicorns a special style of marking seems to possess generic value.

Table of *Thoris*.

Each elytron having 7 eburneous spots	<i>septemguttata</i> Blkb.
Each elytron having 6 eburneous spots	<i>sexguttata</i> , n. sp.
Each elytron having 5 eburneous spots	<i>eburifera</i> Pasc.
Each elytron having 2 eburneous spots	<i>moerens</i> Blkb.

THORIS SEXGUTTATA, n. sp.

Rufo-flavous; each elytron with six eburneous elevations, sparsely pilose. *Head* with distinct medial line; antennae longer than body; segments 3-5 minutely spined on outside; the proportions of segments similar to those of *eburifera* Pasc. *Prothorax* biconstricted, obtusely nodose at sides and quadri-nodose on disc, with a slight, elongate, medial elevation, the depressed areas filled with golden pubescence. *Elytra* rather irregularly, but somewhat coarsely punctate, the punctures larger at sides, smaller and sparser at base, subobsolete at apex; nowhere showing definite seriation; apices subtruncate-dentate, external angles a little acutely produced; the white spots placed as follows: three premedial as in *septemguttata* Blkb., a larger, oval, subapical spot placed obliquely, and two half-way between this and the premedial, placed on a curve parallel to a line drawn through the second and third spots on each. Other characters as in *T. eburifera* Pasc., and *T. septemguttata* Blkb.

Dim.—8 × 2 mm.

Hab.—Queensland (F. P. Dodd).

A single male example is so like *eburifera* that at first I overlooked the difference of number of the white elevations, but an examination of a series of the two species mentioned above shows that the number and position of these are constant; so that the species deserves a specific name.

Holotype in the British Museum.

A second example has been sent from the Melbourne Museum since the above was written.

PORITHODES Auriv. (*Cat. Junk*, 1912, p. 94).

Porithodes is distinct from *Porithea*, of which the only recorded Australian species is *P. (Callidium) intorta* Newm.

In *P. plagiata* Blkb., described erroneously as a *Porithea*, the antennae have segments 3-5 very clearly spined as is also the case in Lea's species. This species

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occurs twice in the Junk Catalogue, (1) under *Porithodes*, p. 94, and (2) under *Porithea*, p. 118.

Synonymy.—*P. fasciata* Auriv. = *P. (Porithea) obliqua* Lea.

Lea's paper was apparently published only one day later than that of Dr. Aurivillius (Results of Mjöberg Expedition), so that *fasciata* gets the benefit of priority. I have specimens of this from Dorrigo and Newport, New South Wales. The figure given by Aurivillius, together with the descriptions, make the synonymy, I think, conclusive.

PORITHODES SPINIPENNIS, n. sp.

Castaneous; elytra with wide medial fascia and large apical macula testaceous; sparsely pubescent.

Head nearly impunctate, front finely channelled, antennae with segments 3-6 unispinose (remaining segments wanting). *Prothorax* about as wide as long, slightly constricted in front and behind; sides subequally rounded (outline a little irregular, but scarcely nodose), disc with five slight prominences, the medial one elongate. *Scutellum* triangular with rounded sides. *Elytra* not quite three times as long as prothorax, finely subseriate punctate, each with two traceable subcostate impressions; a row of minute pustules on each sutural border throughout and three rows of more widely divided, similar pustules parallel to the former on the subapical dark area; apices sub-bispinose, the exterior spine well developed, the sutural short.

Dim.—17 × 6 mm.

Hab.—Northern Territory: Alligator River (G. F. Hill).

A single example in the South Australian Museum is easily distinguished from all previously described species, though nearest in pattern to *P. fasciata* Auriv., by its spinose apices. The general colour and striation is otherwise similar to this species; but the medial fascia is much wider, extending to both suture and sides; expanding towards sides. The apical mark extends to sides and apex, leaving the suture narrowly castaneous.

Holotype in South Australian Museum.

Four examples, examined later, are in the National Museum, Melbourne, labelled Darwin.

SISYRIUM ANTENNALE, n. sp.

Very sparsely setose, testaceous; head black, elytra with a wide subapical fascia and two oval maculae infusate, antennae and tibiae castaneous.

Head without medial line, eyes large and subapproximate; antennae longer than body, finely lineate, scape robust and curved, third segment longer than fourth and having a short spine at its external apex, the rest subequal in length (longer than fourth) and narrowing to apex. *Prothorax* subcylindric, narrower than head, less than half as long as elytra, constricted in front and behind, sides tuberculate, disc with five small tubercles, the middle one elongate. *Elytra* elongate, parallel, considerably wider than prothorax, apices rounded, with moderately large punctures arranged in series, becoming obsolete at apex.

Dim.—7 × 1.5 mm.

Hab.—North Queensland (F. P. Dodd).

A single example in the British Museum differs from *S. ibidionoides* Pasc., in having longer, more slender antennae with the third segment spinose; eyes more approximate, narrower and more cylindric form, and the presence of two infusate

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spots about half-way between the base and the subapical fascia. It is otherwise very like Pascoe's species in colour. It is clearly distinct from *S. fraternum* Blkb., the only species of the genus so far described with spined antennae. The spine is short but distinct.

Holotype in the British Museum.

SISYRIUM BIFASCIATUM, n. sp.

(? ♀ of *S. antennale*.)

Differs from the preceding (*antennale*) in the following: 1. Antennal segments without spine, pale yellow in colour and more robust; 2. Eyes more widely separated; 3. Prothorax and elytra slightly wider; 4. The two elytral maculae replaced by a somewhat semi-circular plagia covering the basal area, its arcuate posterior margin coinciding with the position of the maculae of *antennale*.

Dim.—8 × 2 mm.

Hab.—N. Queensland: Townsville (F. P. Dodd).

The possibility of the antennal spine being a sexual character must be considered here, in view of the two pairs of species described in this paper that so nearly approach one another except in this antennal character, also occurring in the same region. This suggestion also agrees with my note on *Atesta dixonii* Oke, *supra*.

SISYRIUM APICALE, n. sp.

Head, prothorax, apical two-fifths of elytra, legs and basal segments of antennae black, basal three-fifths of elytra orange, with a variably subobsolete, narrow, interrupted, dark fascia about halfway between base and apical fascia; the greater part of antennae and the two apical tarsi castaneous; abdomen infusate.

Head: eyes rather close above, interspace less than that between an antenna and internal margin of an eye; front, as also the three basal segments of antennae sparsely and coarsely punctate; scape curved and robust, the third segment with a moderate spine on outside (longer than that in *S. antennale*), third longer than fourth, and about equal in length to the fifth and succeeding segments; antennae longer than body. *Prothorax* subcylindric, with anterior and posterior constrictions and with rounded lateral tubercles and four rather large nitid, little-raised nodules of irregular form on disc, the usual medial nodule vague; sparsely dotted with large round punctures, an upright reddish hair arising from each. *Scutellum* linguiform, orange. *Elytra* subparallel, wider than, and about twice as long as, prothorax; apices conjointly rounded; each with about eight rows of uniformly large round punctures, the individual punctures alternating with those in the adjacent rows and continuous to the apex, though smaller here; sparsely clad with upright hairs, these more evident near sides.

Dim.—7 × 1.5 mm.

Hab.—N. Queensland: Townsville (F. P. Dodd).

The combination of black prothorax and legs and the elytral apex entirely black (or blue-black) distinguishes this species, besides the prominent, but short antennal spine. Three examples before me; one, sent me by Mr. F. H. Taylor of the Townsville Institute of Tropical Medicine, forms the holotype; two paratypes in the British Museum.

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SISYRIUM TROPICALE, n. sp.
(? ♀ of *S. apicale*).

Very like the preceding, except for the following differences: 1. Antennae not as long as body and slightly stouter than in *apicale*, the third segment without spine; 2. Prothorax rather wider and shorter, infusate in one example, orange in a second; 3. Elytra slightly wider, without any sign of the subobsolete pre-medial fascia.

Dim.—6.5 × 1.7 mm. (approx.).

Hab.—N. Queensland: Townsville (F. P. Dodd).

The case is almost exactly analogous with that of *bifasciatum*, the slight colour distinctions being of little specific value. I believe this and *bifasciatum* will be found to be the females of *antennale* and *apicale* respectively.

Two examples (holotype and paratype) in the British Museum.

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