

AUSTRALASIAN ANTS OF THE GENUS *LEPTOTHORAX* MAYR (HYMENOPTERA :
FORMICIDAE : MYRMICINAE)

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The following species are discussed: *L. bilongrudi* sp. nov. (Papua New Guinea), *L. australis* Wheeler, and *L. renateae* sp. nov. (both North Queensland). The Australian species have peculiar lateral subocular carinae. *Leptothorax*, as presently constituted, is otherwise unknown from the Indo-Australian area.

□ *Ants, Formicidae, taxonomy, Leptothorax, Myrmicinae.*

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Leptothorax is a large and important myrmicine ant genus with over 200 nominal species known from the Palearctic, Ethiopian, Nearctic and Neotropical regions. Its diagnosis, synonymy and distribution were reviewed, with a monograph of the 11 Afrotropical species, by Bolton (1982). Apart from the three species considered here the genus has not been reported from the Indo-Australian area south of the Tropic of Cancer and east of Bangladesh (if one excludes the possibility, now under investigation by the author, that the Australian regional generic names *Podomyrma* Fr. Smith, *Dacryon* Forel, and *Pseudopodomyrma* Crawley, which were synonymised under *Podomyrma* by Taylor and D.R. Brown (1985), should all properly be considered junior synonyms of *Leptothorax*). The Sumatran generic record mentioned in passing by Wheeler (1934), when he described *L. australis* from north Queensland, seems never to have been substantiated. *L. bilongrudi* sp. nov. is the first species to be described from New Guinea, and *L. renateae* sp. nov. the second from Australia. These ants are poorly represented in collections, perhaps because they nest and forage arboreally and would thus tend to be overlooked by most ant collectors. In any case they appear to be rare. The three are apparently closely related; all have a typical *Leptothorax* palpal formula (maxillary 5:labial 3; confirmed in each by dissection), with 12-segmented antennae, unusual mandibular dentition, (described below under *L. bilongrudi*), and angularly projecting dorsolateral mesonotal borders. Twelve-segmented antennae are more usual than the alternative 11 in *Leptothorax*, and mesonotal projections are found in some neotropical species (Kempf, 1958, 1959). The mandibular dentition, however, apparently sets these species apart from all other members of the genus. In addition, the Australian species both have an unusual subocular

carinal complex on either side of the head. Each of these consists of a pair of equally very fine, closely parallel carinae, separated by a minute groove, which is about equal in width to an individual carina. These run together from the mandibular bases to meet the occipital carina on each side at an oblique angle (Fig. 4). Such structures have not been reported from other *Leptothorax* species. Somewhat similar carinae are seen in some species of *Myrmecina* Curtis, but otherwise they appear uniquely to characterise *L. australis* and *L. renateae*. Some records are cited using 1 degree coordinates to indicate mapping grid cells, as in Taylor (1987).

Specimens studied here are from the Australian National Insect Collection (ANIC) and the Queensland Museum (QM). Abbreviations for other collections are: BISHOP — B.P. Bishop Museum, Honolulu, Hawaii, USA; BM(NH) — British Museum (Natural History), London; GM — Museum d'Histoire Naturelle, Geneva, Switzerland; KUB — Masao Kubota collection, Odawara City, Japan; MCZ — Museum of Comparative Zoology, Cambridge, Massachusetts, USA. Conventions for measurements and indices follow Bolton (1982); HL is maximum head length, and HW the maximum width of the head behind the eyes.

***Leptothorax bilongrudi* sp. nov.**
(Figs 1-3)

TYPE LOCALITY

PAPUA NEW GUINEA: West Sepik Province, Victor Emanuel Range, at 5°07'S, 141°38'E, near Telefomin.

MATERIAL EXAMINED AND DISTRIBUTION

Known only from the type locality: holotype worker, 11 paratype workers, 2 paratype dealate females, taken at 1550 m (R.J. Kohout acc.1984.305, 17-19 Aug.).