

species with which they were not previously associated.

Six of the 28 names cited below as senior synonyms were originally proposed for Papuan species. Four of these (*P. creusa* Emery, *P. dives* Fr.Smith, *P. fervens* Fr.Smith, and *P. insularis* Emery) have not been used before for Australian ants. Five names of South-east Asian or Melanesian taxa (*P. guerini* Roger, *P. ithona* Fr.Smith, *P. levior* Roger, *P. lombokensis* Emery and *P. relucens* (Latreille)), which were previously treated as senior synonyms of Australian names or were considered to be nominotypical subspecies of Australian taxa, no longer apply to the Australian fauna. Finally, the first Australian records are noted of 10 species originally described from lands to the north (*P. argenteosignata* Emery, *P. atropos* Fr.Smith, *P. consimilis* Fr.Smith, *P. denticulata* Karawajew, *P. mucronata* Fr.Smith, *P. obtusa* Emery, *P. paxilla* Fr.Smith, *P. reclinata* Emery, *P. rufofemorata* Fr.Smith and *P. semiobscura* Donisthorpe).

Some of the species listed below have not been discussed in detail in our papers. Nonetheless, the species have been studied, found to be valid, and do not require further comment at present. We envisage that few changes will be required in the nomenclature proposed below. However, there is the possibility that we may have overlooked sibling species concealed by variability that we have interpreted here as infraspecific (a problem always prominent in taxonomic work on Australian ants).

All of the species listed are represented in the Australian National Insect Collection (ANIC), Canberra, and most are in the Queensland Museum (QMBA), Brisbane. The ANIC has type material of a number of taxa, including syntypes or paralectotypes of several of the species or subspecies described by Auguste Forel. These were generously donated in 1968 by the Muséum d'Histoire Naturelle, Geneva, Switzerland. In addition the ANIC contains many specifically labelled voucher specimens identified by one of us following direct comparison with type material on loan from foreign or other Australian collections. Between us, we have seen types of every relevant available name for which types are known to exist. We also believe that any specimen bearing one of our determination labels written during or since 1987 can be considered to have been identified with confidence. We have also designated and used a few particular ANIC vouchers as nomenclatural

paradigms for species of which the types are deemed to have been lost (see *P. guerini*). As a result, we believe that Australian workers using our published notes, and the resources of either collection should have little difficulty in identifying material of named *Polyrhachis* species or in recognising specimens representing undescribed species. The undescribed species known to us will at least double the Australian species tally. The next phase of our project will attend to their description and ultimately to the provision of keys enabling the ready identification of all relevant species.

Although we do not make formal use of the *Polyrhachis* subgenera of the Emery/Wheeler classification (Wheeler, 1922; Emery, 1925), we consider that they do provide useful foci for the sorting of species. The collections in our care are arranged following this system, generally as simplified by Hung (1967). For this reason a second list of species is given below, arranged in subgeneric groups. We do not support the direct use of species-group names to replace those of the subgenera. It seems unlikely that all of these subgenera are monophyletic. As well, a number of apparently monophyletic species-groups, which do not correlate with the present subgenera, can be discerned. We expect the present subgenera to be replaced by a larger set of informally-named species-groups but, prior to an overall formal taxonomic analysis, we will not initiate such a classification. No apology is made for this apparent ambivalence; the categorical subdivision of *Polyrhachis* cannot be resolved until all of the species now known are nomenclaturally and taxonomically accessible, and have been subjected to classificatory analysis. We trust that this paper will contribute meaningfully to the achievement of such a classification.

Abbreviations for institutions (with the names of co-operating curators) are: ANIC, Australian National Insect Collection, Canberra; BMNH, British Museum (Natural History), London (Barry Bolton); BPBM, Bernice P. Bishop Museum, Honolulu, Hawai'i, U.S.A. (Dr G. Nishida); HNHM, Hungarian Natural History Museum, Budapest (Dr J. Papp); IZAS, Institute of Zoology, Academy of Sciences, Kiev, U.S.S.R. (Dr A.G. Radchenko); MCSN, Museo Civico di Storia Naturale 'Giacomo Doria', Genoa, Italy (Drs R. Poggi and V. Raineri); MCZC, Museum of Comparative Zoology, Harvard University, Cambridge, Mass., U.S.A. (Dr A.F. Newton, Jr); MHNG, Muséum d'Histoire