

# Japanese earthworms revisited a decade on

(Oligochaeta: Megadrilacea)

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**Abstract.** This paper summarizes eco-taxonomic progress since 2001. Five new natives were described and five new exotics recorded plus herein Megascolecid *Amyntas rodericensis* (Grube, 1879) is retrieved from historical records, Acanthodrilid *Microscolex dubius* (Fletcher, 1887) is a new Asian record and Lumbricid *Dendrodriilus rubidus subrubicundus* (Eisen, 1874) morph from Lake Biwa is added to checklist a total of 96 Megadrile earthworm species in eight families from Japan. Approximately 33 are natives and same number are exotics with the balance having insufficient information to decide their origins (e.g. for *Eisenia japonica hiramoto* Blakemore, 2012). Synonyms are provided especially for parthenogenetically affected morphs which can only be separated via their type DNA. Criodrilid *Criodrilus bathybates* Stephenson, 1917 is restored as originally described in Criodrilidae and its COI nucleotide barcode is for the first time presented on GenBank.

**Key words.** *Amyntas*, *Metaphire*, pheretimoids, Japan, Megadrile Oligochaeta.

## Introduction

The current checklist is of 96 species in eight families from Japan. Previous revisions by EASTON (1981) catalogued 74 species, ISHIZUKA (2001) added 60 new names (most synonyms or homonyms), and BLAKEMORE (2003) concluded just 78 valid taxa with approximately 80 further names either in synonymy or *incertae sedis*. It is reemphasized that genus *Pheretima* Kinberg, 1867 *s. stricto* is nowhere present in Japan (as per SIMS & EASTON 1972, EASTON 1981, BLAKEMORE 2003, 2007d, 2010a,b,c,d). Contrarily, MINAMIYA *et al.* (2007, 2009, 2010) revert to a superceded taxonomy and a futile attempt to restore *Pheretima* without justification and in violation of ICZN (1999). They also retain synonyms while inadvertently adding typing errors and *lapsae* to species/genera/family names. Moreover, the *Metaphire hilgendorfi* / *Amyntas tokioensis* species-complex *s. mihi* (*Amyntas hilgendorfi* group *s.* EASTON (1981) remains particularly contentious and intractable with a myriad of synonyms continuously added from Korea, as lamented by BLAKEMORE (2008, 2010a, d). Hence a need for this review.

New records compared to BLAKEMORE (2003), were for exotics *Dendrobaena pygmaea* (Savigny, 1826) from Yokohama, *Eiseniella tetraedra* (Savigny, 1826) from Toyama-ken and now Mishima, Shizuoka-ken, *Eukerria saltensis* (Beddard, 1895) from Kamakura/Machida and Lake Biwa, plus *Pontoscolex corethrurus* (Müller, 1857) from Okinawa (see BLAKEMORE 2004, 2008, 2010, BLAKEMORE *et al.* 2007). A new native, *Helodrilus hachiojii* Blakemore, 2007c, was added and pheretimoids *Duplodricodrilus* Blakemore, 2008 and *Ma-*