#### ON AUSTRALIAN DERMESTIDAE. PART IV.

NOTES AND THE DESCRIPTION OF A NEW GENUS AND FOUR NEW SPECIES.

By J. W. T. ARMSTRONG.

(Three Text-figures.)

[Read 28th March, 1945.]

The following tabulation of those genera of the family Dermestidae represented in Australia is largely based on those given by Leconte and Horne (Coleoptera of N. America, p. 142) and Blackburn (*Trans. Roy. Soc. S. Aust.*, xxvii, 1903, p. 159). *Megatoma* is not included, as the only Australian species still placed in it is *M. tenuifasciata* Reitt., which probably does not belong there (see my foot-note, these Proceedings, lxvii, 1942, p. 328).

Tabulation of Genera of Australian Dermestidae

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A. Frontal ocellus absent Dermestes
AA. Frontal ocellus present.
B. Mesosternum narrow, middle coxae not widely separated, antennal fossae wanting
Attagenus
Subgen. Telopes
BB. Mesosternum broad, divided or emarginate, receiving the tip of the prosternum, middle
coxae widely separated, antennal fossae present, but very wide and indefinite in
Psacus.
C. Femora and tibiae strongly compressed.
D. Head normal, antennal fossae inconspicuous
DD. Head abnormal, produced forward and upward above eyes, antennal fossae distinct
CC. Tibiae at least normal.
D. Vestiture consisting of hairs.
E. Antennal fossae lateral, sulciform.
F. Antennae flabellate Psacus
FF. Antennae variable but not as above
EE. Antennal fossae anterior, foveiform.
F. Antennal club of three joints
FF. Antennal club of two very unequal joints, the last circular Orphinus
FFF. Antennal club of one joint, very large in &
DD. Vestiture consisting of scales.
E. Form rotund, head scarcely visible from above Anthrenus
EE. Form narrower, pronotum anteriorly raised, head plainly visible from above
Neoanthrenus
Genus Dermestes L.*
Those species of Dermestes that have been introduced to Australia, may be distin-
guished among themselves by the following tabulation.
A. Colour uniform
= felinus F.
AA. With a pattern of lighter coloured pubescence.
B. Clothing of elytra uniform
= australis Macl.
BB. Clothing of elytra bicolorous.
C. Elytra with a broad sub-basal band of ashen pubescence enclosing six dark spots,
clothing of ventral surface dark
CC. Elytra with numerous small spots or speckles distributed evenly thereon, ventral surface
thickly clothed with whitish pubescence murinus F.
* Since I submitted this paper for publication Mr. H. S. Parher of the United States National

<sup>\*</sup> Since I submitted this paper for publication, Mr. H. S. Barber of the United States National Museum has sent me his note, "Some synonymy in *Dermestes* (Coleoptera)", *Bull. Brooklyn Ent. Soc.*, xxxvii (5), 1942, pp. 174-176, in which he points out that *Dermestes ater* De Geer 1774 has priority over *D. cadaverinus* F. 1775 and *D. maculatus* De Geer 1774 over *D. vulpinus* F. 1775 and that there is no good reason known why De Geer's names should not stand. Froggatt in his book "Australian Insects" has the names *D. cadaverinus* F. and *D. vulpinus* F. transposed, which explains some of the confusion in Australian collections.

D. murinus F. is listed in Masters' Catalogue from Queensland, but I have not seen an Australian specimen nor any other reference to it.

#### Genus Attagenus Latr.

There are four species of *Attagenus* represented in Australian collections, of which the only one that may be endemic is *A.* (*Telopes*) undulatus Motsch. Brachysphyrus urroratus Blackb. is a synonym of this species (Arrow, Ann. Mag. Nat. Hist., (8) xv, 1915, p. 426). I have seen numerous specimens of an insect that agrees with Castelnau's brief description of his *A. annulifer* (Hist. Nat. Col., ii, 1840, p. 36), which is placed as a synonym of *A. cinnamomeus* Roth. in the Junk Catalogue. *A. gloriosae* F.\* is placed under the same name.

'The four species may be distinguished as follows:

A. Head, pronotum and antemedial elytral fascia clothed with golden yellow pubescence ......? gloriosae F. AA. Not thus.

B. With 5 small conspicuous white spots, 3 on pronotum situated near each posterior angle

B. With 5 small conspicuous white spots, 3 on pronotum situated near each posterior angle and on the medial lobe, 2 on elytra placed medially on either side of suture ...... pellio L.

BB. Not thus.

## Genus Psacus Pasc.

This genus, originally placed in the Rhipidoceridae, can only be separated from Trogoderma by the great development of the male antennae. P. mastersi Macl. is evidently not a Dermestid as Mr. K. C. McKeown, of the Australian Museum, in a letter, states: "I have made a careful examination of the type of P. mastersi Macl. There is no sign of an ocellus as far as I can see and the antennae are strongly flabellate over almost their whole length; superficially the appearance is very like that of a Trogoderma, but it is much narrower and the base of the prothorax is almost straight, not roundly excavated on either side, as in the Dermestids." This leaves P. attagenoides Pasc. as the only described species. A second is now added.

#### Psacus callubriensis, n. sp.

Elongate-ovate, fusco-piceous, nitid, rather strongly and closely punctate, clothed with moderately long semi-erect fusco-piceous setae, legs and antennae fusco-rufus.

Pronotum widest at base, this moderately bisinuate, sides evenly rounded to apex, not noticeably expanded at middle, posterior angles acute. Elytra slightly wider than prothorax, two-thirds as wide as long, as wide as pronotum at base, thence expanding a little to shoulders, apex evenly rounded. Antennae noticeably hairy, 3 segments 1 and 2 moniliform, 3 very small, 4 strongly pectinate, 5 to 10 strongly flabellate, 11 elongate-clavate; 9 segments 1 and 2 moniliform, 3 to 6 small, 7 to 10 larger serrate, 11 subovate, rather pointed at apex. No defined prosternal fossae, but antennae received under lateral margin of prothorax much as in Attagenus.

Size:  $2.8 \text{ mm.} \times 1.3 \text{ mm.}$ ;  $2 \text{ mm.} \times 1 \text{ mm.}$ 

Hab.—N.S.W.: Bogan R., Nandewar Range (J. W. T. Armstrong).

Cotypes in the British, South Australian and Australian Museums and the author's collection.

It is with hesitation that I place this species with *P. attagenoides* Pasc. The prothorax is not greatly expanded to take the antennae of the male, but otherwise it agrees fairly well. There are fifteen examples before me, and they are at once distinguished from Pascoe's species by being much smaller and far less hairy. They are to be found on the flowers of the wilga (*Geijera parviflora*), mostly in company with

<sup>\*</sup> Since submitting this paper for publication I forwarded a specimen of the species referred to above as Attagenus? gloriosae F. to Mr. G. J. Arrow of the British Museum of Natural History for verification. In a letter just received he writes: "Rather to my surprise, I have found that the unknown Attagenus is not A. gloriosae but a species unknown to me." In this case A. gloriosae has not been recorded from Australia, and the species here referred to remains to be determined.

Trogoderma boganense Armst., with which they are easily confused, owing to their small size and dark colour, until examined with a glass.

Genus Trogoderma Berth. Trogoderma picinum, n. sp.

Elongate-ovate, piceous, nitid, clothed with short semi-depressed piceous setae, antennae and legs fuscous.

Pronotum widest at base, this moderately bisinuate, posterior angles acute, sides at first gradually then evenly rounded towards apex, rather finely and closely punctate. Elytra two-thirds as wide as long, as wide as prothorax at base, slightly expanding to shoulders then subparallel for half length, then evenly rounded to apex, more coarsely and closely punctate than pronotum. Antennal club ovate, 3-segmented. Prosternal fossae wide, triangular, closed.

Size:  $1.9 \text{ mm.} \times 1.1 \text{ mm.}$ ;  $1.75 \text{ mm.} \times 0.9 \text{ mm.}$ 

Hab.—N.S.W.: Mullaley (J. W. T. Armstrong).

Cotypes in British and South Australian museums and the author's collection.

This species would be associated with *T. parvum* Armst., *excul* Blackb. and *lindense* Blackb. in my tabulation (these Proceedings, lxvii, 1942, p. 321). It is narrower than any of these and the 3-segmented antennal club at once separates it from *T. parvum* and *lindense*. *T. excul* is lighter in colour and has very different clothing. There are five specimens before me.

#### TROGODERMA NIGRONITIDUM, n. sp.

Ovate, convex, black, nitid, clothed with short black semi-erect setae, tarsi fusco-piceous.

Pronotum widest at base, medial lobe wide, deep and narrowly rounded at apex, posterior angles acute, sides evenly rounded to apex, disc deeply and fairly closely punctate, more closely so at sides. Elytra three-fourths as wide as long, base as wide as prothorax, expanding in same line as sides of pronotum to shoulders, these evenly rounded, thence narrowing in a gentle curve to near apex which is evenly rounded, coarsely and closely punctate. Antennal club wide, compact, elongate-ovate,  $\delta$  5-segmented,  $\circ$  3-segmented. Prosternal sulci wide, moderately deep, triangular, closed.

Size:  $3.3 \text{ mm.} \times 2 \text{ mm.}$ ;  $3 \text{ mm.} \times 1.8 \text{ mm.}$ 

Hab.—N. Qd.: Townsville (G. F. Hill), on grass flowers, Cooktown (W.J.T.).

Cotypes in the National Museum and F. E. Wilson's and the author's collections.

Four specimens from northern Queensland represent a species that falls beside *T. morio* Er., in my tabulation referred to above, from which it is distinguished by its greater convexity, narrowing elytra, and its antennal club being much wider and more compact.

#### Genus Myrmeanthrenus, n. gen.

Body compact, finely setose. Femora and tibiae strongly compressed, tarsi slender. Head abnormal, produced widely and anteriorly elevated, with a large cavity between the eyes, at the tip of which the ocellus is situated; eyes visible from above. Prosternum produced anteriorly concealing mouth parts, with large foveate antennal fossae situated along the anterior margins. Mesosternum narrow, entirely bisected. Antennae short, 11-segmented, segments 1 and 2 moniliform, 3 to 8 short, strongly compressed, 9 to 11 forming a stout ovate club.

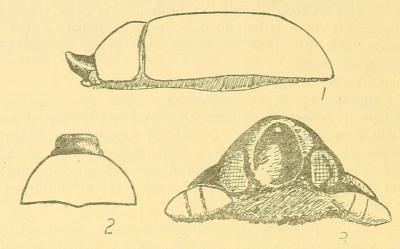
Genotype, Myrmeanthrenus frontalis, n. sp.

The abnormal head at once separates this genus from all others known to me. It is further distinguished from *Anthrenocerus*, to which it seems closest, by its compressed legs, from *Trogoderma* by the position of the antennal fossae and from *Neoanthrenus* and *Anthrenus* by the setose clothing. The single species described below was found associated with ants which would account for the compressed appendages and frontal fovea.

#### Myrmeanthrenus frontalis, n. sp. Figs. 1-3.

Ovate, brunneus, nitid, sparsely clothed with long fine brunneus setae, antennae and legs castaneous.

Head produced anteriorly above eyes and strongly elevated at apex, underside of this projection with an extensive deep fovea continuing down between eyes, having the margins thickly rounded. Pronotum transverse, widest at base, convex, sides evenly rounded to apex, base moderately bisinuate, posterior angles acute, base and sides slightly marginate, sparsely and lightly punctate. Elytra three-fourths as wide as long, base slightly narrower than prothorax, widening to shoulders thence almost parallel till apical one-third, this evenly rounded, coarsely and fairly closely punctate with two perceptible striae on either side of suture.



Figs. 1-3.—Myrmeanthrenus frontalis, n. sp. 1. Lateral view. 2. Dorsal view of head and prothorax. 3. Head from below and in front showing frontal cavity.

Size: 2.75 mm.  $\times 1.5$  mm.

Hab.—Vict.: Tallangatta (Ejnar Fischer), in ants' nests under stones.

Holotype and allotype in the author's collection.

There are two specimens of this remarkable inquiline before me, given me by Mr. F. E. Wilson, whom I have to thank for the opportunity of describing them. They seem to be sexes as one has the antennal club less regularly ovate and with the segments more uniform in length. They represent the most abnormal species of this family so far described from Australia. Figure 3 is to some extent a sketch, from in front and below the head, and must not be considered accurate in detail.

# Genus Anthrenus Geoffroy. Anthrenus vorax Waterh.

In November, 1943, Mr. F. H. Taylor sent me for identification five specimens of A. vorax Waterh. taken in an Australian port on an Australian warship, which had presumably been in Indian waters. They were infesting horse-hair fillings of chairs, etc., and there would seem to be considerable risk that the species might be introduced to this country. It is more robust and more brightly coloured than A. verbasci L., and is more circular in outline. The clothing of the ventral surface is snowy white.

### ANTHRENUS SCROPHULARIAE L.

There is a reference to this species in the Report of the Entomologist and Vegetable Pathologist (A.R. Dept. Agric. and Stock, Qd., 1918–19, p. 40), as follows: "Beetle larva (Anthrenus scrophulariae) attacking woollen clothes; two instances, Brisbane." This, in the absence of any further evidence, would seem to be a mis-determination and I do not propose to admit the presence of this species in Australia. This report has been cited by Griswold and Greenwald (Corneil Univ. Agric. Exp. Stat., Mem. 240, pp. 59 and 74), who also give a sufficiently alarming account of the ravages of both this species and A. vorax. A. scrophulariae can be easily distinguished from the species already introduced, by the orange-red vitta along the elytral suture.

#### CONCLUDING NOTES.

As this paper completes a series based on the material available to me up to the present, the following check-list is given as a summary. Ninety-one species are listed,

of which two (Dermestes murinus F. and Thaumaglossa concavifrons Reitt.) are doubtfully recorded as Australian. This is an increase of just over 50 per cent. on the number (60) given by Tillyard (Insects of Australia and New Zealand, 1926). Those species marked with an asterisk occur on the Bogan River above Nyngan, in central New South Wales, and the majority of these, with the exception of the two species of Dermestes, are to be found on the flowers of the wilga (Geijera parviflora) during the spring and early summer. On several occasions I have taken specimens of Trogoderma tolarnense Blackb. infesting my insect collection and also in tins containing a little powdered milk. Attagenus? gloriosae F.† has only made its appearance in the Bogan River district in recent years and is rapidly increasing.

The numbers in brackets refer to the list of references and indicate the paper in which the original description is to be found.

List of Australian Dermestidae including Introduced Species.

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Dermestes cadaverinus F.* (Introduced.)
                                                 picinum, n. sp.
                                                 reitteri Blackb. (6)
  = felinus F. (19)
  lardarius L. (Introduced.)
                                                 riguum Er. (10)
  murinus F. (Introduced, if, in fact, present
                                                 rufipenne Armst.* (2)
      in Australia.)
                                                 setulosum Armst. (2)
  vulpinus F.* (Introduced.)
                                                 singulare Blackb. (5)
  = australis Macl. (14)
                                                 socium Lea (12)
Attagenus ? gloriosae F.*;
                                                 tasmanica Armst. (2)
                                                 tolarnense Blackb.* (8)
 pellio L.
  piceus Ol.*
                                                 varipes Blackb. (6)
  undulata Motsch.
                                                 whitei Armst. (2)
                                                 yorkense Blackb. (5)
  = Brachysphyrus irroratus Blackb. (8)
                                               Psacus attagenoides Pasc. (15)
Megatoma tenuifasciata Reitt. (18)
    (Unknown to me.)
                                                 callubriensis, n. sp.*
Thaumaglossa concavifrons Reitt. (18)
                                               Adelaidea rigua Blackb. (5) (Unknown to
    (Doubtfully recorded from Tasmania.
                                                   me.)
                                               Myrmeanthrenus frontalis, n. gen. and sp.
    Unknown to me.)
  nigricans Macl. (14)
                                               Anthrenocerus australis Hope (11)
  = Orphinus rufopygus Pic
                                                 erichsoni Reitt. (18)
                                                 bicolor Arrow* (4)
Trogoderma adelaidae Blackb. (5)
                                                 blackburni Armst. (3)
 alpicola Blackb. (5)
 antipodum Blackb. (5)
                                                 chalceous Armst. (3)
  apicalis Macl.* (14)
                                                 concolorous Armst. (3)
  = pectinifer Arrow (4)
                                                 condensus Armst. (3)
                                                 confertum Reitt.* (18)
 apicipenne Reitt. (17)
  = baldiense Blackb. (5)
                                                 = flindersi Blackb. (5)
  blackburni Lea (13)
                                                 convexus Armst. (3)
  boganense Armst.* (2)
                                                 maculosus Armst. (3)
 carteri Armst.* (2)
                                                 niger Armst.* (3)
 consors Arrow (4)
                                                 pulchellus Arrow (4)
 debilius Blackb. (8)
                                                 quadrifasciatum Blackb. (8)
 difficile Blackb. (5)
                                                 signatus Armst. (3)
 ellipticum Armst. (2)
                                                 terzonatum Blackb.* (8)
                                                 trimaculatus Armst.* (3)
 excul Blackb.* (8)
                                                 variabile Reitt.* (18)
  explanaticolle Armst. (2)
  eyrense Blackb.* (5)
                                               Anthrenus verbasci L.* (Introduced.)
                                                 = varius F.
  frater Arrow (4)
                                                 pimpinellae F. (Introduced)
  froggatti Blackb. (6)
                                               Neoanthrenus frater Arrow (4)
 hobartense Armst. (2)
 inconspicuum Armst. (2)
                                                 niveosparsa Armst. (1)
                                                 ocellifer Blackb.* (5)
 laevipenne Armst. (2)
 leai Armst. (2)
                                                 parallelus Armst. (1)
  lindense Blackb. (5)
                                               Orphinus atrous Armst. (3)
  longius Blackb. (8)
                                                 australicum Blackb. (5)
                                                 casuarinae Blackb. (8)
  macleayi Blackb. (5)
                                                 ceciliense Blackb. (8)
  marginicolle Armst. (2)
  maurulum Blackb. (8)
                                                 interioris Blackb. (5)
  meyricki Blackb. (5)
                                                 minimus Arrow (4)
  morio Er. (10)
                                                 nealense Blackb.* (8)
                                                 occidentalis Armst. (3)
  nigrobrunneum Armst. (2)
  nigronitidum, n. sp.
                                                 quornense Blackb. (7)
  occidentale Blackb.* (5)
                                                 woodvillense Blackb.* (5)
                                                 = eucalypti Blackb. (8)
  parvum Armst. (2)
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<sup>†</sup> See footnote, p. 48.

#### References.\*

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#### CORRIGENDA.

Armstrong, 1942 (Part ii of this series), page 322, line 2 from bottom: for less read more. ----, 1943 (Part iii of this series), page 57, line 17 from bottom: after "clothing bicolorous" insert "or of more than two colours".

<sup>\*</sup> References to introduced species are not included.



Armstrong, J. W. T. 1945. "On Australian Dermestidae. Part IV. Notes and the description of a new genus and four new species." *Proceedings of the Linnean Society of New South Wales* 70, 47–52.

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