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# NOTES ON AUSTRALIAN CERAMBYCIDÆ.

By

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(Plate iii.)

## Specimens in the Macleay Museum Collected during King's Survey.

CONSIDERABLE doubt has existed with regard to the identity of certain species of longicorn beetles described by W. S. Macleay from material collected during King's survey of the coasts of Australia.

In the course of an examination of the Cerambycidæ in the Macleay Museum at the University of Sydney, I discovered six specimens with old labels bearing the name of Capt. King. All these labels are in the same handwriting, which appears to be identical with that of W. S. Macleay, and bear every evidence of age. The information contained on the labels agrees in all respects with the particulars given by Macleay in his appendix on the Annulosa in King's "Survey of the Coasts of Australia", ii. While the presence of one specimen might have been concluded to be accidental, the existence of six specimens may be taken as additional evidence of their authenticity. Any doubt which existed was, however, removed by careful comparison of each specimen with the original descriptions, with which they have been found to agree in each case, so that I have no hesitation in accepting them as authentic specimens collected by Capt. P. P. King's expedition and described by W. S. Macleay, and, in the absence of other material, they may be considered to be the types of the species concerned.

Some of the confusion has, no doubt, been due to the fact that Macleay placed three of the species under the generic name of *Callidium*, although they are representatives of three very distinct genera, viz., *Pytheus*, *Phacodes*, and *Hylotrupes*, and no subsequent worker seems to have realized their true position. *Callidium erosum* Macl. is listed, among others, in the Junk Catalogue by Aurivillius as "Genus ?", with the footnote, "Species described as *Callidium*, but of which the generic, or, indeed, the systematic position, is uncertain." All reference to Macleay's record of *Callidium bajulus* L. has been omitted from the catalogues, the identification being, probably, considered to be erroneous. Macleay considered that his *Callidium solandri* (so-called) was identical with the Fabrician insect, a species to which it bears no resemblance. Confusion in the case of *Acanthocinus piliger* Macl. was further intensified by Aurivillius, who considered that *Probatodes plumula* Newm. and this species were synonymous.

The discovery of authentic specimens of these insects has enabled me to correct the existing synonymy, which is as set out below. In the case of each species considered I have reprinted the original description by Macleay, and where confusion between species has occurred the original descriptions of the insects with which they were believed to have been synonymous have also been included.

Captain Phillip P. King's work, "Narrative of a Survey of the Intertropical and Western Coasts of Australia Performed between the Years 1818 and 1822", is dated 1827 on the title page, but Mr. C. Davies Sherborn, in *Ann. Mag. Nat. Hist.* (8), xiii, Feb., 1914, gives the actual date of publication as 18th April, 1826.

The work of the survey was carried out by Capt. P. P. King first in the cutter *Mermaid*, and later, in 1820, in the brig *Bathurst*. From the zoological material obtained it appears that the greater part of the collecting was carried out on the north-western and west coasts of Australia, though some specimens may have been obtained from Queensland. There seems little likelihood that insects were secured in the south; it is, therefore, the more remarkable that species occurring in the vicinity of Sydney and in Tasmania should have been considered to be identical.

In the accompanying plate the insects in the Macleay Museum have been figured in the condition in which they exist at the present time, and examples of *Depsages solandri* and *Probatodes plumula* have been included for the purpose of comparison.

I have to express my sincere thanks to Mr. K. E. W. Salter, B.Sc., Curator of the Macleay Museum, for his kindness in making the material available for my examination, and to Miss N. B. Adams, Australian Museum, for the preparation of the plate, her fine and accurate drawings contributing in no small degree to the value of this paper.

#### Genus *Phacodes* Newm.

#### *Phacodes subfasciatus* Gahan.

(Plate iii, figs. 3 and 3a.)

*Callidium solandri* Macleay [nec Fab.], in King, Survey Coasts Australia, ii, April 18, 1826, App., p. 452.

*Phacodes subfasciatus* Gahan, Trans. Ent. Soc. Lond., 1893, p. 170.

This is one of the species in connection with which considerable confusion has existed owing to the inclusion by Macleay of species of widely separated genera in *Callidium*, but this confusion has been intensified by his identification of this insect as *Lamia solandri* Fabricius, an error which has been perpetuated by all subsequent workers. Macleay states: "I place Olivier's Synonym in this case first; because the Fabrician description is so erroneous, that did we not know the original insect in the Banksian Collection, there would be no possibility of making it out." It would appear from this that Macleay's recollection of the Fabrician specimen had been at fault.

There are two specimens of this insect in the Macleay Museum bearing the label: "*Callidium Solandri*, L. Solandri Fab. et Oliv., Captn. King, Australasia." Both specimens are damaged; the smaller, possibly a male, has one antenna wanting, while the larger specimen has the greater part of both antennæ broken off. These specimens measure 11 mm. and 14 mm. long respectively.

Gahan's description of *Phacodes subfasciatus*, with which the Macleay specimens agree very closely, is as follows:

"♀. Fusco-brunneus, cinereo fulvoque pubescens; prothorace quam latiori vix longiori, lateribus cinereo sat dense pubescentibus, disco pube grisea fulvoque sparsim vestito, medio vix evidentem carinato; elytris pube cinerea fulvoque punctis brunneis adpersis interrupta, vestitis, utrisque paulo pone apicem fascia sub-

obliqua albedo-pubescente; apicibus truncatis, haud spinosis; antennis medium elytrorum vix excedentibus. Long 10 mm.

"*Hab.*—Roebuck Bay, North-west Australia (Walker).

"Dark brown, with a pubescence which is for the most part ashy grey, but which, along the middle of the head and pronotum, alongside the suture, and near the apex of the elytra, is more or less tawny in colour. This pubescence is interrupted by the rather large scattered setigerous punctures, but is almost sufficiently thick, except in one or two places, to conceal the ordinary close punctuation of the elytra. At about the beginning of its posterior fourth, each elytron has a transverse or slightly oblique band formed of a denser and whiter pubescence than that on the rest of the surface. Immediately in front of and just behind this band, the elytron is somewhat bared of pubescence, so that its dark derm and close punctuation are visible. The prothorax is widest at about the beginning of its posterior third or fourth, and from this point its sides very slightly and gradually converge towards the apex, but more strongly converge towards the base. Its length is scarcely greater than its greatest width. The disc is without tubercles, and bears an indication of a median raised line or carina. The elytra are not wider at the base than the widest part of the prothorax; their length is to that of the prothorax as about 5 to 2; their apices are transversely truncate and unarmed. The antennæ, which are without spines, scarcely extend beyond the middle of the elytra; the third joint is longer than the fourth, and about equal in length to the first or fifth.

"This small species seems to have a relatively very large prothorax. Though the unique specimen, judged by the length of its antennæ and the form and length of the last joint, appears to be without doubt a female, yet its prothorax is as wide as the elytra, and considerably more than one-third as long."

It is significant that the type locality of Gahan's specimen is Roebuck Bay, North-west Australia, one of the localities visited by King's expedition.

*Lamia solandri* Fab., with which Macleay identified his insect, appears to be adequately covered by Fabricius' description (*Syst. Ent.*, p. 177):

"L. thorace subspinoso, nigro, elytris bidentatis, fuscis, cinereo irroratis.

"Habitat in Nova Hollandia. *Mus. Dom. Banks.*

"Magnitudo *L. bidentis*. Antennæ mediocres nigrae. Thorax cylindricus, subrugosus, niger, antice utrinque spinula brevissima, acuta. Scutellum nigrum. Elytra punctata, nigra, cinereo irrorata, basi punctata, humeri gibbo apice bidentata. Pedes nigri, plantis fuscis."

The shape of the apices of the elytra alone should have been sufficient to separate these insects from the descriptions, apart from other points of difference, those of *P. subfasciatus* being transversely truncate and unarmed, while those of *D. solandri* are clearly stated to be "bidentate".

It is very probable that the Fabrician specimen of *L. solandri* was collected by Banks or Solander at Botany Bay, New South Wales, and it is of interest that a large proportion of the specimens in the Australian Museum were secured at Long Bay, N. S. Wales, where they breed in the stems of the grass-trees (*Xanthorrhœa*).

The synonymy of *Depsages solandri* (Fabricius) is as follows:

***Depsages solandri* (Fabricius).**

(Plate iii, figs. 6 and 6a.)

*Lamia solandri* Fabricius, *Syst. Ent.*, 1775, p. 177.

- Lamia solandri* Fabricius, Spec. Ins., 1781, p. 225.  
*Lamia solandri* Fabricius, Mant. Ins., i, 1787, p. 142.  
*Lamia solandri* Gmelin, in L. Syst. Nat., Ed. 13, i, 4, 1790, p. 1829.  
*Lamia solandri* Olivier, Encycl. meth., vii, 1792, p. 468.  
*Lamia solandri* Olivier, Ent., iv, nr. 67, 1795, p. 100, t. 16, fig. 118.  
*Lamia solandri* Fabricius, Syst. Eluth., ii, 1801, p. 304.  
*Lamia solandri* Boisduval, Voy. Astrolabe, Ent. ii, 1835, p. 526.  
*Symphyletes solandri* Froggatt, Proc. Linn. Soc. N. S. Wales (2), ix, 1894, p. 115  
 (Biology).  
*Depesages solandri* Aurivillius, Cat. Coll. (Junk), pars. 73, Jan. 15, 1922, p. 269.  
 Hab.—Its distribution appears to be confined to the coastal districts of south-eastern New South Wales.

#### Genus *Pytheus* Newman.

##### *Pytheus erosus* (Macleay).

(Plate iii, fig. 1.)

- Callidium erosum* Macleay, in King's Survey Coasts Australia, ii, 18, April, 1826, App. p. 452.  
*Brachytria latebrosa* Newman, Entomol., i, 1841, p. 95.  
 One specimen in the Macleay Museum, Sydney, labelled "*Callidium erosum* McL., Captn. King, Australasia". It is identical with *Pytheus latebrosus* (Newman).  
*Callidium erosum* Macleay is listed by Aurivillius, Cat. Coll. (Junk), pars. 39, Feb. 28, 1912, p. 357, Callidiini, under the heading "Genus ?", with a footnote, "Species described as *Callidium*, but of which the generic or, indeed, the systematic position is uncertain."

When applied to *Pytheus latebrosus*, Macleay's description becomes quite clear:

"*Callidium erosum* (n.s.) C. nigrum capite punctato, ore testaceo, antennis apice, fuscis thorace tomentoso punctato vel potius punctis confluentibus eroso, disco rufo medio subtuberculato, elytris acuminatis apice deflexis lineis duabus elevatis interstitiis punctis confertissimis pulcherrimè erosis suturâ margineque rufis, corpore subtus pedibusque tomentosus."

Since Macleay's description antedates that of Newman by fifteen years, *Pytheus erosus* has priority, and the synonymy stands as above.

#### Genus *Hylotrupes* Serv.

##### *Hylotrupes bajulus* (Linnæus).

(Plate iii, fig. 5.)

This is a common European species, described by Linnæus in 1758 (Syst. Nat., Ed. 10, p. 396).

One specimen in the Macleay Museum is labelled, "*Callidium bajulus?* var. with 8 spots, Captn. King, Australasia". It is in very abraded condition, but there is no doubt as to its identity. Little trace remains of the eight white spots; six are, however, visible. It agrees perfectly with the published descriptions of *Hylotrupes bajulus*, and has been compared with a specimen in the Australian Museum. In Europe this species is recorded as being very variable.

It would be interesting to know how this specimen came to be secured by King. It is possible that it bred out from new timber embodied in the construction of the "Mermaid", which he states as "not quite twelve months old", or from

timber carried among her stores. The available evidence is not sufficient to justify the inclusion of this species in the Australian list; it is obviously of accidental occurrence.

Genus *Platyomopsis* Thomson.

*Platyomopsis piliger* (Macleay).

(Plate iii, fig. 4.)

*Acanthocinus piliger* Macleay, in King's Survey Coasts of Australia, ii, April 18, 1826, App. p. 452.

*Lamia pulverulens* Boisduval, Voy. Astrolabe, Ent., ii, 1835, p. 501.

*Symphyletes vetustus* Pascoe, Ann. Mag. Nat. Hist. (3), ix, 1862, p. 464.

*Saperdopsis armata* Thomson, Syst. Ceramb., 1864, p. 53.

*Saperdopsis pulverulens* Aurivillius, Ent. Tidskr., xiv, 1893, p. 167.

*Platyomopsis pulverulens* Aurivillius, Cat. Col. (Junk), pars. 73, Jan. 15, 1922, p. 267.

There is one specimen in the Macleay Museum, Sydney, with the label, "Acanthocinus piliger, Capt. King, Australasia".

On examination, it was at once apparent that this insect was not a member of the genus *Probatodes*, in which it is placed by Aurivillius in the Junk Catalogue, but is a *Platyomopsis*. Careful comparison with the description of *Platyomopsis pulverulens* (Boisduval) and with specimens of that species in the Australian Museum, proved them, beyond all doubt, to be identical. Reference to the original descriptions will make this clear. W. S. Macleay's description reads as follows:

"*Acanthocinus piliger* (n.s.) A. antennis obscuris pilosis apicem versus cinereo-annulatis, capite cinereo vertice nigro bilineato, thorace obscuro cinereo inæquali postice subcaniculato medio utrinque tuberculato, eytris obscuris fasciculis minutis nigris flavis cinereisque variegatis, fasciâ mediâ cinereâ undatâ cristâque tuberculata humeros versus."

Boisduval's description of *L. pulverulens* reads:

"Oblonga, pallide cinerea; thorace lateribus albedo, tenue tuberculato, subplicato; elytris apice tomentosis, fascia media sinuata, obsoleta, pallidiori, punctisque nigris elevatis a basi ad medium; subtus cinereo-fulvo parce variegata.

"Oblongue, d'un cendré pâle, avec le corselet légèrement tuberculé et un peu plissé; élytres terminés par une frange tomenteuse, transversées par une espèce de bande peu prononcée, un peu plus pâle que le fond, et ayant sur leur moitié antérieure des points noirs élevés; dessous cendré, un peu mélangé de fauve."

Aurivillius, in the Junk Catalogue, places *Probatodes plumula* (Newman) as a synonym of *P. piliger* (Macleay). It is difficult to see how this error has occurred, for the species differ so widely that their identity is beyond dispute.

Newman's description of *Acanthocinus ? plumula* is as follows:

"Antennae corpore paullò longiores, basi sat proximæ, 10-articulatæ, articulo secundo sesquialtero, quinto apice plumoso, nigra, maculis elytrorum nonnullis, incertis, lanuginosus, canis. (Corp. long. .475 unc. Elytrorum lat. max. .2 unc.)

"Antennæ rather longer than the body, somewhat approximate at the base, the head being longitudinally grooved between them, 10-jointed; the first joint long and stout, the second less than half the length of the first, rather stout and apparently divided into two, but whether this division is apparent only or real, is a point on which, without attempting a separation, an observer is so liable to be mistaken that I will not venture to express an opinion; the third is long,

slender and slightly arcuate; the fourth shorter; the fifth still shorter and bearing a small fascicle of black hairs on one side at its apex; the rest decrease in length; all the joints have a thin fringe of hairs on one side, they are black, with the exception of a small portion at the base of each, which is grey: the head and prothorax are black, with scattered grey hairs, the latter has a strong and sharp central tooth on each side, and three small obtuse tubercles on the base, the middle one of which is nearest the hind margin and unites with a small ridge which passes between the other two: the elytra are manifestly wider than the prothorax, and ample, extending beyond the abdomen; they are rounded at the apex, coarsely and deeply punctured, black, and variegated with irregular markings due to a short, velvety, grey pilosity, they have two short ridges at the base, one originating at the humeral angle, and the other halfway between that and the scutellum: the legs are moderate, the femora being decidedly, but not abruptly incrassated.

"*Hab.*—Van Diemen's Land: a single specimen in the cabinet of Mr. Westwood, to whom I am indebted for the opportunity of describing the species."

The more important and striking differences between the two species are:

*Platyomopsis piliger*: Thorax rounded and very indistinctly tuberculate at sides; elytra sparsely tuberculate, covered with a dense ashy-brown pubescence, with an indistinct chevron-like fascia about midway, apices fringed with grey hairs, strong humeral crests. Long 20 mm.

*Probatodes plumula*: Thorax with a stout and acute lateral spine, black with a scattered greyish pubescence; elytra deeply and coarsely punctate, the depressions with a sparse clothing of grey pubescence, no humeral crests. Long 13 mm.

The range of the two species appears to be:

*Platyomopsis piliger*: Queensland and New South Wales.

*Probatodes plumula*: Tasmania.

There is no doubt that *P. plumula* is a good species, and must accordingly be restored to the Australian list. Its synonymy is now:

**Probatodes plumula (Newman).**

(Plate iii, fig. 2.)

*Acanthocinus ? plumula* Newman, Zoolog., ix, 1851, App. p. cxxx.

*Probatodes plumula* Thomson, Syst. Ceramb., 1864, p. 57.

*Probatodes plumula* Lacordaire, Gen. Coll. ix, 1872, p. 511.

**Genus Penthea Cast.**

***Penthea vermicularia* (Donovan).**

One damaged specimen, lacking one antenna and considerably abraded, in the Macleay Museum, labelled "*Lamia vermicularia* Don. Ins. N.H. tab. 6, Dej. Cat. *vermicularis*, New Holland, Captn. King".

**EXPLANATION OF PLATE III.**

Fig. 1.—*Pytheus erosus* (Macleay).

Fig. 2.—*Probatodes plumula* (Newman).

Fig. 3.—*Phacodes subfasciatus* Gahan.

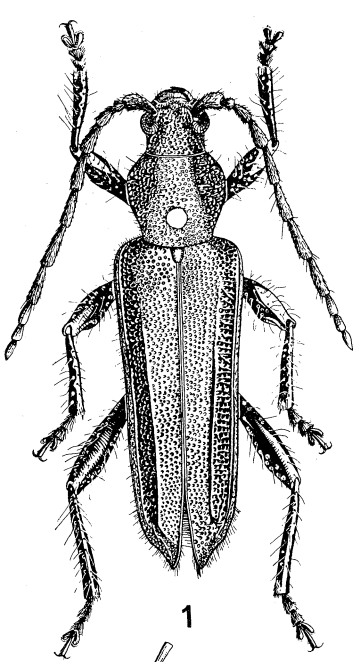
Fig. 3a.—*Phacodes subfasciatus* Gahan (apices of elytra).

Fig. 4.—*Platyomopsis piliger* (Macleay).

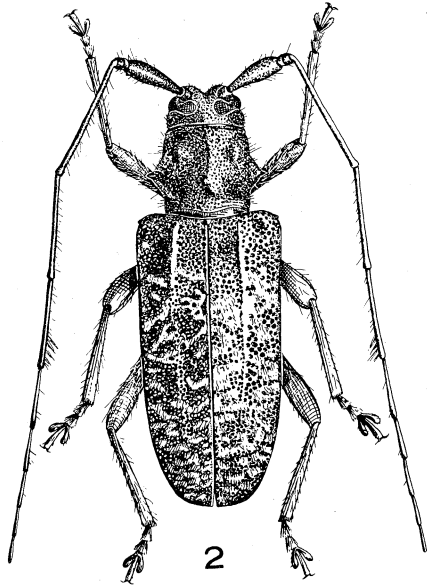
Fig. 5.—*Hylotrupes bajulus* (Linnæus).

Fig. 6.—*Depsages solandri* (Fabricius).

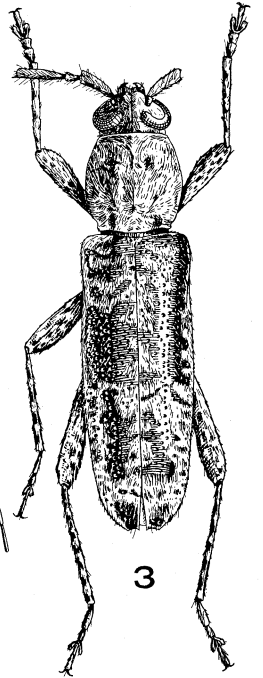
Fig. 6a.—*Depsages solandri* (Fabricius) (apices of elytra).



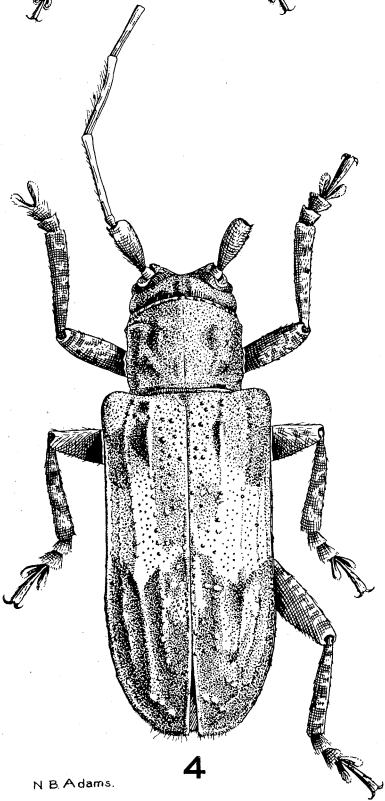
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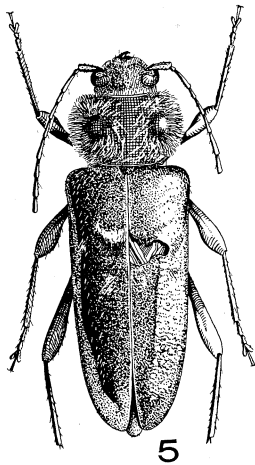
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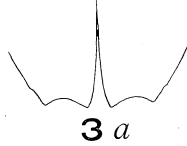
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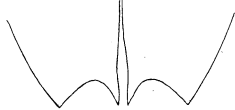
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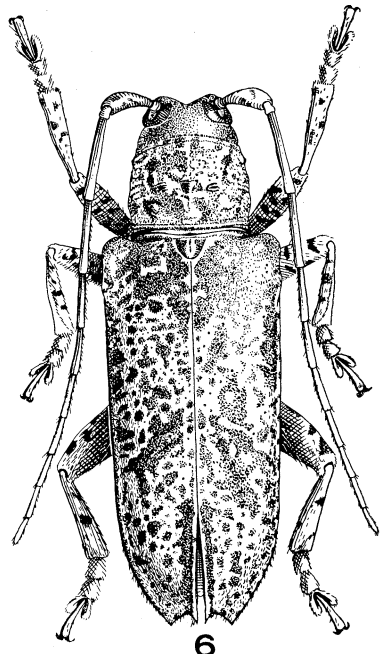
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3 a



6 a



6