

Cuban earthworms - a current checklist of species

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Summary

The present list from Cuba is of 45 recorded species with about 21 (or 46%) natives; compared to Rodrigues (2004; and Rodriguez-Aragones *et al.*, 2005) who catalogued 38 taxa but stated that 51 species in 24 genera from 8 families were known from Cuba (including 13 currently unpublished taxa) and that these probably represented only 25% of the total potential fauna pending further survey. The current checklist is derived from sources in the Acknowledgements and References given below although several generic and family placements differ from previous authors'.

American and Mexican taxa placed by some authors in either *Diploctrema* Spencer, 1900 or its synonym *Eodrilus* Michaelsen, 1907 require re-evaluation. Many possibilities exist for generic reallocation [eg. *Hegesipyle* Kinberg, 1782; *Acanthodrilus* Perrier, 1872; *Notiodrilus* Michaelsen, 1899; and other genera listed in Blakemore (2005; 2006) "Review of Southern Ocean, South Atlantic and Subantarctic species after Lee (1994)"] but, pending resolution, such taxa are provisionally transferred to the genus *Microscolex* Rosa, 1887 with a "?".

Survey Results: Checklist of Cuban species. Family level taxonomy follows Blakemore (2000: 2006a,b). Natives, as catalogued by Rodriguez (2004) are marked with a "*"; a "?" indicates some uncertainty; all cosmopolitan exotics are described in Blakemore (2002; 2006a).

Family Moniligastridae - non native

1. *Drawida barwelli* (Beddard, 1886) cosmopolitan, inc. Cuba by Rodriguez (1999; 2004), many synonyms.

Family Ocneroдрilidae – some natives, some exotics

1. *Eukerria saltensis* (Beddard, 1895) cosmopolitan, inc. Cuba by Rodriguez (1999; 2004), several synonyms.
2. *Ocneroдрilus* (*Ocneroдрilus*) *occidentalis* Eisen, 1878 cosmopolitan; [Gates (1972: 274) considered *O. occidentalis* to be a parthenogenetically degraded complex and said; "*O. beddardi*, *guatemalae*, *hendrici*, *sonorae* Eisen, 1893, *O. calwoodi* Michaelsen, 1898 and *O. mexicana* Eisen, 1900 are believed to be morphs of *occidentalis* rather than species". Many of these names were included in the genus *Ilyogenia* characterized by spermathecal pores in 8/9; but its type species, *Ilyogenia africana* Beddard, 1893, is probably a merely thecate morph of *O. occidentalis*, suggesting this genus should be combined. *Ilyogenia comondui* Eisen, 1900 is claimed as a further synonym of *O. occidentalis* by Fragoso (pers. comm. Sept. 2006)].

3. **Phoenicodrilus calwoodi* (Michaelsen, 1899: 131) originally *Ocnerodrilus calwoodi* from St Thomas also from Cuba by Michaelsen (1923) according to Fragoso (2004: 312).
4. **Temanonegia alba* (Gates, 1957: 438), originally *Nematogenia alba* transferred to genus *Temanonegia* Gates, 1979 (type *Nematogenia magna* Gates, 1957 from Dominican Republic), *T. alba* from Cuba by Rodrigues (2004).

Family Acanthodrilidae s. Blakemore (2000) - possibly some natives; (“?” with the genus *Microscolex*, indicates a provisional transfer from *Diplothelema* and/or its junior synonym *Eodrilus*).

1. *?*Microscolex ulrici* (Michaelsen, 1923: 77) comb. nov. - originally as *Acanthodrilus ulrici* also transferred to *Eodrilus* and/or *Diplothelema*, from Cuba.
2. *Microscolex dubius* (Fletcher, 1887) cosmopolitan.
3. *Microscolex phosphoreus* (Dugès, 1837) cosmopolitan.
4. **Zapotecia keiteli* Michaelsen, 1903: 16 possibly native to Haiti and also from Cuba (Rodriguez, 1999; 2004) [non *Eutrigaster* (*Graffia*) *keiteli* Michaelsen (1898: 173) also from Haiti].

Family Octochaetidae s. Blakemore (2000) including Benhamiinae s. Csuzdi & Zicsi (1994) – some native, some introduced.

1. **Cubadrilus carvernicolus* (Gates, 1962) type-species from Cuba, originally *Trigaster* then *Zapatadrilus*.
2. **Cubadrilus morenoae* (Rodriguez & Fragoso, 1995: 26) from Cuba originally in *Zapatadrilus*.
3. **Cubadrilus siboney* (Rodriguez & Fragoso, 1995: 29) from Cuba originally in *Zapatadrilus*.
4. *Dichogaster* (*Diplothelecodrilus*) *affinis* (Michaelsen, 1890) cosmopolitan, inc. Cuba by Csuzdi & Zicsi (1991), many synonyms.
5. *Dichogaster* (*Diplothelecodrilus*) *annae* (Horst, 1893) cosmopolitan inc. Cuba by Csuzdi & Zicsi (1991), many synonyms.
6. *Dichogaster* (*Diplothelecodrilus*) *bolau* (Michaelsen, 1891) cosmopolitan (inc. Mexico and Cuba), many synonyms.
7. *Dichogaster* (*Diplothelecodrilus*) *modiglianii* (Rosa, 1896) cosmopolitan inc. Costa Rica, Mexico and, (from Rodriguez, 1999; 2004) from Cuba, several synonyms.
8. *Dichogaster* (*Diplothelecodrilus*) *saliens* (Beddard 1893) cosmopolitan, inc. Cuba, Rodriguez (2004: 313)].
9. **Eutrigaster* (*Eutrigaster*) *pobozsnyae* Csuzdi, 1994: 64 from Cuba.
10. **Eutrigaster* (*Graffia*) *rodriguezi* Csuzdi, 1994: 65 from Cuba.

Family Exxidae - natives (new combinations from Blakemore, 2006b and in press).

1. **Exxus barroi* (Rodriguez & Fragoso, 2002: 131) comb. nov. originally *Cubadrilus barroi* from

Cuba.

2. **Exxus cubitasensis* (Rodriguez & Fragoso, 2002: 133) comb. nov. originally *Cubadrilus cubitasensis* from Cuba.
3. **Exxus righii* (Rodriguez & Fragoso, 2002: 134) comb. nov. originally *Cubadrilus righii* from Cuba.
4. **Exxus taina* (Rodriguez & Fragoso, 1995: 23) comb. nov. originally as *Zapatadrilus taina* with etymology: "Se refiere a uno de los grupos aborígenes de Cuba" (note: these peoples also known as "Taino" or "La Taina"), thus the noun does not require declension to match the genus and the name remains the same; later transferred to *Cubadrilus*; from Cuba.
5. *?*Exxus wyensis* Gates, 1959: 234 origin unknown but possibly from Cuba/Puerto Rico region where congeners occur - Rodrigues (2004: 309) estimated that only 25% of Cuban taxa had been identified and possibly it is in the remaining 75%, or it may now be extinct; syntypes in Harvard MCZ catalogue (erroneously?) listed as coming from Singapore.
6. **Trigaster setarmata* [authorship unknown, cited as *Trigaster setarmatus* (sic – although ICZN, 1999: Art. 30 says genera ending in *-gaster* are feminine) in Rodriguez & Fragoso (2002: 128) having non-tubular (= racemose?) prostates and with 3 gizzards]. **Nomen nudum** (Fragoso pers. comm. Sept., 2006) from Cuba.

Family Megascolecidae s. Blakemore (2000) – not natives

1. *Amyntas corticis* (Kinberg, 1867) cosmopolitan, many synonyms.
2. *Amyntas gracilis* (Kinberg, 1867) cosmopolitan, many synonyms.
3. *Metaphire houlleti* (Perrier, 1872) cosmopolitan, many synonyms.
4. *Perionyx excavatus* Perrier, 1872 cosmopolitan, inc. Cuba from Rodriguez (1999; 2004).
5. *Pithemera bicincta* (Perrier, 1875) cosmopolitan, several synonyms.
6. *Polypheretima elongata* (Perrier, 1872) cosmopolitan, several synonyms.
7. *Pontodrilus litoralis* (Grube, 1855) cosmopolitan on shorelines, many synonyms.

Family Lumbricidae - not natives

1. *?*Allolobophora decui* Botea, 1983: 36 from Cuba an unlikely (cavernicolous) native species; *incertae sedis* (from Rodriguez, 2004).
2. *?*Allolobophora negreai* Botea, 1983: 35 from Cuba an unlikely (cavernicolous) native species, *incertae sedis* (from Rodriguez, 2004).
3. *?*Allolobophora orghidani* Botea, 1983: 34 from Cuba an unlikely (cavernicolous) native species, *incertae sedis* (from Rodriguez, 2004).
4. *?Eisenia fetida andrei* Bouché, 1972 [unconfirmed report of introduction of this species for vermicomposting operations in Cuba by Jorge Ramon Cuevas reported by Werner (1996) - see

<http://www.wormdigest.org/content/view/61/2/>, Werner & Cuevas (1996) and Rodriguez (1999, 2004)].

5. *Eisenia fetida fetida* (Savigny, 1826) cosmopolitan with many synonyms.
6. ?*Lumbricus rubellus* Hoffmeister, 1843 [unconfirmed and unlikely report of introduction of this species from Mexico for vermicomposting operations in Cuba by Jorge Ramon Cuevas reported by Werner (1996) - see <http://www.wormdigest.org/content/view/61/2/> and Werner & Cuevas (1996)].
7. ?*Lumbricus terrestris* Linnaeus [unconfirmed and unlikely report of introduction of this species from Mexico for vermicomposting operations in Cuba by Jorge Ramon Cuevas reported by Werner (1996) - see <http://www.wormdigest.org/content/view/61/2/> and Werner & Cuevas (1996)].

Family **Glossoscolecidae** - some exotics, some natives.

1. **Onychochaeta elegans cubana* Michaelsen, 1923 from Cuba that was reported from Mexico by Rodriguez (1999), however Rodriguez *et al.* (2003: 85, 86, 89) claim that "*Onychochaeta cubana* Zicsi, 1995: 59" is a junior synonym but this citation is incorrect and they are actually referring to the redescription by Zicsi (1995) of *O. e. cubana* thus the status is rather uncertain. [Better citation perhaps as *Onychochaeta elegans* (Cognetti, 1905) (syn. *O. e. cubana* Michaelsen, 1923) from Cuba, Panama, Mexico and Colombia - see Rodriguez *et al.* (2003)].
2. **Onychochaeta windlei* (Beddard, 1890) reported from Cuba (and Mexico).
3. *Periscolex brachycystis* (Cognetti, 1905: 4) originally in *Hesperoscolex* from Cuba.; from Mexico and (introduced to?) Cuba (Rodriguez, 1999).
4. *Pontoscolex (Pontoscolex) corethrurus* (Müller, 1856) cosmopolitan, including Cuba.
5. **Pontoscolex (Mesoscolex) cynthiae* Borges et Moreno, 1990 from Puerto Rico, Mexico and Cuba (Rodriguez, 1999; 2004; Brown pers. comm. Dec. 2006).

Family **Eudrilidae** - non native.

1. *Eudrilus eugeniae* (Kinberg, 1867) cosmopolitan (inc. Mexico and Cuba) [misspelt "eugenia" and "eugenieae" by Gonzales *et al.* (2006: 1249, 1250)].

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[End of Cuban Checklist].