New species of *Pheretima* (Oligochaeta: Megascolecidae) from the Mt. Malindang Range, Mindanao Island, Philippines

NONILLON M. ASPE1 & SAMUEL W. JAMES2

1Department of Natural History Sciences, Graduate School of Science, Hokkaido University, N10 W8, Sapporo 060-0810, Japan. E-mail: nonillon_aspe@yahoo.com
2Department of Biology, University of Iowa, Iowa City 52242-1324, Iowa, USA. E-mail: samuel-james@uiowa.edu

Abstract

We provide descriptions, with illustrations of internal structures, for 18 new species of *Pheretima* from Mt. Malindang, Misamis Occidental Province, Mindanao Island, Philippines. Among the 18 species, 11 belong to the *P. sangirensis* species group, characterized by having a pair of spermathecal pores in the intersegmental furrow of 7/8 and lacking penial sheaths in the copulatory bursae: *P. maculodorsalis* n. sp., *P. tigris* n. sp., *P. immannis* n. sp., *P. lago* n. sp., *P. nunezae* n. sp., *P. boniaoi* n. sp., *P. malindangensis* n. sp., *P. misamisensis* n. sp., *P. wati* n. sp., *P. longiprostata* n. sp., and *P. nolani* n. sp. One species, *P. longigula* n. sp., belongs to the *P. montana* species group, characterized by having a pair of spermathecal pores in the intersegmental furrow of 7/8 and penial sheaths in the copulatory bursae. Two species, *P. vergrandis* n. sp. and *P. concepcionensis* n. sp., are monothecal. Three species, *P. adevai* n. sp., *P. lluchi* n. sp., and *P. potonganensis* n. sp., belong to the *P. darnleiensis* species group, characterized by having either four or five pairs of spermathecae from vi to ix, with a fifth pair variably present in segment v. One species, *P. subanensis* n. sp., is athecate. All species described here from the Mt. Malindang Range are probably native rather than introduced, and probably do not represent range extensions of species known from neighboring islands in Southeast Asia. We provide an identification key to the *Pheretima* species from Mt. Malindang.

Key words: Earthworm, terrestrial, tropical, taxonomy, new species, diversity

Introduction

Until recently, knowledge of the native earthworm fauna of the Philippines was very limited. Non-specialist biologists in the Philippines erroneously identified all earthworms there as *Lumbricus terrestris* Linnaeus, 1758, a species common to North America and Europe but not detected in recent studies in the Philippines. Organized research on earthworm diversity in the Philippines began after Lawrence Heaney and collaborators discovered that the Isarog shrew-rat (*Rhynchomys isarogensis* Musser & Freeman, 1981) and *Chrotomys gonzalesi* Rickart & Heaney, 1991 feed exclusively on earthworms. The desire of the mammalogists to identify the worms the rat feeds on led to the discovery of 10 new species collected in 1993, all belonging to perichaetine genera in the *Pheretima* complex (Sims & Easton 1972) in the family Megascolecidae (James 2004).

*Pheretima* Kinberg, 1867, a Southeast Asian group with a range extending from northern Australia to Myanmar and northward to Korea, became the largest genus of earthworms there as *Lumbricus terrestris* Linnaeus, 1758, a species common to North America and Europe but not detected in recent studies in the Philippines. Organized research on earthworm diversity in the Philippines began after Lawrence Heaney and collaborators discovered that the Isarog shrew-rat (*Rhynchomys isarogensis* Musser & Freeman, 1981) and *Chrotomys gonzalesi* Rickart & Heaney, 1991 feed exclusively on earthworms. The desire of the mammalogists to identify the worms the rat feeds on led to the discovery of 10 new species collected in 1993, all belonging to perichaetine genera in the *Pheretima* complex (Sims & Easton 1972) in the family Megascolecidae (James 2004).

As the result of taxonomic studies in the last decade, around 200 species of native earthworms representing 10 genera are now known from the Philippines (Blakemore 2007; James 2004, 2005, 2006, 2009; James et al.
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References


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