

English names of the megadrile earthworms (Oligochaeta) of KwaZulu-Natal

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Abstract

Certain groups of invertebrates are becoming mainstreamed in conservation activities in KwaZulu-Natal, especially taxa that have many narrow-range species endemic to the province. As a result, there may be a need to assign common (in this case English) names where these are unavailable. A list of scientific names and standardised common names is presented for earthworm species occurring in the province of KwaZulu-Natal, north-eastern South Africa.

Keywords

Earthworms, English names, Acanthodrilinae, Microchaetidae, Tritogeniidae, KwaZulu-Natal, South Africa

Introduction

This paper is the second providing English names for invertebrate groups that have many species endemic to the Maputaland-Pondoland-Albany biodiversity hotspot in the eastern region of South Africa, in the middle of which lies most of the province of KwaZulu-Natal (Mittermeier et al. 2005). The reasons for providing English names for these invertebrates, including now earthworms, are given in Armstrong and Hamer (2015). Land transformation is probably the most important threat facing indigenous

earthworm species in KwaZulu-Natal (e.g. Plisko 2000a), and 53 % of the total provincial landscape was in a natural state in 2011 (Jewitt et al. 2015). By 2050, Jewitt et al. (2015) estimate that 45 % of KwaZulu-Natal will remain in a natural state. As a result, the conservation requirements of the endemic invertebrate species need to be included in conservation planning and environmental impact assessments (McGeoch et al. 2011). The vulnerability of these species to extinction needs to be communicated to the general public who relate more to English names than scientific names. Eighty-eight earthworm species are currently thought to be endemic to KwaZulu-Natal, and many have very small total distribution ranges. Earthworms are slowly being incorporated into conservation planning and environmental impact assessments in KwaZulu-Natal (McGeoch et al. 2011). The provided list can be used as the basis for common names of genera and species elsewhere in South Africa should this be required.

The scientific name of an earthworm species may be based on the Latin or Greek language, or sometimes on the English or local language. The name of the species may refer to selected, specific, external or internal anatomical characters, based often on a single specimen, the Holotype, during its description. These characters may not be fully developed in an immature specimen. Many species have been named after the type locality, but this does not mean that it is the only species present at that locality. Many species are named after a person who collected, or assisted with the collection of, the specimen or who donated the specimen to a collection. Such a name does not indicate any diagnostic characters for the identification of the species. The same goes for species named in honour of a person or a property, or for species named for any other reason apart from a diagnostic identification character. All of the implemented common names should be treated as additional descriptions of the species with respect to already existing data.

Methods of compilation

English names for various species of earthworm have been in use for some time (Ezemvelo KZN Wildlife Biodiversity Database). These common names were taken as the starting point for the naming of the earthworm species in KwaZulu-Natal. Some genera in the province can be given names according to characteristics that are quite easily observable to the lay-person. However, since the internal organs and minute external setae are important distinguishing characteristics of families, genera and species of earthworm, the scientific names may reflect some aspect of these distinguishing characteristics. Therefore the name often does not describe readily observable features. The species occurring in KwaZulu-Natal and the scientific nomenclature were obtained from relevant publications (Nxele 2015; Plisko 1992, 1993, 1996a,b, 1997, 1998, 2000a,b, 2002a,b, 2003, 2004, 2005, 2006, 2007, 2008, 2012, 2013; Plisko and Zicsi 1991; Pickford 1927, 1937; Kinberg 1867; Michaelsen 1899, 1907, 1913, 1928; Benham 1892; Beddard 1897, 1907; Reinecke and Ryke 1969; Cognetti de Martiis 1906; Zicsi 1998; Zicsi and Pajor 1992).

Results

Table 1 gives the scientific names and English names of the species of earthworms known from KwaZulu-Natal.

Table 1. English names for earthworms in the subfamily Acanthodrilinae and families Microchaetidae and Tritogeniidae occurring in KwaZulu-Natal, South Africa.

SCIENTIFIC NAME	ENGLISH NAME
Subfamily Acanthodrilinae	Bristly earthworms (Fig. 1). English name derived from their characteristic setae.
<i>Chilota dilatus</i> Plisko, 2007	Projecting-papillae bristly earthworm
<i>Chilota quindecimus</i> Pickford, 1937	Unique-fifteenth-segment bristly earthworm
<i>Eodriloides thompsoni</i> Plisko, 2007	Thomson's bristly earthworm
<i>Parachilota braunsi</i> (Michaelsen, 1899)	Brauns' bristly earthworm
<i>Parachilota editha</i> (Pickford, 1927)	Edith's bristly earthworm
<i>Parachilota hutchinsoni</i> Pickford, 1937	Hutchinson's bristly earthworm
<i>Parachilota karkloofi</i> Zicsi, 1998	Karkloof bristly earthworm
<i>Parachilota kranskopensis</i> Pickford, 1937	Kranskop bristly earthworm
<i>Parachilota minimus</i> Zicsi & Pajor, 1992	Small bristly earthworm
<i>Parachilota nanus</i> Pickford, 1937	Dwarf bristly earthworm
<i>Parachilota ncandu</i> Plisko, 2008	Ncandu bristly earthworm
<i>Parachilota photodilus</i> (Beddard, 1897)	Coastal bristly earthworm
<i>Parachilota timothyi</i> Plisko, 2008	Timothy's bristly earthworm
<i>Parachilota traegardhi</i> (Michaelsen, 1907)	Traegardh's bristly earthworm
<i>Parachilota uysae</i> Plisko, 2008	Uys' bristly earthworm
<i>Parachilota wahlbergi</i> (Michaelsen, 1899)	Wahlberg's bristly earthworm
<i>Parachilota warreni</i> (Michaelsen, 1913)	Warren's bristly earthworm
<i>Parachilota wittebergensis</i> Pickford, 1937	Witteberg bristly earthworm
<i>Udeina adriani</i> Plisko, 2004	Adrian's bristly earthworm
<i>Udeina anneae</i> Plisko, 2004	Anne's bristly earthworm
<i>Udeina mapelane</i> Plisko, 2004	Mapelane bristly earthworm
<i>Udeina nkandla</i> Plisko, 2004	Nkandla bristly earthworm
<i>Udeina petrosi</i> Plisko, 2004	Petros' bristly earthworm
<i>Udeina pliskoae</i> Zicsi, 1998	Plisko's bristly earthworm
<i>Udeina qudeni</i> Plisko, 2004	Qudeni bristly earthworm
Family Microchaetidae	Wrinkled earthworms (Figs 2, 3). English names derived from their many body rings.
<i>Geogenia ambita</i> (Plisko, 1998)	Encircling-gland wrinkled earthworm
<i>Geogenia caementerii</i> (Michaelsen, 1913)	Pietermaritzburg wrinkled earthworm
<i>Geogenia distasmosa</i> Plisko, 2003	Interesting wrinkled earthworm
<i>Geogenia gripa</i> Plisko, 2002	Puzzle wrinkled earthworm
<i>Geogenia herberti</i> Plisko, 2002	Herbert's wrinkled earthworm
<i>Geogenia idechorita</i> Plisko, 2003	Ngele forest wrinkled earthworm
<i>Geogenia minnehaha</i> Nxele, 2015	Minnehaha wrinkled earthworm
<i>Geogenia mkuzi</i> Plisko, (1992)	Mkuzi wrinkled earthworm
<i>Geogenia natalensis</i> (Kinberg, 1867)	Natal wrinkled earthworm
<i>Geogenia parva</i> (Michaelsen, 1913)	Little wrinkled earthworm



Figure 1. Subfamily Acanthodrilinae (Bristly earthworms): Timothy's bristly earthworm *Parachilota timothyi* Plisko, 2008.



Figure 2. Family Microchaetidae (wrinkled earthworms): green giant wrinkled earthworm *Microchaetus papillatus* Benham, 1892.

SCIENTIFIC NAME	ENGLISH NAME
<i>Geogenia pondoana</i> (Michaelsen, 1913)	Pondoland wrinkled earthworm
<i>Geogenia quaera</i> Plisko, 2003	Hluhluwe wrinkled earthworm
<i>Geogenia tegwana</i> Plisko, 2005	Tegwan wrinkled earthworm
<i>Geogenia tuberosa</i> (Plisko, 1998)	Glandular wrinkled earthworm
<i>Geogenia zaloumisi</i> (Plisko, 1992)	Zaloumis' wrinkled earthworm
<i>Microchaetus papillatus</i> Benham, 1892	Green giant wrinkled earthworm
<i>Microchaetus vernoni</i> Plisko, 1992	Vernon's giant wrinkled earthworm
<i>Proandricus adami</i> Plisko, 2003	Adam's wrinkled earthworm
<i>Proandricus adriani</i> Plisko, 2000	Adrian's wrinkled earthworm
<i>Proandricus alatus</i> Plisko, 1996	Flanged wrinkled earthworm
<i>Proandricus amphius</i> Plisko, 2003	Encircling-clitellum wrinkled earthworm



Figure 3. Family Microchaetidae (wrinkled earthworms): setaceous wrinkled earthworm *Proandricus setosus* Plisko, 1996.

SCIENTIFIC NAME	ENGLISH NAME
<i>Proandricus armstrongi</i> Plisko, 2002	Armstrong's wrinkled earthworm
<i>Proandricus babanango</i> Plisko, 1992	Babanango wrinkled earthworm
<i>Proandricus beddardi</i> (Benham, 1892)	Beddard's wrinkled earthworm
<i>Proandricus bergvillensis</i> Plisko, 2000	Bergville wrinkled earthworm
<i>Proandricus bourquini</i> Plisko, 1996	Bourquin's wrinkled earthworm
<i>Proandricus bulwerensis</i> Plisko, 1992	Bulwer wrinkled earthworm
<i>Proandricus colletti</i> (Beddard, 1907)	Collett's wrinkled earthworm
<i>Proandricus comptus</i> Plisko, 1996	Ornamented wrinkled earthworm
<i>Proandricus crookesi</i> Plisko, 2002	Crookes' wrinkled earthworm
<i>Proandricus entumeni</i> Plisko, 1992	Entumeni wrinkled earthworm
<i>Proandricus gracilis</i> (Michaelsen, 1907)	Slender wrinkled earthworm
<i>Proandricus hedothecus</i> Plisko, 2000	Pongola wrinkled earthworm
<i>Proandricus hlatikulu</i> Plisko, 2002	Hlatikulu wrinkled earthworm
<i>Proandricus holbeck</i> Plisko, 2005	Holbeck wrinkled earthworm
<i>Proandricus injasuti</i> Plisko, 2002	Injasuti wrinkled earthworm
<i>Proandricus ivari</i> (Michaelsen, 1907)	Midlands wrinkled earthworm
<i>Proandricus jasoni</i> Plisko, 1992	Jason's wrinkled earthworm
<i>Proandricus lesothoensis</i> (Reinecke & Ryke, 1969)	Lesotho wrinkled earthworm
<i>Proandricus lovuuus</i> Plisko, 2003	Lovu wrinkled earthworm
<i>Proandricus marleyi</i> (Michaelsen, 1928)	Marley's wrinkled earthworm
<i>Proandricus martensi</i> Plisko, 2002	Martens' wrinkled earthworm



Figure 4. Family Tritogeniidae (stumpy earthworms): Zululand stumpy earthworm *Tritogenia zuluensis* (Beddard, 1907).

SCIENTIFIC NAME	ENGLISH NAME
<i>Proandricus michelleae</i> Plisko, 2002	Michelle's wrinkled earthworm
<i>Proandricus modestus</i> (Michaelsen, 1899)	Modest wrinkled earthworm
<i>Proandricus notabilis</i> Plisko, 2005	Noteworthy wrinkled earthworm
<i>Proandricus oresbiosus</i> Plisko, 2003	Mountain-dwelling wrinkled earthworm
<i>Proandricus ortyi</i> Plisko, 2000	Orty's wrinkled earthworm
<i>Proandricus pajori</i> Plisko, 1993	Pajor's wrinkled earthworm
<i>Proandricus richerti</i> Plisko, 2002	Richert's wrinkled earthworm
<i>Proandricus setosus</i> Plisko, 1996	Setaceous wrinkled earthworm
<i>Proandricus thornvillensis</i> Plisko, 1992	Thornville wrinkled earthworm

SCIENTIFIC NAME	ENGLISH NAME
Family Tritogeniidae	Stumpy earthworms (Fig. 4). The English name is derived from the relatively plump, compact shape, usually shorter than species of Microchaetidae.
<i>Michalakus initus</i> Plisko, 1996	Two-gizzard stumpy earthworm
<i>Tritogenia alveata</i> Plisko, 1997	Invaginated stumpy earthworm
<i>Tritogenia annetteae</i> Plisko, 1997	Annette's stumpy earthworm
<i>Tritogenia ataxia</i> Plisko, 1997	Disorderly-bristled stumpy earthworm
<i>Tritogenia curiosa</i> Plisko, 1997	Curious stumpy earthworm
<i>Tritogenia curta</i> Plisko & Zicsi, 1991	Short stumpy earthworm
<i>Tritogenia debbieae</i> Plisko, 2003	Debbie's stumpy earthworm
<i>Tritogenia diversa</i> Plisko, 1997	Diverse stumpy earthworm
<i>Tritogenia douglasi</i> Plisko, 1997	Douglas' stumpy earthworm
<i>Tritogenia herbana</i> Plisko, 1997	Herb stumpy earthworm
<i>Tritogenia hiltonia</i> Plisko, 2003	Hilton stumpy earthworm
<i>Tritogenia howickiana</i> (Michaelsen, 1913)	Howick stumpy earthworm
<i>Tritogenia insolita</i> Plisko, 1997	Trapeziform-clitellum stumpy earthworm
<i>Tritogenia karkloofia</i> Plisko & Zicsi, 1991	Karkloof stumpy earthworm
<i>Tritogenia koilia</i> Plisko, 1997	Oval-tuberculate stumpy earthworm
<i>Tritogenia liversagei</i> Plisko, 1997	Liversage's stumpy earthworm
<i>Tritogenia lunata</i> Plisko, 1997	Crescent-shaped-tuberculate stumpy earthworm
<i>Tritogenia melmothana</i> (Michaelsen, 1928)	Melmoth stumpy earthworm
<i>Tritogenia miniseta</i> Plisko, 1997	Minute-bristled stumpy earthworm
<i>Tritogenia monosticha</i> Plisko, 1997	Single-rowed stumpy earthworm
<i>Tritogenia morosa</i> Cognetti de Martiis, 1906	Morose stumpy earthworm
<i>Tritogenia mucosa</i> Plisko & Zicsi, 1991	Slimy stumpy earthworm
<i>Tritogenia ngeleensis</i> Plisko, 1997	Ngele stumpy earthworm
<i>Tritogenia ngomensis</i> Plisko, 1992	Ngome stumpy earthworm
<i>Tritogenia phinda</i> Plisko, 2005	Phinda stumpy earthworm
<i>Tritogenia qudeni</i> Plisko, 2003	Qudeni stumpy earthworm
<i>Tritogenia shawi</i> Plisko & Zicsi, 1991	Shaw's stumpy earthworm
<i>Tritogenia soleata</i> Plisko, 1997	Horseshoe-gland stumpy earthworm
<i>Tritogenia sulcata</i> Kinberg, 1867	Glandular stumpy earthworm
<i>Tritogenia tetrata</i> Plisko, 2003	Four-rowed stumpy earthworm
<i>Tritogenia zuluensis</i> (Beddard, 1907)	Zululand stumpy earthworm

Discussion and conclusions

The list of species of earthworms in KwaZulu-Natal gives each species a standardized English name that can be used for conservation planning and other conservation activities. Although identification of earthworm species usually has to be done by specialists and trained technicians, certain genera or species can be distinguished by external features such as feel, size and colour, in conjunction with distribution. Nevertheless, keys are available to distinguish between genera and species, including introduced species (e.g. Plisko 1992, 1993, 1997, 1998, 2000b, 2002a, 2004, 2006, 2013; Plisko and Nxele 2015; Plisko and Zicsi 1991; Zicsi and Pajor 1992). We trust that this short communication will assist with the inclusion of earthworm taxa in conservation activities and planning.

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