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**NOTES ON SOME AUSTRALIAN AND MELANESIAN
BASICEROTINE ANTS (HYMENOPTERA: FORMICIDAE)**

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NOTES ON SOME AUSTRALIAN AND MELANESIAN BASICEROTINE ANTS (HYMENOPTERA: FORMICIDAE)

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Abstract

This paper supplements an earlier one (Taylor, R. W., 1968, *Aust. J. Zool.*, **16**: 333-348). *Eurhopalothrix cinnamea* sp. n. is described from Manus Island, Bismarck Archipelago, and new data on some previously described basicerotine species are presented.

INTRODUCTION

This paper supplements my recent review of the Indo-Australian ants of the myrmicine tribe Basicerotini (Taylor 1968). It brings up to date the information available on distribution and variation of several previously described species, and a new species, *Eurhopalothrix cinnamea*, is described from Manus Island in the Bismarck Archipelago. The *E. cinnamea* types were collected by the Danish "Noona Dan" expedition, and were provided for study by Dr. Børge Petersen of Universitets Zoologiske Museum, Copenhagen. Rev. B. B. Lowery collected much of the other material, which he has generously deposited with the Australian National Insect Collection (ANIC). Abbreviations and definitions of measurements and indices follow those of the 1968 paper, which should be consulted for references and other data.

Rhopalothrix orbis Taylor

New record.—NEW SOUTH WALES: Burringbar Range, c. 15 km S of Murwillumbah, colony in roots and litter on buttress of *Tristania conferta*, medium sclerophyll forest, c. 120 m (2.ix.1968; B. B. Lowery) ANIC.

Six worker specimens generally resemble the holotype (ANIC), but two have supernumerary large orbicular cephalic hairs. The types, and the four apparently normal current specimens, have 16 hairs arranged in three rows across the frons. The anterior row of eight hairs is divided into two bilateral series of four by a gap at the midline, which slightly exceeds the other interspaces (Taylor 1968, Fig. 1). One of the anomalous Burringbar Range specimens has a fifth hair in the right anterior series, and the other has an extra hair between the right inner members of the anterior and middle series. Neither specimen appears to have accidentally lost any bilateral homologues of these supernumerary hairs.

A queen collected with these workers is too badly worn and encrusted for formal description. She has a complete thoracic exoskeleton and was obviously once winged. Her pilosity is badly obscured or damaged, but other comparable features resemble those of the workers. She has the following dimensions: TL c. 3.25 mm; HL 0.70 mm; HW 0.75 mm; CI 107; ML 0.24 mm; MI 34; SL 0.39 mm; greatest diameter of eye 0.14 mm; WL 0.90 mm.

Several larvae collected with this colony are preserved in the ANIC.

Eurhopalothrix australis Brown and Kempf

New records.—NEW SOUTH WALES: Burringbar Range, c. 15 km S of Murwillumbah, medium sclerophyll forest, 120 m, B. B. Lowery: colony of 27 workers and queen in soil bank at base of tree (28.viii.1967); single worker from gallery of *Bothroponera* nest, under stone (31.viii.1967) ANIC and Lowery collection. Dorrigo National Park, ex Berlese funnel sample, leafmould, palm/rain forest, < 1,000 ft (7.xi.1967; R. J. Bartell and L. B. Barton Browne) ANIC.

Fourteen workers in the Dorrigo series agree generally with ANIC material from NE and SE Queensland, but several show apparent anomalies in the cephalic

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hair pattern. The usual condition, with 10 specialised erect clavate hairs in the anterior row (Brown and Kempf 1960, Fig. 46), is seen in eight specimens; five have 12 hairs symmetrically arranged, and one has 11, including a supernumerary on the left side. All these specimens show no signs of loss of other cephalic hairs. I have seen 19 workers from the Burringbar Range colony; 15 have 10 anterior cephalic hairs, one has 12, and three have 11, with supernumeraries on either the left or right. Two workers from Mt. Coot-tha, Brisbane (members of a series from which Brown and Kempf (1960, p. 220) selected a paratype) have 10 anterior cephalic hairs, while a third has the pilosity damaged, but there are six hairs on the right side; a fourth specimen is too damaged for analysis. A worker from Lake Eacham National Park, near Atherton, N. Queensland, has 10 hairs in the anterior row.

Obviously caution is needed when using chaetotaxonomic characters in basiocerotine studies. Couplet 9 of my 1968 key to the Indo-Australian species requires modification in the light of this information.

Larvae from the Burringbar Range series are preserved in the ANIC.

Eurhopalothrix biroi (Szabó)

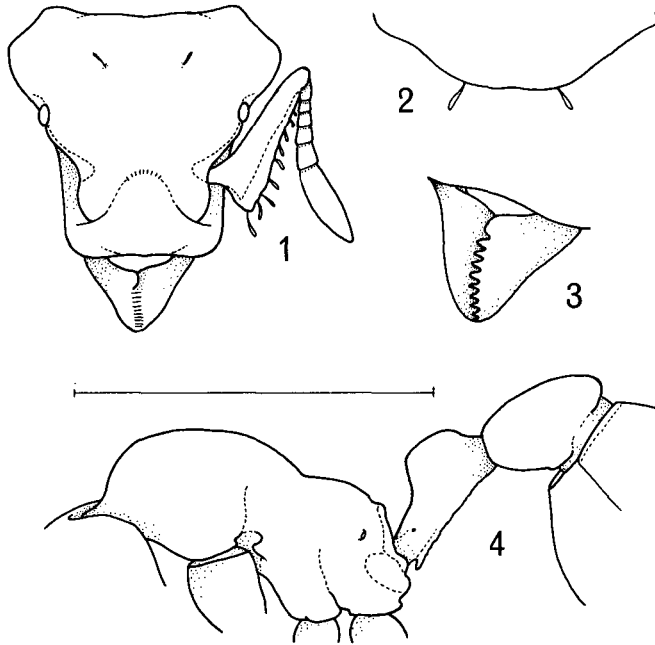
New record.—N.E. NEW GUINEA: Bulolo, several workers from dead wood in soil, lower montane rain forest, c. 610 m (15.xii.1967; B. B. Lowery) ANIC.

Eurhopalothrix cinnamea sp. n.

(Figs. 1–4)

Type locality.—BISMARCK ARCHIPELAGO (Admiralty Group): *Manus Island*: Lorengau (22.vi.1962, "Noona Dan" Expedition; No. 13 crl. hr 71). The type series (eight workers) was collected in a Berlese funnel sample of leafmould from primary tropical rain forest near the expedition campsite about 4 km SW of Lorengau (Petersen 1966).

Type deposition.—*Holotype* and four *paratypes* in Universitets Zoologiske Museum, Copenhagen; two *paratypes* in ANIC, one *paratype* in Museum of Comparative Zoology, Harvard University, Massachusetts, U.S.A.



FIGS. 1–4.—*Eurhopalothrix cinnamea* sp. n.: (1) head, frontal view (holotype); (2) transverse profile of frons across widest part of head, viewed from behind (holotype); (3) detail of mandible to show dentition (paratype); (4) mesosoma, petiole and postpetiole, lateral view (holotype). Scale line = 1.0 mm for Figs. 1, 2 and 4.

Dimensions as follows (holotype cited first): TL c. 3.3, 3.2–3.5 mm; HL 0.73, 0.73–0.77 mm; HW 0.77, 0.76–0.82 mm; CI 105, 104–107; ML 0.20, 0.20–0.21 mm; MI 27, 26–27; SL 0.45, 0.44–0.48 mm; SI 58, 56–59; greatest diameter of eye 0.08, 0.08–0.09 mm; PW 0.48, 0.47–0.51 mm; WL 0.89, 0.89–0.95 mm; petiolar node width 0.20, 0.20–0.21 mm; postpetiole width 0.45, 0.45–0.47 mm; maximum gastral width 0.63, 0.63–0.66 mm. General features as shown in accompanying figures. Frons moderately inflated, its transverse profile as in Figure 2. Mandibular structure and dentition (Fig. 3) much as in *E. isabellae* (Mann) (Taylor 1968, Fig. 11): outer borders concave (less strongly than in *isabellae*); posterior borders oblique, framing (with the anterior clypeal border) a narrow, roughly triangular gap when the jaws are closed; basal teeth broad, blade-like, each about twice as wide at base as the conical more apical teeth. Promesonotum strongly inflated; dorsum much higher than propodeum, almost entirely convex, with only very slight traces of a median longitudinal depression and bilateral tumosities; humeri broadly rounded in dorsal view. Promesonotal sulcus virtually obsolete above anterior spiracles. Mesometanotal suture not incised or otherwise differentiated in angle formed at promesonotal-propodeal junction. Propodeal teeth barely developed, represented only as small obtuse dorsal angles to low lamellae which border the declivity laterally. Outline of lamellar crests simple, approximately parallelling face of declivity (Fig. 4). A very fine trans-dental carina crosses the propodeum between the dorsal lamellar angles. Propodeal dorsum anterior to this carina more or less evenly convex, not invaded from behind by a distinct concave triangular extension of the declivity, as in *E. procera* (Emery), *E. greensladei* Taylor, and *E. isabellae*. Subpetiolar process with traces of serrations, probably homologous with those of *E. procera*. Dorsum of petiolar node minutely broader than long. Postpetiole about $\frac{3}{4}$ as long as wide; posterodorsal tumosities moderately developed. Gaster about 1.4 × wider than postpetiole.

Mandibles finely, obscurely granulose-punctate, especially near bases. Clypeus, frontal carinae, and most of frons, closely, moderately coarsely, but shallowly punctate; a depressed triangular area between frontal carinae obscurely and very finely shagreened; similar microsculpture overlying and partly obscuring frontal puncturation, especially postero-medially. Occiput, anterior to occipital carina, moderately finely and distinctly punctate; area behind carina, postgenae and antennal foveae finely and distinctly granulose-punctate. Scapes sculptured like mandibular bases. Promesonotal dorsum moderately coarsely but shallowly punctate-rugose, with a more or less longitudinal bias, especially posteriorly. Propodeal dorsum similarly but much more finely sculptured; declivity, below trans-dental carina, textured like antennal foveae. Sides of mesosoma, coxae, petiole, postpetiole and first gastral sternite densely and sharply punctuate; average punctural diameter about 0.01–0.015 mm, interpunctural distances averaging c. $\frac{1}{2}$ – $\frac{2}{3}$ diameter of surrounding punctures; puncturation roughened and effaced on dorsa of petiole and postpetiolar tumosities, less strongly incised on gaster than elsewhere. Median strip of first gastral tergite with moderately dense, slightly effaced, medium puncturation, grading outwards to smooth, shining lateral areas. Legs, distal to coxae, very finely and densely granulose-punctate.

Ground pilosity of minute bristle-like hairs about 0.01 mm long, extremely reduced and sparse where present; virtually absent on head except outer crests of occipital lobes and around eyes; elsewhere noticeably developed only on dorsa of promesonotum, petiole and postpetiole. Face of scape moderately covered by longer (c. 0.03 mm) narrowly clavate hairs; its outer edge with about 10 erect, narrowly clavate hairs, grading distally from c. 0.08–c. 0.04 mm long. A few similar hairs on apex of gaster and posterior area of its first sternite. Legs, proximal to femoral apices, with dense small hairs like those on face of scape; tibiae and tarsi with similarly dense but broad flattened hairs about 0.03 mm long and 0.02 mm wide. A pair of narrowly clavate erect specialised hairs c. 0.1 mm long on frons (Figs. 1, 2). Pubescence noticeable only on antennal scapes. General colour of head, body and appendages even, rich, golden chestnut brown; pilosity and pubescence yellowish-white.

This species is not especially striking or unusual. It clearly belongs in the group of *E. procera* (Taylor 1968), and appears to be part of a Melanesian radiation from *procera*-like stock, which also includes the Solomon Islands species *E. greensladei* and *E. isabellae*.

E. cinnamea runs to *E. isabellae* in couplet 3 of my 1968 key to the Indo-Australian Basicerotini. These species may be differentiated by inserting the following couplet 3a into the key:

- 3a(3). Propodeal teeth well developed, supporting broad infra-dental lamellae, a triangular area of propodeal dorsum anterior to their bases distinctly concave, and more or less clearly set off from the remaining dorsum. Colour medium-dark reddish brown (Solomon Islands: Ysabel and Vella Lavella) *E. isabellae* (Mann)
 Propodeal teeth vestigial, surmounting very narrow infradental lamellae. Propodeal dorsum almost entirely convex, with at most only slight traces of a posteromedian concavity. Colour bright golden chestnut brown (Manus Island) *E. cinnamea* sp. nov.

Eurhopalothrix szentivanyi Taylor

New record.—N.E. NEW GUINEA: near Bulolo, several workers foraging on rotting log, lower montane rain forest, about midday, c. 1070 m (20.xii.1967; B. B. Lowery), Lowery collection.

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