In Memoriam

Frank Evers Beddard

19 July 1858 – 14 July 1925

This page serves to introduce an exceptional article written by John W. Cole, entitled, *Bibliography of the contributions to the study of the Annelida by Frank Evers Beddard with details of the material reported*", published in 1981 in the journal, Archives of Natural History, Volume 10, issue 2, pp. 273-315. This article presents a broad overview of Beddard's personal life and scientific career, inclusive of his personal and avocational involvements and interests, his broad scientific endeavors with and contributions to the study of the Annelida, mammals, birds, amphibians, reptiles, Cestoda, other invertebrate groups, and lung fishes, and an annotated bibliography of scientific publications focusing on the Annelida. An appendix within Cole's article lists the types of species described by Beddard, inclusive of the museum(s) in which the type specimens have been deposited, the item number (presumably now associated with the museums' current accession numbers for specimens in the type series therein deposited), and an index of scientific names.

The reference section in Cole's paper includes citations for several previously published obituaries for Beddard: in 1925 (in the journal, *Ibis* by an anonymous author; in the journal, *Nature* by Hilderic Friend; and in the journal, *Nature* by W.P. Pycraft), and in 1926 (in the journal, *Proceedings of the Royal Society of Edinburgh* by an anonymous author; and in the journal, *Proceedings of the Royal Society of London* by P. Chalmers Mitchell).

You are encouraged to read the following article by Cole and the literature cited therein.

Additionally, you are encouraged to visit the on-line nomenclator for the Oligochaeta – Nomenclatura Oligochaetologica – Editio Secunda, to access the accounts for the taxa described as new to science by Beddard.

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Bibliography of the contributions to the study of the Annelida by Frank Evers Beddard with details of the material reported

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> One evening I was with Mr Frank E. Beddard at his club and taking advantage of the occasion, asked him some question about earthworms, he being the greatest authority in the universe on the subject.
> W. H. HUDSON. [1919] *The book of a naturalist* London, p. 347.

INTRODUCTION

Prior to the contributions made to the study of the Oligochaeta by F. E. Beddard, workers in Great Britain and elsewhere had largely confined their examinations of earthworms to a consideration of the external morphology with the result that knowledge of the group was severely limited and the conclusions reached were frequently erroneous. Beddard had a wide knowledge of zoology and being a proponent of Darwinism, was interested in the homologies of structures occurring in different animal groups. Inevitably, when he came to investigate earthworms he examined their internal anatomy to record system variation and, possibly being influenced by the work of E. S. Goodrich on the nephridia of the lower invertebrates, was particularly interested in excretory systems. This more scientific methodology caused him to achieve significant progress in the study of the group. Beddard was especially fortunate in that he carried out his studies at a time when collections of Oligochaeta were first being made in many areas of Africa, the Americas, Asia, and Australasia and much of this material, containing representatives of new species, genera and families, was sent to him. His careful dissections not only enabled him to lay the foundations of our knowledge of the limits of morphological variation, so permitting the parameters of the class and its component families to be delineated, but also established a standard of study for future workers. His detailed, prolific scientific reports influenced many others not least an illustrious contemporary Wilhelm Michaelsen who, in his early years, investigated the European Oligochaeta, first the Enchytraeidae then the Lumbricidae. Michaelsen's high regard for Beddard's wide knowledge and experience was evident when he sent him for determination the earthworms that he had collected in South America. (These specimens were subsequently returned and now form part of the important oligochaete collections in the Zoologisches Institut und Zoologisches Museum, Universitat Hamburg.)

Over the years Beddard received collections of earthworms from many parts of the world from which he described many new taxa. The material was purchased by the British Museum (Natural History) in 1904 but at this date there was no oligochaete specialist on the staff of the Museum and the specimens were neither fully documented nor the type material separated. (Other oligochaetes studied by Beddard but donated to the British Museum (Natural History) in 1924 by the Zoological Museum, Cambridge, received similar treatment.) The present paper was produced during the course of curating these important

accessions. An annotated list is provided of all the 143 scientific papers and books Beddard published on the Annelida. The names of the species described or recorded are cited under each entry together with information on the locality of origin and the name of the collector of the material and, when known, the current location. Details of the type material are listed in an Appendix.

BIOGRAPHICAL NOTE

Frank Evers Beddard was born in Dudley on 19 July 1858, the son of John Beddard, and was educated at Harrow and New College, Oxford. He married soon after moving to London in 1884 and died at his home in Hampstead, in north western London on 14 July 1925. In 1882 he began a lifetime of research by studying the isopod Crustacea when he joined the team of naturalists formed in Edinburgh to identify the collections made by the *Challenger* expedition (Beddard, 1884, 1885, 1886). Within two years his abilities and wide interests in zoology were recognized and led in 1884 to him being appointed Prosector to the Zoological Society of London, a post which he held with great distinction until his retirement in 1915 (Mitchell, 1926, 1929). During this period he made significant contributions to knowledge of the comparative anatomy of vertebrates and several invertebrate groups (Beddard, 1902). His work was reported in numerous scientific journals, especially in the *Proceedings of the Zoological Society of London.* He contributed 143 papers on annelids in addition to many others on mammals, birds, reptiles, amphibians, lung fishes, and various invertebrate groups (including twenty-one on cestodes). He was also the author of a number of major works: *The structure and classification of birds* (1890), *Animal colouration* (1892), *A textbook of zoogeography* (1895), *A mongraph of the order Oligochaeta* (1895), *Elementary practical zoology* (1898), *A book of whales* (1900), *Natural history in zoological gardens* (1905), *Earthworms and their allies* (1912). Further, he contributed the chapters on oligochaetes and leeches (1895) and a volume on mammals (1906) to the *Cambridge Natural History* series, and chapters on anatomy and classification to several books on birds, e.g. *British birds* by W. H. Hudson (1895, 1897).

During his career F. E. Beddard was a lecturer in biology at Guy's Hospital, London, and an examiner at the universities of Oxford and London. He was elected a Fellow of the Royal Society of Edinburgh in 1883. Then, primarily for his contributions to the study of the Oligochaeta, he was elected a Fellow of the Royal Society in 1892 at the age of 34, and was later awarded the Gold Medal of the Linnean Society. The degree of Doctor of Science was conferred on him by Oxford University in 1912. After his retirement as Prosector of the Zoological Society he continued research at Bedford College, London. Other details are provided by Mitchell (1926, 1929), Friend (1925), Pycraft (1925), and also anonymous obituary notices (Anon., 1925, 1926).

ANNOTATED BIBLIOGRAPHY

Beddard's scientific publications on the Annelida are listed chronologically below. Each reference is briefly annotated with an indication of the scope of the paper if the title is not explicit, and the names of the taxa reported with both the nomenclatural combination employed by Beddard and the name now currently regarded as valid. The majority of the papers contain descriptions of specimens from new collections most of which were eventually incorporated in the British Museum (Natural History). Details of the material now in the British Museum (Natural History) collection are given in square brackets,

specimens *not* located are indicated by an asterisk (*). The annotations to Item 98 *(A monograph of the order Oligochaeta)* contain only the names of new taxa and new records of extant species (all other existing taxa being reviewed).

1881

1. On the anatomy and histology of *Pleurochaeta moseleyi* (Abstract). *Proceedings of the Royal Society of Edinburgh* **11**: 629–630.

Pleurochaeta moseleyi Beddard, 1881 = *Megascolex coeruleus* Templeton, 1884.
Specimens collected in Ceylon, received from Professor Moseley.*

1883

2. On the anatomy and histology of *Pleurochaeta moseleyi. Transactions of the Royal Society of Edinburgh* **30**: 481–509, 3 pls.

Specimens: see **1.**

3. Notes on some earthworms from India. *Annals and Magazine of Natural History (5)* **12**: 213–224, 1 pl.

Notes on the important differences between the two genera *Megascolex* Templeton and *Perichaeta* Schmarda.
Specimens of the following species, collected chiefly in the neighbourhood of Calcutta, sent to Professor McIntosh from the Indian Museum at Calcutta and forwarded to F. E. Beddard for identification.
Megascolex affinis (E. Perrier, 1872) = *Metaphire posthuma* (Vaillant, 1868). [*ca.* 18 specimens.]
Perichaeta armata Beddard, 1883 = *Lampito mauritii* Kinberg, 1867. [*ca.* 20 specimens (syntypes) and micro-slides.]
Perionyx M'Intoshii Beddard, 1883 = *P. macintoshii* Locality: Akhyab, Burmah.*
Typhoeus Beddard, 1883 defined.
Typhoeus orientalis Beddard, 1883 = *Eutyphoeus orientalis.**

1884

4. Note on the structure of the body-wall in certain earthworms. *Proceedings of the Royal Physical Society of Edinburgh* 8: 89–91.

First description of intra-epithelial blood capillaries (*Perichaeta* and *Perionyx* spp.).)

5. On the genus *Megascolex* of Templeton. *Annals and Magazine of Natural History (5)* **13**: 398–402.

Megascolex Templeton and *Perichaeta* Schmarda, redefined.
Perichaeta diffringens (Baird, 1869) = *Amynthas corticus* (Kinberg, 1867) [*ca.* 6 specimens.]
Re-examination of type specimens and comparison with *Megascolex coeruleus.*

1885

6. Preliminary note on the nephridia of a new species of earthworm. *Proceedings of the Royal Society of London* No. 238: 459–464.

Acanthodrilus sp. innom. Specimens collected by Professor T. J. Parker from Otago, New Zealand.*

7. On the specific characters and structure of certain New Zealand earthworms. *Proceedings of the Zoological Society of London* **1885**: 810–832, 2 pls.

Acanthodrilus Perrier, structure of the genus and systematic notes.
Acanthodrilus dissimilis Beddard, 1885 = *Maoridrilus dissimilis.* [5 specimens (syntypes).]
Acanthodrilus multiporus Beddard, 1885 = *Octochaetus multiporus.* [*ca.* 30 specimens (holotype and paratypes) and 79 micro-slides.]
Acanthodrilus novaezelandiae Beddard, 1885 = *Maoridrilus uliginosus* (Hutton, 1877). [2 specimens (syntypes).]
Specimens of all three species collected from New Zealand by Professor T. J. Parker.

8. Notes on the structure of a new species of earthworm belonging to the genus *Acanthodrilus* (E.P.). *Proceedings of the Royal Physical Society of Edinburgh* 8: 369–377.

Acanthodrilus capensis Beddard, 1885 = *Parachilota capensis.* Specimens collected by Rev. G. R. Fisk from Cape Town, South Africa. [3 micro-slides (syntypes).]

9. Note on the paired dorsal vessel of certain earthworms. *Proceedings of the Royal Physical Society of Edinburgh* 8: 424–430.

Including *Megascolex* and *Microchaeta* spp.*

10. Sur les organes segmentaires de quelques Vers de Terre. *Annales des Sciences Naturelles* Paris (7) **19**: 1–19, 1 pl.

Acanthodrilus multiporus Beddard, 1885 = *Octochaetus multiporus.* Segmental organs etc. Specimens: see **7.**

11. Note on the nephridia of a species of *Acanthodrilus. Zoologischer Anzeiger* Leipzig 8: 289–290.

Acanthodrilus dissimilis Beddard, 1885 = *Maoridrilus dissimilis.* Specimens: see **7.**

1886

12. Contributions to our knowledge of the Oligochaeta. *Reports of the British Association for the Advancement of Science* for the year 1885: 1102–1103.

Anatomical notes on nephridia, spermathecae and dorsal blood-vessels. Including the following species examined:
Acanthodrilus multiporus Beddard, 1885 = *Octochaetus multiporus.*
Acanthodrilus novaezelandiae Beddard, 1885 = *Maoridirilus uliginosus* (Hutton, 1877).
Specimens: see **7.**

13. Note on the structure of a large species of earthworm from New Caledonia. *Proceedings of the Zoological Society of London* **1886**: 168–175, 1 pl.

Acanthodrilus layardi Beddard, 1886 = *Acanthodrilus ungulatus* Perrier, 1872.
Collected by Mr E. L. Layard from New Caledonia. [Holotype.]

14. On the anatomy and systematic position of a gigantic earthwork (*Microchaeta rappii*) from the Cape Colony. *Transactions of the Zoological Society of London* **12**: 63–76, 2 pls.

Microchaeta Beddard, 1886, defined.
Microchaeta rappii Beddard, 1886. Synonym: *Lumbricus microchaeta* Rapp, 1849. Collected by Rev. G. R. Fisk from Cape Province, South Africa. [Holotype.]

15. Description of some new or little known earthworms, together with an account of the variations in structure exhibited by *Perionyx excavatus* E.P. *Proceedings of the Zoological Society of London* **1886**: 298–314.

Eudrilus boyeri Beddard, 1886 = *E. eugeniae* (Kinberg, 1867). Specimens collected by Mr Boyer from New Caledonia. [1 specimen (syntype).]
Microchaeta rappii Beddard, 1886. Additional note on female generative apparatus. [Another specimen received from Rev. G. R. Fish, Cape Province, South Africa.]
Perichaeta horsti Beddard, 1886 = *Pleinogaster horsti.* Collected by Mr H. E. Barwell from Manila, Philippines. [4 micro-slides (syntypes).]
Perichaeta indica Horst, 1883 = *Amynthas corticus* (Kinberg, 1867). Specimens collected by Mr E. L. Layard from New Caledonia. [1 specimen.]
Perionyx excavatus Perrier, 1872, remarks on variation. [2 specimens collected by Mr H. E. Barwell from Manila, Philippines.]

16. Observations on the structure of *Lumbricus complanatus* Duges. *Proceedings of the Royal Society of Edinburgh* **13**: 451–460.

Lumbricus complanatus Dùges, 1828 = *Octodrilus complanatus.* [1 specimen collected by Professor A. G. Bourne from Naples.]
Perichaeta affinis Perrier, 1872 = *Metaphire posthuma* (Vaill., 1868). [2 specimens collected by Mr H. E. Barwell from Manila, Philippines.]

17. On the reproductive organs in the genus *Eudrilus* E.P. *Proceedings of the Royal Society of Edinburgh* **13**: 672–682, 1 pl.

Eudrilus perigrinus Perrier, 1872 = *E. eugeniae* (Kinberg, 1867). Several specimens collected by Mr E. L. Layard from New Caledonia.*

18. Notes on some earthworms from Ceylon and the Philippine Islands, including a description of two new species. *Annals and Magazine of Natural History* (5) **17**: 89–98, 1 pl.

Moniligaster barwelli Beddard, 1886 = *Drawida barwelli.* Collected by Mr H. E. Barwell from Manila, Philippines. [2 specimens and 1 micro-slide (syntypes).]
Perichaeta ceylonica Beddard, 1886 = *Megascolex ceylonicus.* Collected by Dr Ondaatje from Sri Lanka. [1 specimen (holotype) and 5 micro-slides.]
Perichaeta houlleti (Perrier, 1872) = *Metaphire houlleti.* Specimens collected by Mr H. E. Barwell from Manila, Philippines.*
Perichaeta posthuma Vaillant, 1868 = *Metaphire posthuma.* [2 specimens collected by Mr H. E. Barwell from Manila, Philippines.]

19. Note on the ovaries and oviducts of *Eudrilus. Zoologischer Anzeiger* **91**: 342–344.

Eudrilus perigrinus Perrier, 1872 = *E. eugeniae* (Kinberg, 1867). New Caledonia. See **17.**

1887

20. On the structure of a new genus of Lumbricidae (*Thamnodrilus guliemi*). *Proceedings of the Zoological Society of London* **1887**: 154–163.

Thamnodrilus Beddard, 1887.
Thamnodrilus guliemi Beddard, 1887. 4 specimens collected by Mr W. L. Sclater from Guyana. [Syntypes.]

21. Contributions to the anatomy of earthworms. Nos. I, II, III. *Proceedings of the Zoological Society of London* **1887**: 372–392, 1 pl.

Eudrilus sylvicola Beddard, 1887 = *E. eugeniae* (Kinberg, 1867). Specimens collected by Mr W. L. Sclater from Guyana. [1 micro-slide (holotype).]
Acanthodrilus dissimilis Beddard, 1885 = *Maoridrilus dissimilis.* Further note on reproductive organs. Specimens collected by Professor T. J. Parker from New Zealand. [Syntypes.] See **7.**
Perichaeta affinis Perrier, 1872 = *Metaphire posthuma* (Vaill., 1868). Specimens collected by Mr W. F. R. Weldon from the Bahamas.*

Perichaeta houlleti Perrier, 1872 = *Metaphire houlleti.* Note on genital setae. Specimens collected by Mr W. F. R. Weldon from the Bahamas. [6 specimens.]

22. Contributions to the anatomy of earthworms No. IV. *Proceedings of the Zoological Society of London* **1887**. 544–548.

Cryptodrilus fletcheri Beddard, 1887 = *Heteroporodrilus fletcheri.* Specimens collected by Mr S. Prout Newcombe from Queensland.*

23. Observations on the structural characters of certain new or little known earthworms. *Proceedings of the Royal Society of Edinburgh* **14**: 156–176, 1 pl.

Acanthodrilus neglectus Beddard, 1887 = *Maoridrilus dissimilis* Beddard, 1885 – originally considered distinct from *dissimilis* in a mixed sample. Specimens collected by Professor T. J. Parker from New Zealand.*

Neodrilus Beddard, 1887
Neodrilus monocystis Beddard, 1887 = *Neodrilus campestris* (Hutton, 1877). [2 specimens (syntypes) collected by Mr W. W. Smith and /or Professor T. J. Parker from New Zealand.]
Perichaeta antarctica (Baird, 1873) = *Spenceriella antarctica* (Baird, 1873). Re-examination of holotype in BMNH.
Perichaeta newcombei Beddard, 1887 = *Megascolex newcombei*. Specimens collected by Mr S. Prout Newcombe from ? Australia. [3 specimens and 3 micro-slides (? syntypes).]
Perichaeta upoluensis Beddard, 1887 = *Amynthas taitensis* (Grube, 1866). [2 specimens (syntypes) collected by Mr R. Damon from Upolu I., S. Pacific.]
Urochaeta sp. innom. = *Pontoscolex corethurus* (F. Muller, 1857). Specimens collected by Mr S. Prout Newcombe from Queensland. [3 micro-slides in BMNH may belong to this collection.]

24. On the so-called prostate glands of the Oligochaeta. *Zoologischer Anzeiger* **10**: 675–678.
Anatomical notes on two organs in oligochaetes which had been termed 'prostates'.

25. Note on the reproductive organs of *Moniligaster*. *Zoologischer Anzeiger* **10**: 678–681.
Moniligaster sp. innom.* Notes on resemblance of reproductive organs to those in aquatic oligochaetes and distinctive from other terrestrial species.

1888

26. Report on annelids from the Mergui Archipelago collected for the Trustees of the Indian Museum, Calcutta, by Dr John Anderson. *Journal of the Linnean Society* Zoology **21**: 256–266, 1 pl.
Annelida, Polychaeta:
Branchiomma intermedium Beddard, 1888.*
Chloeia merguiensis Beddard, 1888 = *Chloeia parva* Baird, 1870.*
Dasychone serratibranchis Grube, 1878.*
Eupompe indica Beddard, 1888.*
Eurythoe alcyonia Savigny ? Kinberg = *Eurythoe complanata* (Pallas, 1766).*

27. On the development of the ovum in *Eudrilus* (Abstract). *Reports of the British Association for the Advancement of Science* for the year 1887: 771.

28. The nephridia of earthworms. *Nature* London **38**: 221–222.
Perichaeta armata Beddard, 1883 = *Lampito mauritii* Kinberg, 1883. Specimens collected in the neighbourhood of Calcutta and received from Mr W. L. Sclater of the Calcutta Museum. [Micro-slides (?syntypes) in BMNH may belong to this collection.]

29. The tail-bristles of a West-Indian earthworm. *Nature* London **39**: 15–16.
Urochaeta sp. innom. = *Onychochaeta windlei* (Beddard, 1890). Specimens collected by Mr R. Windle from Bermuda. [Micro-slides.]

30. Preliminary note on the nephridia of *Perichaeta*. *Proceedings of the Royal Society of London* **43**: 309–310.
Perichaeta aspergillum Beddard, 1888 (non Perrier, 1872) = *Amynthas gracilis* (Kinberg, 1867). Collected from Bermuda by Mr Shipley of Christ's College, Cambridge. [4 specimens.]

31. Note on the structure and development of the ovum in an annelid (*Eudrilus*). *Journal of Anatomy and Physiology* London **22**: 9–14, 1 pl.
Eudrilus sylvicola Beddard, 1887 = *E. eugeniae* (Kinberg, 1867). Collected by Mr W. L. Sclater from Guyana. [1 micro-slide.] See **21.**

32. Observations upon an annelid of the genus *Aeolosoma*. *Proceedings of the Zoological Society of London* **1888**: 213–217, 1 pl.
Aeolosoma headleyi Beddard, 1888. Collected by Mr Bartlett (England). Noted and brought to the attention of Mr F. W. Headley.*

33. On certain points in the structure of *Clitellio* (Claparède). *Proceedings of the Zoological Society of London* **1888**: 485–495, 1 pl.

Clitellio Claparède, systematic position and affinities, redefined.
Clitellio ater Claparède 1862 = *Peloscolex benedeni* (Udekem, 1855). Collected from the shores of Plymouth Sound, England. [2 specimens.]
Clitellio arenarius (Müller, 1776) Savigny, 1820. Collected from the shores of Plymouth Sound.*
Remarks on some other marine species of Tubificidae.

34. On the reproductive organs of *Phreoryctes*. *Annals and Magazine of Natural History* (6) **1**: 389–395, 1 pl.

Phreoryctidae Claus, redefined.
Phreoryctes Hoffmeister, brief definitions of species.
Phreoryctes smithii Beddard, 1888 = *Haplotaxis smithii*. Collected by Mr W. W. Smith from Ashburton, New Zealand. [2 specimens and 10 micro-slides (incl. lectotypes and paralectotypes).]

35. On the anatomy of *Allurus tetraedrus* (Eisen) [*sic.*] *Quarterly Journal of Microscopical Science* **28**: 365–371, 1 pl.

Allurus tetraedrus (Savigny, 1826) = *Eiseniella tetraedra* (Savigny, 1826). Collected by Rev. C. V. Goddard from Teneriffe, Canary Is. [9 specimens.]
Summary of structural differences from *Lumbricus* and *Allolobophora*.

36. On the occurrence of numerous nephridia in the same segment in certain earthworms, and on the relationship between the excretory system in the Annelida and Platyhelminthes. *Quarterly Journal of Microscopical Science* **28**: 397–409, 2 pls.

Acanthodrilus multiporus Beddard,1885 = *Octochaetus multiporus*. Specimens received from Professor Parker of Otago, New Zealand. Specimens: See **7**.
Perichaeta aspergillum Beddard, 1888 (non Perrier, 1872) = *Amynthas gracilis* (Kinberg, 1867). Collected by Mr Shipley from Bermuda. [15 micro-slides.]
Dichogaster Beddard, 1888

37. On the structure of three new species of earthworms, with remarks upon certain points in the morphology of the Oligochaeta. *Quarterly Journal of Miscroscopical Science* **29**: 101–131, 2 pls.

Acanthodrilus annectens Beddard, 1888 = *Eodrilus annectens*. Collected by Mr W. W. Smith from Ashburton, New Zealand. [Holotype.]
Deinodrilus Beddard, 1888
Deinordrilus benhami Beddard, 1888 = *Dinodrilus benhami*. Collected by Mr W. W. Smith from Ashburton, New Zealand. [Holotype.]
Typhoeus Beddard, 1883, redefined.
Typhoeus gammii Beddard, 1888 = *Eutyphoeus gammii*. Collected by Mr G. A. Gammie from Darjeeling, India. [Holotype.]
Notes on the structure and homologies of the so-called prostate glands in the Oligochaeta.

38. On certain points in the structure of *Urochaeta* E.P. and *Dichogaster* nov. gen., with further remarks on the nephridia of earthworms. *Quarterly Journal of Microscopical Science* **29**: 235–282, 2 pls.

Acanthodrilus multiporus Beddard, 1885 = *Octochaetus multiporus*. Occurrence of numerous nephridia in the same segment. Specimens: See **7**.
Dichogaster Beddard, 1888
Dichogaster damonis Beddard, 1888. Collected in Fiji and acquired from Mr R. Damon of Weymouth – from part of the Godeffroy collection purchased by Mr R. Damon and labelled "Hypogaeon."*
Urochaeta sp. [*Pontoscolex corethurus* acc. to Beddard, 1895 (see **97**)]
The evolution of the excretory organs in earthworms.

39. Preliminary note on the "mucous gland" of *Urochaeta*. *Zoologischer Anzeiger* **11**: 90–91.

Urochaeta sp. innom. Specimens received from Mr W. L. Sclater of the Calcutta Museum.*

40. Preliminary notes on the anatomy of *Perichaeta*. *Zoologischer Anzeiger* **11**: 91–94.

Perichaeta aspergillum Perrier, 1872 = *Amynthas gracilis* (Kinberg, 1867). Capsulogenous glands in.*
Perichaeta houlettii Perrier, 1872 = *Metaphire houlettii*. Salivary and capsulogenous glands in.*
Perichaeta mirabilis Bourne, 1887 = *Amynthas corticus* (Kinberg, 1867). Capsulogenous glands in.*

41. Further notes upon the reproductive organs of *Eudrilus*. *Zoologischer Anzeiger* **11**: 643–646.

42. Remarks upon a species of *Coccidium* infesting *Perichaeta*. *Annals and Magazine of Natural History* (6) **2**: 433–439, 1 pl.

Perichaeta armata Beddard, 1883 = *Lampito mauritii* Kinberg, 1867. Specimens sent from Borneo by Mr Everett. [2 specimens.]
Perichaeta novaezelandiae Beddard, 1888 nom. nud. Specimens received from Mr W. W. Smith (New Zealand).*

43. 'Worm' *Encyclopaedia Britannica* 9th edition **24**: 677–684.

This article treats the earthworm and its immediate allies.
[See also *Encyclopaedia Britannica* 10th edition (1902), Leech: 181–182, and Oligochaeta: 878–81; 11th edition (1910) Leech: 365–6]

1889

44. On the anatomy and histology of *Phreoryctes* (Abstract). *Proceedings of the Royal Society of Edinburgh* **16**: 117–119.

Phreoryctes smithii Beddard, 1888 = *Haplotaxis smithii*. Specimens: See **34.**
A complete account of the genitalia of *Phreoryctes*.

45. Zoological Notes No. 1: On some British species of *Pachydrilus*. *Proceedings of the Royal Physical Society of Edinburgh* **10**: 101–106, 1 pl.

Pachydrilus nervosus (Eisen, 1878) = *Lumbricillus nervosus* (Eisen, 1878). Collected from Rum Bay, shores of Plymouth Sound, England.*
Pachydrilus verrocosus (Orsted, 1844) = *Peloscolex benedeni* (Udekem, 1855). Collected from Rum Bay, shores of Plymouth Sound, England. [2 specimens.]

46. Note upon the green cells in the integument of *Aeolosoma tenebrarum*. *Proceedings of the Zoological Society of London* **1889**: 51–56, 1 pl

Aeolosoma tenebrarum Vejdovsky, 1882, Specimens collected by F. E. Beddard (? England).*
Aeolosoma variegatum Vejdovsky, 1885. Specimens collected by Professor Hartog from southern Ireland.*

47. On the oligochaetus fauna of New Zealand, with preliminary descriptions of new species. *Proceedings of the Zoological Society of London* **1889**: 377–382.

Acanthodrilus Perrier, redefined.
Acanthodrilus antarcticus Beddard, 1889 = *Octochaetus antarcticus*. Specimens collected by Mr W. W. Smith from New Zealand. [1 micro-slide (? syntype).]
Acanthodrilus annectens Beddard, 1888 = *Eodrilus annectens*. See **37.**
Acanthodrilus dissimilis Beddard, 1885 = *Maoridrilus dissimilis*. See **7.**
Acanthodrilus multiporus Beddard, 1885 = *Octochaetus multiporus*. See **7.**
Acanthodrilus novaezelandicae Beddard, 1885 = *Maoridrilus uliginosus* (Hutton, 1877). See **7.**
Acanthodrilus rosae Beddard, 1889 = *Maoridrilus uliginosus* (Hutton, 1877). See **50.**
Deinodrilus Beddard, 1888, redefined.
Deinodrilus benhami Beddard, 1888 = *Dinodrilus benhami*. See **37.**
Limnodrilus sp. innom. (immature). Collected by Mr W. W. Smith and/or Professor T. J. Parker from New Zealand. [Micro-slides.]
Neodrilus Beddard, 1889
Neodrilus monocystis Beddard, 1887 = *N. campestris* (Hutton, 1877). See **23.**
Perichaeta Schmarda, systematic note.

Perichaeta antarctica (Baird, 1873) = *Spenceriella antarctica* (Baird, 1873). See **23.**
Perichaeta intermedia Beddard, 1889 = *Perionyx excavatus* Perrier, 1872. Collected by Mr W. W. Smith from New Zealand. [Holotype.]
Phreoryctes smithii Beddard, 1888 = *Haplotaxis smithii.* See **23.**
Rhododrilus Beddard, 1889, defined.
Rhododrilus minutus Beddard, 1889. Collected by Mr W. W. Smith and/or Professor T. J. Parker from New Zealand. [Syntypes.]
Tubifex rivulorum Lamarck, 1816 = *Tubifex tubifex* (Muller, 1774). Specimens collected by Mr W. W. Smith and/or Professor T. J. Parker. [3 micro-slides (whole-mounts).]

48. Contributions to the natural history of an annelid of the genus *Dero. Proceedings of the Zoological Society of London* **1889**: 440–444.

Dero perrieri Bousfield, 1886 = *D. obtusa* d'Udekem, 1885. Specimens collected by Messrs Bolton (England).*

49. Notes upon certain species of *Aeolosoma. Annals and Magazine of Natural History* (6) **4**: 262–265.

Aeolosoma headleyi Beddard, 1888. Collected by F. E. Beddard and others (British Isles).*
Aeolosoma quaternarium Ehrenberg, 1831. Specimens collected by Messrs Bolton (England).*

50. Contributions to the anatomy of earthworms, with descriptions of some new species. *Quarterly Journal of Microscopical Science* **30**: 421–479, 2 pls.

Acanthodrilus Perrier, notes on the classification of species.
Acanthodrilus antarcticus Beddard, 1889 = *Octochaetus antarcticus.* Specimens collected by Mr W. W. Smith from Ashburton, New Zealand.*
Acanthodrilus dalei Beddard, 1889 = *Chilota dalei.* Collected by Mr Dale from the Falkland Is. (Port Stanley). [2 specimens (syntypes).]
Acanthodrilus georgianus Michaelsen, 1888 = *Microscolex georgianus.* [Specimens collected by Mr Dale from the Falkland Is.] See also **63** and **86.**
Acanthodrilus rosae Beddard, 1889 = *Maoridrilus uliginosus* (Hutton, 1877). Collected by Mr W. W. Smith from Ashburton, New Zealand. [Syntypes originally deposited in BMNH, not found.]
Eudrilus Perrier, observations on the reproductive organs.
Perichaeta Schmarda, anatomical notes.
Perichaeta intermedia Beddard, 1889 = *Perionyx excavatus* Perrier, 1872. Collected by Mr W. W. Smith from New Zealand. [Holotype.]

51. Notes on the marine Oligochaeta of Plymouth. *Journal of the Marine Biological Association of the U.K.* **1** (New Series): 69–71.

Clitellio arenarius Savigny, 1820 = *C. arenarius* (Muller, 1776). Specimens collected from Drakes I. and shores of Plymouth Sound.*
Clitellio ater Claparède, 1862 = *Peloscolex benedeni* (Udekem, 1855). Collected from the shores of Plymouth Sound and Drakes I. [2 specimens.]
Lumbricillis sp. Specimens collected from Rum Bay, Plymouth.

52. Preliminary notes on some Oligochaeta. *Zoologischer Anzeiger* **12**: 533–536.

Perichaeta sp. innom. = *Amynthas forbesi* (Beddard, 1890). Specimens collected by Mr H. O. Forbes from Borneo. See **56.**
Note on the sexual organs of *Dero.*
Note on *Moniligaster.*

1890

53. Contributions to our knowledge of the freshwater annelids. *Reports of the British Association for the Advancement of Science* for the year 1889 (Newcastle-upon-Tyne): 616–617.

Aeolosoma headleyi Beddard, 1888
Aeolosoma tenebrarum Vejdovsky, 1822

Specimens of the above 2 species collected by F. E. Beddard from "British Isles".
Aeolosoma variegatum Vejdovsky, 1885. Specimens collected by Professor Hartog from southern Ireland.*

54. Observations upon the structure of a genus of Oliogochaete belonging to the Limicoline Section. *Proceedings of the Royal Society of Edinburgh* **17**: 5–7.

Moniligaster sp. Note on reproductive organs – likeness to various aquatic genera. Locality and collector not given.*

55. On the homology between genital ducts and nephridia in the Oligochaeta. *Proceedings of the Royal Society of London* **48**: 452–455.

Acanthodrilus multiporus Beddard, 1885 = *Octochaetus multiporus.* Specimens: See **7.** Formation of the genital funnels and a portion of the ducts from nephridia.

56. Observations upon an American species of *Perichaeta* and upon some other members of the genus. *Proceedings of the Zoological Society of London* **1890**: 52–69, 2 pls.

Perichaetidae Claus, redefined.
Perichaeta Schmarda, redefined. Proposed subdivision of the genus (subgenera: *Megascoles* and *Perichaeta*).
Perionyx Perrier, redefined.
Anisochaeta Beddard, 1890, defined, (for *Perichaeta attenuata* Fletcher, 1889).
P. enormis Fletcher, 1889 and *P. coxii* Fletcher, 1886.
Diporochaeta Beddard, 1890, defined (for *Perichaeta novaezelandiae* Beddard, 1886 and perhaps *P. bakeri* Spencer, 1893).
Haplochaeta Beddard, 1890 (for *P. stuarti* Bourne, 1887).
Notes on the distribution of setae in Chaetopods.
Anatomical notes on nephridia, spermathecae and glycogenic organs.
Perichaeta biserialis Perrier, 1875 = *Polypheretima elongata* (Perrier, 1872). Collected by Mr H. E. Barwell from Manila, Philippines. [2 specimens, syntypes of *Perichaeta acystis* Beddard, 1895 (= *P. biserialis* of Beddard, 1890 *nec* Perrier, 1875.] See **98.**
Perichaeta forbesi Beddard, 1890 = *Amynthas forbesi.* Collected by Mr H. O. Forbes from New Guinea. Locality emended. See **52.** [Holotype.]
Perichaeta indica Horst, 1883 = *Amynthas corticus* (Kinberg, 1867). Specimens collected by Mr C. Bartlett from South America.*
Perichaeta vaillanti Beddard, 1890 = *Pheretima (Pheretima) darnleiensis* (Fletcher, 1886). Collected by Mr Herbert Barwell from Manila, Philippines. [2 specimens (syntypes).]

57. Exhibition of and remarks upon, some living specimens of oriental earthworms, found in a greenhouse in Scotland. *Proceedings of the Zoological Society London* **1890**: 94.

Perichaeta indica Horst, 1883 = *Amynthas corticus* (Kinberg, 1867). Specimens believed to have been introduced from India.*

58. On the structure of a species of earthworm belonging to the genus *Diachaeta. Quarterly Journal of Microscopical Science* **31**: 159–174, 1 pl.

Anatomical notes on *Diachaeta* and comparison with allied forms, including the genus *Urochaeta.*
Diachaeta windlei Beddard, 1890 = *Onychochaeta windlei.* Specimens collected by Mr Reginald Windle from Bermuda. [27 micro-slides (syntypes).]

59. On the structure of a new genus of Oligochaeta (*Deodrilus*), and on the presence of anal nephridia in *Acanthodrilus. Quarterly Journal of Microscopical Science* **31**: 467–488, 2 pls.

Deodrilus Beddard, 1890, defined, affinities.
Deodrilus jacksoni Beddard, 1890 = *Notoscolex jacksoni.* Specimens collected by Professor Moseley from Sri Lanka received from Professor Hatchett Jackson. [1 specimen (holotype).]
Geoscolecidae and Eudrilidae as defined by Rosa.
Acanthodrilus multiporus Beddard, 1885 = *Octochaetus multiporus.* Note on anal nephridia. Specimens: see **7.**

60. On the anatomy, histology, and affinities of *Phreoryctes*. *Transactions of the Royal Society of Edinburgh* **35**: 629–640, 1 pl.

Phreoryctes Hoffmeister, anatomical, histological, and historical notes on affinities.
Phreoryctes smithii Beddard, 1888 = *Haplotaxis smithii*. Collected by Mr W. W. Smith from Ashburton, New Zealand. Specimens: see **34.**

61. Preliminary note on a new earthworm belonging to the family Eudrilidae. *Zoologischer Anzeiger* **13**: 561–563.

Hyperiodrilus Beddard 1890
Hyperiodrilus sp. = *H. africanus* Beddard, 1891. Specimens: see **71.**

62. Preliminary note upon *Heliodrilus* a new genus of Eudrilidae. *Zoologischer Anzeiger* **13**: 627–629

Heliodrilus Beddard, 1890
Heliodrilus sp. Lagos, Nigeria. See **71.**

1891

63. Zoological Notes. No. 2: Aquatic Earthworms. *Proceedings of the Royal Physical Society of Edinburgh* **10**: 208–210.

Notes on the rare occurrence of earthworms (Oligochaeta Terricolae) in rivers and streams.
Acanthodrilus georgianus Michaelsen, 1888 = *Microscolex georgianus*. Collected by Mr Dale from the Falkland Is. See also **86** under *Acanthodrilus falklandicus*.
Allurus tetraedrus (Savigny, 1826) = *Eiseniella tetraedra* (Savigny, 1826). Collected from Bickleigh, near Plymouth, England. [2 specimens (poor condition).]

64. The classification and distribution of earthworms. *Proceedings of the Royal Physical Society of Edinburgh* **10**: 235–290, 2 pls.

Review of Oligochaete classification. Geographical distribution of earthworms, including maps.
Onychochaeta Beddard, 1891
Onychochaeta windlei (Beddard, 1890). *O. windlei* (new combination) referring to the species *Diachaeta windlei*. Specimens: see **57.**
Perissogaster nunoralis Beddard, 1891, lapsus pro *P. nemoralis* Fletcher, 1889.
Urochaeta australiensis Beddard, 1891, nom. nud. = *Pontoscolex corethurus* (F. Muller, 1857). Specimens collected from Australia. No further locality given. [8 micro-slides (? syntypes).]
Rhinodrilus (*Thamnodrilus*) *guliemi* Beddard, 1887 = *T. gulieme*. Specimens: see **20.**
Perichaeta oeriginosa Beddard, 1891, lapsus pro *P. aeruginosa* Kinberg, 1867

65. Formation of a temporary cyst in the freshwater annelid *Aeolosoma*. *Nature* London **45**: 28.

Aeolosoma quaternarium Ehrenberg, 1831. Specimens collected by Mr O. H. Latter (England).*

66. Preliminary notice of a new branchiate oligochaete. *Nature* London **45**: 109–110.

Branchiura sowerbyi Beddard, 1891. Specimens collected by Mr Sowerby (England).* See **81.**

67. Preliminary notice of a new form of excretory organs in an oligochaetous annelid. *Proceedings of the Royal Society of London* **49**: 308–310.

Lybiodrilus [*sic*] = *Libyodrilus* (Beddard, 1902).

68. On an earthworm of the genus *Siphonogaster* from West Africa. *Proceedings of the Zoological Society of London* **1891**: 48–52.

Siphonogaster millsoni Beddard, 1891 = *Alma millsoni*. Collected by Mr Alvan Millson (sent by Sir A. Moloney) from Yoruba country, north of Lagos, Nigeria. [*ca* 40 specimens (syntypes).]

69. Preliminary account of an earthworm from West Africa referable to a new genus. *Proceedings of the Zoological Society of London* **1891**: 172–176.

Lumbricus capensis Kinberg, 1867. Cape Province, South Africa. Type specimen sent to Dr Beddard by Professor Loven (Swedish State Museum). Not a *Lumbricus* sp., according to Beddard but probably belongs to *Acanthodrilus*. [Specimen in BMNH.]
Libyodrilus Beddard, 1891
Libyodrilus violaceus Beddard, 1891. Specimens collected by Mr Alvan Millson from Lagos, Nigeria. [*ca* 10 specimens (?syntypes).]
A complete list of central and southern African earthworms, excluding representatives of the allochthonous genera *Lumbricus* and *Allolobophora*.

70. Abstract of some investigations into the structure of the Oligochaeta. *Annals and Magazine of Natural History* (6) **7**: 88–96.

Notes on Oligochaeta intermediate between the Limicolae and Terricolae of Claparède.
Pelodrilus sp. = *Haplotaxis violaceus* (Beddard, 1891). Specimens collected by Mr W. W. Smith from Ashburton, New Zealand. See **74.**
Phreodrilus Beddard, 1891
Phreodrilus sp. Specimens collected by Mr W. W. Smith from Ashburton, New Zealand.*
Pontodrilus bermudensis Beddard, 1891. Specimens collected by Surgeon-Major Windle from Bermuda (among dried seaweed on sea-shore).*
Notes on the zone growth in *Urochaeta*.

71. On the structure of two new genera of earthworms belonging to the Eudrilidae, and some remarks on *Nemertodrilus*. *Quarterly Journal of Microscopical Science* **32**: 235–278, 2 pls.

Heliodrilus Beddard, 1890. See **62.**
Heliodrilus lagosensis Beddard, 1891. Specimens received from Kew Gardens, originally from Lagos, Nigeria. [37 micro-slides (syntypes).]
Hyperiodrilus Beddard, 1890. See **61.**
Hyperiodrilus africanus Beddard, 1891. Specimens received from Kew Gardens, originally from Lagos, Nigeria. [10 micro-slides (syntypes).]
Nemertodrilus griseus Michaelsen, 1890. Re-examination, incl. anatomical notes, of type specimens in Zoologisches Museum, Berlin. [3 specimens (syntypes).]

72. On the structure of an earthworm allied to *Nemertodrilus*, Mich., with observations on the post-embryonic development of certain organs. *Quarterly Journal of Microscopical Science* **32**: 539–586, 2 pls.

A full account of a new Eudrilinae genus *Libyodrilus* and evidence that the spermathecal system is coelomic in nature and not comparable to the spermathecae of other Oligochaeta. Full description of the branching excretory network in integument.
Libyodrilus Beddard, 1891
Libyodrilus violaceus Beddard, 1891. Specimens: see **69.**
Notes on homologies of reproductive organs in Eudrilidae.

73. Observations upon the structure of a genus of Oligochaeta belonging to the Limicoline Section. *Transactions of the Royal Society of Edinburgh* **36**: 1–17, 1 pl.

Affinities and systematic position of *Moniligaster*.
Moniligaster barwelli Beddard, 1886 = *Drawida barwelli*. Specimens: see **18.**

74. Anatomical descriptions of two new genera of aquatic Oligochaeta. *Transactions of the Royal Society of Edinburgh* **36**: 273–305, 3 pls.

Pelodrilus Beddard, 1891
Pelodrilus violaceus Beddard, 1891 = *Haplotaxis violaceus*. Collected by Mr W. W. Smith from Ashburton, New Zealand. [2 complete and 3 incomplete or damaged specimens. Also 21 micro-slides (lectotypes and paralectotypes).]
Phreodrilidae Beddard, 1891

Phreodrilus Beddard, 1891
Phreodrilus subterraneus Beddard, 1891 = *P. (Phreodrilus) subterraneus.* Collected by Mr W. W. Smith from Ashburton, New Zealand. [4 specimens and 6 micro-slides (syntypes).]

75. On the anatomy of *Ocnerodrilus* (Eisen). *Transactions of the Royal Society of Edinburgh* **36**: 563–583, 1 pl.

Anatomy and systematic position of the genus *Ocnerodrilus.*
Ocnerodrilus eiseni Beddard, 1891. Specimens received from Kew Gardens (originally from Guyana through Mr Dyer. [1 micro-slide (? type).]

1892

76. On the earthworms collected in Algeria and Tunisia by Dr Anderson. *Proceedings of the Zoological Society of London* **1892**: 28–37.

Allolobophora complanata Dùges, 1828 = *Octodrilus complanatus* (Dùges, 1828). From Algeria. [6 specimens.]
Microscolex Rosa, systematic notes.
Microscolex algeriensis Beddard, 1892 = *M. phosphoreus* (Dùges, 1837). From Algeria. [5 micro-slides (syntypes).]
Microscolex modestus Rosa, 1887 = *Eodrilus pallidus* Lee, 1959. From Algeria and/or Tunisia.*
Microscolex poultoni Beddard, 1892 = *M. dubius* (Fletcher, 1887). Specimens collected by Mr E. G. Poulton from Madeira.*
Perichaeta sp. innom. Specimens (mixed with *P. mauritiana*) received from Kew Gardens. Accidentally imported from Mauritius.*

77. On some species of the genus Perichaeta (sensu stricta). *Proceedings of the Zoological Society of London* **1892**: 153–172, 2 pls.

Notes on the generic distinctions of *Perichaeta* and points of systematic importance for the genus.
Perichaeta barbadensis Beddard, 1892 = *Amynthas morrisi* (Beddard, 1892). Living worms received from Kew gardens. Originally from Barbados. [3 specimens (syntypes).]
Perichaeta bermudensis Beddard, 1892 = *Amynthas gracilis* (Kinberg, 1867). Collected by Surgeon Major Windle from Bermuda. [4 specimens (syntypes).]
Perichaeta dyeri Beddard, 1892 = *Amynthas rodericensis* (Grube, 1879). 1 specimen received from Kew Gardens through Mr Crisp. Country of origin unknown. Specimens: see **98.**
Perichaeta hesperidum Beddard, 1892 = *Metaphire californica* (Kinberg, 1866). Received from Kew Gardens. Originally from Barbados. [1 specimen (holotype).]
Perichaeta mauritiana Beddard, 1892 = *Amynthas mauritiana.* Received from Kew Gardens. Accidentally imported from Mauritius. [3 specimens (syntypes).]
Perichaeta morrisi Beddard, 1892 = *Amynthas morrisi.* Living worms received from Mr Morris, Assistant Director, Kew Gardens. Originally from Penang, Malaya. [3 specimens (syntypes).]
Perichaeta sinensis Beddard, 1892 = *Amynthas rodericensis* (Grube, 1879). Specimens received from Kew Gardens. Originally from Foochow, China.*
Perichaeta sumatrana Horst, 1883 = *Metaphire schmardae* (Horst, 1883). Living worms received from Kew Gardens. Originally from Barbados and Hong Kong.*
Perichaeta taprobanae Beddard, 1892 = *Polypheretima taprobanae.* Collected by Professor Moseley. Received from Mr W. Hatchett Jackson (Oxford University Museum) from Sri Lanka. [20 specimens (syntypes).]
Perichaeta sp. Specimen received alive from Kew Gardens, imported from Singapore.*

78. On some aquatic oligochaetous worms. *Proceedings of the Zoological Society of London* **1892**: 349–361.

Aeolosoma niveum, non Leydig, 1865 = *A. beddardi* Michaelsen, 1900. Specimens collected by ? F. E. Beddard (England)*
Dero sp. Specimens collected by ? F. E. Beddard (England).*
Kerria Beddard, 1892 incl. comparison with allied genera.
Kerria halophila Beddard, 1892 = *Eukerria halophila.* Specimens collected by Mr J. Graham Kerr from the upper reaches of River Pilcomayo, ? Bolivia.*

Limnodrilus sp. Specimens collected by Mr W. W. Smith from New Zealand (with *Phreoryctes smithii*). Specimens: see **47.**
Pristina longiseta Ehrenberg, 1828. Specimens collected by ? F. E. Beddard (England). Systematic notes.* Notes on the genera *Clitellio* and *Limnodrilus.*

79. Notes upon the encystment of *Aeolosoma. Annals and Magazine of Natural History* (6) **9**: 12–19.

Aeolosoma ehrenberghi (Ersted) = *A. hemprichi* Ehrenberg, 1828. Specimens collected by Mr O. H. Latter (? British Isles).*

80. The earthworms of the Vienna Museum. *Annals and Magazine of Natural History* (6) **9**: 113–134.

Anteus Perrier, 1872, systematic notes including definitions and affinities of the three species (*A. gigas* Perrier, *A. horsti* Beddard, and *A. heterostichon*(Schmarda))
Anteus heterostichon (Schmarda, 1861) (synonym: *Hypogaeon heterostichon* Schmarda). Re-examination of specimens in Vienna Museum.*
Anteus horsti Beddard, 1892 (syn. *A. gigas* of Horst, 1891 *nec* Perrier. 1872) = *Rhinodrilus horsti* (Beddard, 1892). Type specimens in the Rijksmuseum, Leiden.*
Diachaeta littoralis Beddard, 1892 = *Diachaeta thomasi* Benham, 1886. Kingston and Port Royal, Jamaica. Part of a collection all named *Pontoscolex arenicola*
Geoscolex maximus F. S. Leuckart, 1841 (syn. *Titanus brasiliensis* Perrier, 1872). Re-examination of specimens in Vienna Museum, originally labelled *Lumbrius paucisetis.*
Megascolex brachycyclus (Schmarda, 1861) (synonym: *Perichaeta brachycyclus* Schmarda). Re-examination of type specimens in Vienna Museum.*
Megascolex cingulatus (Schmarda, 1861). Re-examination of type specimens as *Perichaeta cingulata.* *
Megascolides orthostichon (Schmarda, 1861). Re-examination of type specimens as *Hypogaeon orthostichon.* [4 specimens (? syntypes).] Specimens also in Hamburg Museum.
Perichaeta brachycycla Schmarda, 1861 = *Megascolex brachycyclus.* Re-examination of specimens in Vienna Museum.*
Perichaeta leucocycla Schmarda, 1861 = *Megascolex leucocyclus.* Re-examination of type specimen. Considered by Beddard to be synonymous with *Megascolex* coearuleus Templeton.*
Perichaeta viridis Schmarda, 1861. Incertae sedis. Re-examination of type specimens.*
Perichaeta vitiensis Beddard, 1892 = *Pheretima* (*Pheretima*) *montana* Kinberg, 1867. A single specimen in the Vienna Museum labelled "*Hypogeon orthostichon* Schm. Viti Ins."*
Pontoscolex arenicola Schmarda, 1861. Collected from seashore, Kingston and Port Royal, Jamaica.*
Acanthodrilus schmardae Beddard, 1892 = *Diplotrema schmardae.* Found in freshwater at Rockhampton (? in Queensland).*

81. On a new genus of Oligochaeta, comprising five new species belonging to the family Ocnerodrilidae. *Annals and Magazine of Natural History* (6) **10**: 74–97, 2 pls.

Gordiodrilus Beddard, 1892
All the specimens examined and reported in this paper were received from the Director, Royal Botanic Gardens, Kew. All imported in plant and soil material.
Gordiodrilus ditheca Beddard, 1892. From Lagos, Nigeria. 1 specimen.*
Gordiodrilus dominicensis Beddard, 1892. From Dominica. [1 micro-slide (? type).]
Gordiodrilus elegans Beddard, 1892. From Lagos, Nigeria. [2 specimens (syntypes) and 11 micro-slides.]
Gordiodrilus robustus Beddard, 1892 = *Dorgiodrilus robustus.* From Lagos, Nigeria. [2 specimens and 4 micro-slides (syntypes).]
Gordiodrilus tenuis Beddard, 1892. From "Assaba, west coast of Africa". [1 specimen (type) and 1 micro-slide.]

82. A new Branchiate Oligochaete (*Branchiura sowerbyi*). *Quarterly Journal of Microscopical Science* **33**: 325–341, 1 pl.

Branchiurs Beddard, 1892, defined.
Branchiura sowerbyi Beddard, 1891. Specimens collected in England by Mr Sowerby; see **65.***

83. Researches into the embryology of the Oligochaeta. No. 1. On certain points in the development of *Acanthodrilus multiporus. Quarterly Journal of Microscopical Science* **33**: 497–540, 2 pls.

Acanthodrilus multiporus Beddard, 1885 = *Octochaetus multiporus.* Specimens: see **7.**

84. On some Perichaetidae from Japan. *Zoologischer Jahrbucher* (Systematic etc.) **6**: 755–766, 1 pl.

Note on peculiarities of Perichaetidae from Japan.
Perichaeta masatakae Beddard, 1892 = *Amynthas robustus* (Perrier, 1872). [2 specimens (syntypes).]
Perichaeta nipponica Beddard, 1892 = *Amynthas corticus* (Kinberg, 1867. [1 specimen (holotype).]
Perichaeta rokugo Beddard, 1892 = *Amynthas hilgendorfi* (Michaelsen, 1892). [2 specimens (syntypes).]
Note on a hybrid *Perichaeta* (= *P. rokugo* x *P. sieboldi*).
Perichaeta sieboldi Horst, 1883. [*P. sieboldi:* Beddard, 1892 (non Horst, 1883) = *Amynthas hilgendorfi* (Michaelsen, 1892).] [1 specimen.]
Perichaeta tokioensis Beddard, 1892 = *Amynthas hilgendorfi* (Michaelsen, 1892). [1 specimen (holotype).]
All specimens collected by Mr Masataka Rokugo from Japan.

1893

85. Two new genera and some new species of earthworms. *Quarterly Journal of Microscopical Science* **34**: 243–278, 2 pls.

Revision of the family Geoscolecidae.
Alvania Beddard, 1893, defined.
Alvania millsoni Beddard, 1893 = *Hyperiodrilus millsoni.* Collected by Mr Alvan Millson from Lagos, Nigeria. [5 specimens (syntypes) and 10 micro-slides.]
Polytoreutus magilensis Beddard, 1893. Collected from Magila, east central Africa. [9 specimens received from Rev H. W. Woodward (holotype and paratypes).]
Pygmaeodrilus lacuum Beddard, 1893 = *Ocnerodrilus lacuum.* Collected from Lagos, Nigeria. [4 micro-slides (? type – labelled *Pygmaeodrilus* sp., Lagos).]
Siphonohaster millsoni Beddard, 1891 = *Alma millsoni.* Collected by Mr Alvan Millson from Lagos, Nigeria. [*ca* 50 specimens and 2 micro-slides.]
Stuhlmannia variabilis Michaelsen, 1890. [Many specimens from Magila.]
Trichochaeta Beddard, 1893 (non Bigot, 1878 – Diptera) = *Hesperoscolex* Michaelsen, 1900 (nom. nov.).
Trichochaeta hesperidum Beddard, 1893 = *Hesperoscolex hesperidum.* 1 specimen received alive together with a number of specimens of *Perichaeta* sp. from Kew Gardens. Originally from Jamaica. [1 specimen (? holotype).]

86. On some new species of earthworms from various parts of the world. *Proceedings of the Zoological Society of London* **1892**: 666–706, 2 pls.

Acanthodrilidae, systematic notes.
Acanthodrilus aquarum-dulcium Beddard, 1893 = *Microscolex georgianus* (Michaelsen, 1888). Specimens collected from Patagonia and/or Falkland Is. in fresh water.*
Acanthodrilus falclandicus Beddard, 1893 = *Microscolex georgianus* (Michaelsen, 1888). Collected by Dr Dale from Falkland Is. Re-examination of specimens determined as *A. georgianus* Michaelsen (see **50 and 63**) and comparison with the type specimens sent to F. E. Beddard by Dr Michaelsen. [8 specimens (syntypes).]
Acanthodrilus paludosus Beddard, 1893 = *Eodrilus paludosus.* [3 micro-slides (holotype – section of the one specimen).]
Acanthodrilus smithi Beddard, 1893 = *Maoridrilus smithii.* Collected by Mr W. W. Smith from New Zealand. [Several specimens (syntypes).]
Benhamia Michaelsen, redefined, systematic notes.
Benhamia crassa Beddard, 1893 = *Dichogaster crassa.* Specimens received from Kew Gardens. Originally obtained from Lagos, Nigeria. [Holotype.]

Benhamia whytei Beddard, 1893 = *Dichogaster whytei.* Specimens collected by Mr Alexander Whyte (for Mr H. H. Johnston) from Malawi.*
Eudriloides durbanensis Beddard, 1893. Specimens received from Kew Gardens, originally from Durban, Natal by Mr Thiselton Dyer.*
Ilyogenia Beddard, 1893
Ilyogenia africana Beddard, 1893. Received from Kew Gardens among specimens of *Eudriloides durbanenesis.* Originally from Durban, Natal.*
Microdrilus Beddard, 1893
Microdrilus saliens Beddard, 1893 = *Dichogaster saliens.* Received from Kew Gardens. Originally from Java and Penang, Malaysia. [5 specimens from Penang (syntypes).]
Moniligaster Perrier, notes on affinities and systematic position.
Moniligaster bahamensis Beddard, 1893. Specimens received from Kew Gardens, accidentally imported with plants from the Bahamas.*
Octochaetus Beddard, 1893, defined.
Octochaetus huttoni Beddard, 1893. Collected by Mr W. W. Smith from New Zealand. [2 specimens (syntypes).]
Octochaetus multiporus (Beddard, 1885) transferred from *Acanthodrilus.* Specimens: see **7.**
Octochaetus thomasi Beddard, 1893. Collected by Professor T. J. Parker or Mr W. W. Smith from New Zealand. [Holotype.]
Perionyx Perrier, redefined, systematic notes.
Perionyx excavatus Perrier, 1872. Description and assessment of species. Specimens: see **15.**
Perionyx intermedius Beddard, 1893 = *Perionyx excavatus* Perrier, 1872. Specimens collected by Dr King from Seebpore, Burmah.
Perionyx macintoshii Beddard, 1883. [1 specimen (from ? India).] See **3.**
Trichochaeta barbadensis Beddard, 1893 = *Hesperoscolex barbadensis.* 1 specimen received alive from Kew Gardens. Originally from Barbados.*

87. On the atrium and prostate in the Oligochaeta. *Proceedings of the Zoological Society of London* **1893**: 475–487.

Anatomical notes on variation and probable homologies of the atrium and prostate in different earthworms.

88. On the geographical distribution of earthworms. *Proceedings of the Zoological Society of London* **1893**: 733–738.

Earthworm genera listed by zoogeographical regions.

1894

89. Some new or little known Oligochaeta. *Proceedings of the Royal Physical Society of Edinburgh* **12**: 30–45.

Cryptodrilus spatulifera Michaelsen, 1889 = *Yagansia spatulifera.* Specimens collected by Mr Lane from Chile. [3 specimens (? syntypes).]
Fridericia antarctica Beddard, 1894. Specimens collected by Mr W. W. Smith from New Zealand.*
Henlea ventribulosa (Udekem, 1854). Specimens collected by Mr W. W. Smith from Canterbury, New Zealand.*
Microscolex Rosa, redefined.
Microscolex novaezelandiae Beddard, 1894 = *M. phosphoreus* (Duges, 1837). Specimens collected by Mr W. W. Smith from New Zealand. [*ca* 10 specimens (? syntypes).]
Pontodrilus Perrier, distinctive characters, key to species.
Pontodrilus hesperidum Beddard, 1894 = *P. bermudensis* Beddard, 1891. Specimens received from Jamaica.*
Rhododrilus parkeri Beddard, 1894, non. nud.
Notes on some New Zealand Enchytraeidae.

90. A contribution to the anatomy of *Sutroa*. *Transactions of the Royal Society of Edinburgh* **37**: 195–202, 1 pl.

Sutroa rostrata Eisen, 1888 = *Rhynchelmis rostrata* (Eisen, 1888). Collected by Dr Eisen from west of San Francisco, California. [10 specimens and 5 micro-slides (syntypes).] Re-examination of type specimens.
Sutroa alpestris Eisen, 1893 = *Rhynchelmis rostrata* (Eisen, 1888). Collected by Dr Eisen from Sierra Nevada, California. [7 micro-slides (syntypes).] Re-examination of type specimens.

91. Another new Branchiate oligochaete. *Nature*. London **50**: 20.

Hesperodrilus Beddard, 1894
Hesperiodrilus branchiatus Beddard, 1894 = *Phreodrilus* (*Phreodrilus*) *branchiatus*. Collected by W. Michaelsen from River Valdivia, Chile. [3 micro-slides (syntypes).] Specimens possibly also in Hamburg Museum.

92. On two new genera comprising three new species of earthworms from western tropical Africa. *Proceedings of the Zoological Society of London* **1894**: 379–390.

Millsonia Beddard, 1894, defined.
Millsonia nigra Beddard, 1894 = *Dichogaster nigra*. [1 specimen (holotype).]
Millsonia rubens Beddard, 1894 = *Dichogaster rubens*. [1 specimen (holotype).]
Nannodrilus Beddard, 1894, defined.
Nannodrilus africanus Beddard, 1894. [*ca* 50 specimens (syntypes).]
Specimens of the above species collected by Mr Alvan Millson from Lagos, Nigeria.
Notes on the families Cryptodrilidae and Eudrilidae.

93. Preliminary notice of some South American Tubificidae collected by Dr Michaelsen, including the description of a branchiate form. *Annals and Magazine of Natural History* (6) **13**: 205–210.

Bothrioneron americanum Beddard, 1894. From Buenos Aires.*
Hesperodrilus Beddard, 1894, defined.
Hesperodrilus albus Beddard, 1894 = *Phreodrilus* (*Antarctodrilus*) *niger* (Beddard, 1894). [2 micro-slides (? syntypes).]
Hesperodrilus branchiatus Beddard, 1894 = *Phreodrilus* (*Phreodrilus*) *branchiatus*. From River Valdivia, Chile. [3 micro-slides (syntypes).]
Hesperodrilus niger Beddard, 1894 = *Phreodrilus* (*Antarctodrilus*) *niger*. [7 micro-slides (syntypes).]
Hesperodrilus pellucidus Beddard, 1894 = *Phreodrilus* (*Antarctodrilus*) *niger* (Beddard, 1894). [1 micro-slide (? syntype).]
Specimens of all 5 species possibly deposited in the Hamburg Museum.

94. A contribution to our knowledge of the Oligochaeta of Tropical Eastern Africa. *Quarterly Journal of Microscopical Science* **36**: 201–269, 2 pls.

Alluroides Beddard, 1894, defined.
Alluroides pordagei Beddard, 1894. Collected by Mr Frank Finn from Mombasa I. Kenya. [4 micro-slides (syntypes).]
Eudriloides brunneus Beddard, 1894. Specimens collected by Mr Frank Finn [2 specimens (syntypes) and 5 micro-slides.]
Eudriloides cotterilli Beddard, 1894. Specimens collected by Mr Cotterill.*
Gordiodrilus zanzibaricus Beddard, 1894. Collected by Mr Frank Finn. [3 micro-slides (? syntypes).]
Pareudrilus Beddard, 1894.
Pareudrilus stagnalis Beddard, 1894. Collected by Mr Frank Finn. [3 specimens and 2 micro-slides (syntypes).]
Polytoreutus finni Beddard, 1894 (*P. elongatus* Beddard, 1894 (laps.)). Collected by Mr Frank Finn. [1 specimen (holotype) and 12 micro-slides.]
Polytoreutus kilindinensis Beddard, 1894. Collected by Mr Hinde from Kilindini, Mombasa I., Kenya. [2 specimens (syntypes) and 22 micro-slides.]
Polytoreutus violaceus Beddard, 1894. Collected by Mr Frank Finn from Kilindini, Mombasa I., Kenya. [1 specimen (holotype) and 15 micro-slides.]
Stuhlmannia variabilis Michaelsen, 1890. Specimens collected by Mr Finn.*

95. Recent progress in our knowledge of earthworms and their allies. *Natural Science,* London **5**: 45–52.

Notes about collections of earthworms from various parts of the world and their importance. Summary of geographical distributions and variations of structures in oligochaetes and comparisons with some other invertebrate groups.

1895

96. Preliminary account of new species of earthworms belonging to the Hamburg Museum *Proceedings of the Zoological Society of London* **1895**: 210–239.

Specimens collected by Dr Michaelsen from South America.
Acanthodrilus albus Beddard, 1895 = *Notiodrilus albus.* Corral.*
Acanthodrilus bicinctus Beddard, 1895 = *Chilota bicincta.* Pictou I., Smyth Channel, Wide Bay, Juan I. [1 specimen (syntype).]
Acanthodrilus carneus Beddard, 1895 = *Chilota carneus.* Quilpue, Chile. [1 specimen (syntype).]
Acanthodrilus chilensis Beddard, 1895 = *Chilota chilensis.* Taja I., Valdivia, Chile.*
Acanthodrilus cingulatus Beddard, 1895 = *Chilota cingulata.* I. of Teja, Valdivia, Chile.*
Acanthodrilus corralensis Beddard, 1895 = *Chilota corralensis.* Corral. [1 specimen (? syntype).]
Acanthodrilus decipiens Beddard, 1895 = *Chilota decipiens.* Near Estancilla, Province of Valdivia, Chile.*
Acanthodrilus magellanicus Beddard, 1895 = *Notiodrilus magellanicus.* Magellan Straits, Elizabeth I. [1 specimen (? syntype).]
Acanthodrilus minutus Beddard, 1895 = *Chilota minuta.* Valdivia, Chile. [1 specimen (? syntype).]
Acanthodrilus occidentalis Beddard, 1895 = *Notiodrilus occidentalis.* Valparaiso, Chile.*
Acanthodrilus purpureus Beddard, 1895 = *Chilota bicincta* (Beddard, 1895). Magellan Straits, Punta Arenas.*
Acanthodrilus putablensis Beddard, 1895 = *Chilota putablensis.* Putabla, Valdivia, Chile.*
Acanthodrilus simulans Beddard, 1895 = *Chilota simulans.* Corral.*
Kerria Beddard, 1892, systematic note.
Kerria rosae Beddard, 1895 = *Eukerria rosae.* Buenos Aires. [7 specimens (syntypes).]
Kerria saltensis Beddard, 1895 = *Eukerria saltensis.* Valparaiso Salto. [1 specimen (? syntype).]
Microscolex corralensis Beddard, 1895 = *Yagansia corralensis.* Corral.*
Microscolex diversicolor Beddard, 1895 = *Yagansia diversicolor.* Valdivia, Chile; Estancilla and Corral. [1 specimen (? syntype).] Specimens also in Berlin Museum.
Microscolex gracilis Beddard, 1895 = *Yagansia gracilis.* Uschuia Forest. [1 specimen (? syntype).]
Microscolex griseus Beddard, 1895 = *Yagansia griseus.* Valparaiso, Quilpue, Corral, Valdivia, Sanjose. [1 specimen (? syntype).] Specimens also in Berlin and Torino Museums.
Microscolex longiseta Beddard, 1895 = *Yagansia longiseta.* Tierra del Fuego, Puerto Pantalon, Uschuia, Navarin, Porto Toro. [1 specimen (? syntype).] Specimens also in Paris Museum.
Microscolex michaelseni Beddard, 1895 = *Yagansia michaelseni.* Straits of Magellan, Punta Arenas, Uschuia Forest, Navarin I., Porto Toro, Puerto Bridges. [6 specimens (? syntypes).] Specimens also in United States National Museum, Paris Museum, and Leiden Museum.
Microscolex papillosus Beddard, 1895 = *Yagansia papillosa.* Forest of Uschuia. [1 specimen (? syntype).] Specimens also in Paris Museum.
Microscolex robustus Beddard, 1895 = *Yagansia robustus.* Yeja I., Valdivia, Putabla, Estancilla. [1 specimen from Putabla (? syntype).]
Perichaeta sanctijacobi Beddard, 1895 = *Amynthas morrisi* (Beddard, 1892). Santiago, Chile. Specimens (syntypes) in Hamburg Museum.*

97. (& Fedarb, S.M.†). On some Perichaetidae from the Eastern Archipelago collected by Mr Everett. *Annals and Magazine of Natural History* (6) **16**: 69–73.

Megascolex armatus (Beddard, 1883) = *Lampito mauritii* Kinberg, 1867. From Padas Valley, North Borneo. [2 specimens.]

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†Sophie M. Fedarb, an Indian naturalist, was the author of several papers in the *Journal of the Bombay Natural History Society* and the *Proceedings of the Zoological Society of London.* She worked for a time in Beddard's laboratory at the Zoological Society of London.

Perichaeta everetti Beddard and Fedarb, 1895 = *Polypheretima everetti.* From Mount Kinabalu. Type locality redesignated as Balabac Island, Palawan by Easton (1976). [Specimens (syntypes).]
Perichaeta kinabaluensis Beddard and Fedarb, 1895 = *Polypheretima kinabaluensis.* From Mount Kinabalu.
Perichaeta merabahensis Beddard and Fedarb, 1895 = *Metaphire merabahensis.* Collected by Mr Everett from Padas Valley, North Borneo. [*ca* 20 specimens (syntypes).]
Perichaeta padasensis Beddard and Fedarb, 1895 = *Pheretima* (*Pheretima*) *darnleiensis* (Fletcher, 1886). From Merabah and Padas Valley, North Borneo. [10 specimens (syntypes).]
Perichaeta papillata Beddard and Fedarb. 1895 = *Polypheretima everetti* (Beddard and Fedarb, 1895). From Merabah, North Borneo [13 specimens (syntypes).]
Perichaeta sarawacensis Beddard and Fedarb, 1895 = *Polypheretima everetti* (Beddard and Fedarb, 1895). From Sarawak. [1 specimen (holotype).]
Pontoscolex corethurus (F. Müller, 1857). From Merabah, North Borneo [*ca* 10 specimens.]

98. *A Monograph of the Order Oligochaeta.* Oxford: Clarendon Press, xii + 769 pp., Pls.I–V.

Anatomy and Systematics.
The following new records and new species were detailed:
Acanthodrilus kerguelarum Grube, 1877 = *Microscolex kerguelarum.* Specimens collected by the *Challenger* Expedition from Marion I.*
Acanthodrilus parkeri Beddard, 1895 = *Maoridrilus parkeri.* From New Zealand. [2 specimens (syntypes).]
Acanthodrilus plumbeus Beddard, 1895 = *Maoridrilus plumbeus.* Specimens collected by Captain Broun of Drury, New Zealand.*
Acanthodrilus valdiviensis Beddard, 1895 = *Chilota valdiviensis.* Specimens collected by Mr A. Lane from Corral, Valdivia, Chile. [2 specimens (syntypes).]
Chaetobranchus semperi Bourne, 1890 = *Branchiodrilus semperi.* Specimens collected by F. E. Beddard from the Victoria Regia Tank in the Royal Botanical Society's Gardens, Regent's Park.*
Dero furcata Oken, 1815 = *Aulophorus furcatus* (Muller, 1773). Specimens received from tropical eastern Africa.*
Desmogaster horsti Beddard, 1895 = *Desmogaster* sp. Horst, 1893. Sumatra, Mt Singalay.*
Eudrilus eugenias (Kinberg, 1867). Specimens received from Professor Loven, collected in St. Helena. [Kinberg's type specimens in BMNH.]
Fridericia novaezelandiae Beddard, 1895, nom. nud.
Gordiodrilus matthewsi Beddard, 1895, nom. nud. Lapsus pro *G. robustus* Beddard, 1892, according to Michaelsen, 1900.
Limnodrilus novaezelandiae Beddard, 1895, nom. nud.
Lumbricus pumilosum Beddard, 1895, lapsus pro *Enterion pumilum* Savigny, 1826.
Microscolex monticola Beddard, 1895 = *Rhododrilus monticola.* Collected by Captain Brown from Mount Pirongea, Auckland, New Zealand. [1 specimen (holotype).]
Moniligaster viridis Beddard, 1895 = *Eupolygaster viridis.* Collected by Mr Everett from Borneo, Penrisen Hills, Sarawak. [2 specimens (syntypes).]
Perichaeta acystis Beddard, 1895 nom. nov. pro *Perichaeta biserialis* of Beddard 1890 nec *P. biserialis* Perrier = *Polypheretima elongata* (Perrier, 1872). Luzon, Philippines. [2 specimens (syntypes).] See **56.**
Perichaeta dyeri Beddard, 1892 = *Amynthas rodericensis* (Grube, 1879). Additional specimens received from Trinidad; Jamaica; Lagos, Nigeria. (Collector or origin not given). See **77.** [*ca* 80 specimens.]
Perichaeta violacea Beddard, 1895 = *Pithemera bicincta* (Perrier, 1875). [5 specimens (syntypes) received from Penang, Malaya.]
Polytoreutus gregorianus Beddard, 1895. Collected by Dr J. W. Gregory from Giriama near Fuladoya, Kenya. [1 specimen (holotype).]
Pontoscolex corethurus (F. Müller, 1857). Specimens received from several localities including Australia, Guyana, Nigeria, Singapore, St Vincent, and Grenada. [*ca* 25 specimens.] See also **23, 64** and **97.**
Pontoscolex hawaiensis Beddard, 1895. Specimens collected by Mr R. L. Perkins from Mauna Loa, Hawaii.*
Pontoscolex trinitatis Beddard, 1895, nom. nud. No description – only briefly compared with *P. corethurus* and *Trichochaeta barbadensis.**
Pristina equiseta Bourne, 1891. Specimens collected by F. E. Beddard from the Victoria Regia Tank in the Gardens of the Royal Botanical Society in Regent's Park, London.*

Pristina proboscidae Beddard, 1895. Specimens collected by Dr Michaelsen from Valparaiso, South Chile.* See **101.**
Rapistes parasitica Beddard, 1895, lapsus pro *R. parasita* Schmarda, 1847.
Siphonogaster stuhlmanni Michaelsen, 1892 = *Alma stuhlmanni.* Collected by Dr Michaelsen from Lake Victoria, Tanzania. [3 specimens (syntypes).]
Trichochaeta hesperidum Beddard, 1893 = *Hesperoscolex hesperidum.* Additional specimens reported from Trinidad [2 in BMNH.]
Trinephrus Beddard, 1895
To include 3 species of *Cryptodrilus* Fletcher, 1886 described by Fletcher (1889): *fastigatus, tenuis* and *mediocris* and 1 by Spencer (1892): *dubius.*

99. Earthworms and oceanic islands. *Natural Science* London **6**: 123–5.

Notes on the importance of earthworms in zoogeographical studies. A list of oceanic islands from which earthworms have been collected together with the names of the species reported, (indigenous species being itemized).

1896

100. On some earthworms from the Sandwich Islands collected by Mr R. L. Perkins; with an Appendix on some new species of *Perichaeta,* etc. *Proceedings of the Zoological Society of London* **1896**: 194–211.

Sandwich Islands, Pacific Ocean (= Hawaii)
Acanthodrilus macquariensis Beddard, 1896 = *Microscolex macquariensis.* Collected by Professor T. J. Parker from Macquarie I., south of New Zealand. [3 specimens (syntypes).]
Allolobophora calignosa (Savigny, 1826). From Waialua, Oahu.*
Allolobophora foetida (Savigny, 1826). = *Eisenia fetida* (Savigny, 1826). From Halemanu, Kausi.*
Allolobophora putris Sav. variety *"arborea"* = *Dendrobaena puter* Hoffmeister, 1845. From Molokai and Kawailoa River, Oahu.
Benhamia indica Beddard, 1896. Specimens collected by Mr Wroughton from Thana, Bombay, India.*
Perichaeta indica Horst, 1883 = *Amynthas corticus* (Kinberg, 1867). From Molokai, Manua Loa.*
Perichaeta insulae Beddard, 1896 = *Amynthas morrisi* (Beddard, 1892). Collected by Dr D. Sharp from Hong Kong. [1 specimen (holotype).]
Perichaeta molokaiensis Beddard, 1896 = *Amynthas corticus* (Kinberg, 1867). From Molokai.*
Perichaeta perkinsi Beddard, 1896 = *Amynthas corticus* (Kinberg, 1867). From Halemann, Kausi.
Perichaeta sandvicensis Beddard, 1896 = *Metaphire californica* (Kinberg, 1866). From Lanai, Mauna Loa, Molokai. [2 specimens (? syntypes).]
Perichaeta trinitatis Beddard, 1896 = *Amynthas rodericensis* (Grube, 1879). From Trinidad (collected by Mr R. L. Perkins). [1 specimen (holotype).]
Perichaeta trityphyla Beddard, 1896 = *Metaphire schmardae* (Horst, 1883). From Barbados. (collected by Mr R. L. Perkins). [1 specimen (holotype).]
Pontoscolex hawaiensis Beddard, 1895. From Mauna Loa, Hawaii and Waiahia, Oahu. See also **98.**
Notes on the distribution of the genus *Perichaeta.*

101. Naiden, Tubificiden und Terricolen. *Ergebnisse Hamburger Magalhaensische Sammelreise* Lief. 1 (2): 1–64, 1 pl. Hamburg: Naturhistorisches Museum.

Specimens collected by Dr Michaelsen from South America and deposited in the Hamburg Museum.
Aquatic Oligochaeta (Naididae and Tubificiidae) incl. Introduction:
Bothrioneuron americanum Beddard, 1894. Buenos Ayres.* See **93.**
Chaetogaster filiformis Schmarda, 1861 = *Allonais chelata* (Marcus, 1944). Valdivia, Chile.*
Hesperodrilus Beddard, 1894, redefined, anatomical notes. See **93.**
Hesperodrilus albus Beddard, 1894 = *Phreodrilus* (*Antarctodrilus*) *niger* (Beddard, 1894). Port Stanley, Falkland Is. [2 micro-slides (? syntypes).] See **93.**
Hesperodrilus branchiatus Beddard, 1894 = *Phreodrilus* (*Phreodrilus*) *branchiatus.* River Valdivia, Chile. See **93.**
Hesperodrilus niger Beddard, 1894 = *Phreodrilus* (*Antarctodrilus*) *niger* (Beddard, 1894). Port Stanley, Falkland Is. Specimens: See **93.**
Hesperodrilus pellucidus Beddard, 1894 = *Phreodrilus* (*Antarctodrilus*) *niger* (Beddard, 1894). From Uschuaia. [1 micro-slide (? syntype).] See **93.**

Pristina proboscidea Beddard, 1895. Valparaiso, South Chile.*
Terrestrial Oligochaeta, incl. Introduction (see also **96**).
Acanthodrilidae, notes on distribution and habitat.
Acanthodrilus Perrier, systematic and distribution notes.
Acanthodrilus albus Beddard, 1895 = *Notiodrilus albus.* Corral.*
Acanthodrilus bicinctus Beddard, 1895 = *Chilota bicineta.* Smyth Channel, Juan I. [1 specimen (? syntype).]
Acanthodrilus bovei Rosa, 1889 = *Microscolex georgianus* (Michaelsen, 1888). [3 specimens from Punta Arenas and 1 specimen from Tierra del Feugo.]
Acanthodrilus carneus Beddard, 1895 = *Chilota carnea.* Quilpue, Chile. Specimens: see **96.**
Acanthodrilus chilensis Beddard, 1895 = *Chilota chilensis.* Yeja I., Valdivia.*
Acanthodrilus cingulatus Beddard, 1895 = *Chilota cingulata.* I. of Teja, Valdivia.*
Acanthodrilus corralensis Beddard, 1895 = *Chilota corralensis.* Corral. [1 specimen (syntype).]
Acanthodrilus dalei Beddard, 1889 = *Chilota dalei.* Also collected by Mr Dale from Falkland Is. [2 specimens from Port Stanley (Falkland I.), 2 specimens (syntypes).] See **50.**
Acanthodrilus decipiens Beddard, 1895 = *Chilota decipiens.* Estancilla, Valdivia.*
Acanthodrilus magellanicus Beddard, 1895 = *Notiodrilus magellanicus.* Straits of Magellan, Elizabeth I. [1 specimen (syntype).]
Acanthodrilus minutus Beddard, 1895 = *Chilota minuta.* Valdivia, Chile. [1 specimen (? syntype).]
Acanthodrilus occidentalis Beddard, 1895 = *Notiordrilus occidentalis.* Valpraraiso. Salto, Chile.*
Acanthodrilus pictus (Michaelsen, 1889) = *Chilota patagonica* (Kinberg, 1867). Uschuia, Chile. [3 specimens (from Uschuia) and 5 (from Chile).]
Acanthodrilus platyurus Michaelsen, 1892 = *Chilota platyura.* Insel Teja, Valdivia, Chile, Estancilla.*
Acanthodrilus purpureus Beddard, 1895 = *Chilota bicincta* (Beddard, 1895). Magellan Straits, Punta Arenas.*
Acanthodrilus putablensis Beddard, 1895 = *Chilota putablensis.* Putabla, Valdivia, Chile.*
Acanthodrilus simulans Beddard, 1895 = *Chilota simulans.* Corral.*
Kerria Beddard, systematic and distribution notes.
Kerria rosae Beddard, 1895 = *Eukerria rosae.* Buenos Aires. [7 specimens (syntypes).]
Kerria saltensis Beddard, 1895 = *Eukerria saltensis.* Valparaiso, Salto. [1 specimen (? syntype).]
Kerria spegazzini (Rosa, 1890) = *Eukerria stagnalis* (Kinberg, 1867). Buenos Aires. [1 specimen.]
Cryptodrilidae systematic and distribution notes.
Microscolex corralensis Beddard, 1895 = *Yagansia corralensis.* Corral.*
Microscolex diversicolor Beddard, 1895 = *Yagansia diversicolor.* Chile: Valdivia, Estancilla and Corral.*
Microscolex dubius (Fletcher, 1888) = *Eudrilus dubius.* Valparaiso, Montevideo. [3 specimens (Buenos Aires).]
Microscolex gracilis Beddard, 1895 = *Yagansia gracilis.* Uschuia Forest. Specimens: see **96.**
Microscolex griseus Beddard, 1895 = *Yagansia griseus.* Valparaiso, Quilpue, Coronel, Valdivia. Specimens: see **96.**
Microscolex longiseta Beddard, 1895 = *Yagansia longiseta.* Tierra del Fuego, Uschuaia, Puerto Pantalon, etc. Specimens: see **96.**
Microscolex michaelseni Beddard, 1895 = *Yagansia michaelseni.* Magellan Straits, Punta Arenas, etc. [6 specimens (? syntypes).]
Microscolex modestus Rosa, 1887 = *Eodrilus pallidus* Lee, 1959. Elisabeth I., Magellan Straits; Valparaiso, Salto.*
Microscolex papillosus Beddard, 1895 = *Yagansia papillosa.* Tierra del Fuego, Uschaia. Specimens: see **96.**
Microscolex robustus Beddard, 1895 = *Yagansia robusta.* Valdivia, Putabla. Specimens: see **96.**
Microscolex spatulifer (Michaelsen, 1889) = *Yagansia spatulifera.* Lota, Valdivia, Corral. [3 specimens (? syntypes).]
Perichaetidae
Perichaeta sanctijacobi Beddard, 1895 = *Amynthas morrisi* (Beddard, 1892). Santiago, Chile.*
Lumbricidae, remarks on occurrence of European species in South America.
Allolobophora calignosa (Savigny, 1826). Santiago, Valparaiso, etc. Chile: San Jose, Uruguay. [7 specimens.]
Allolobophora chlorotica (Savigny, 1826). Santiago and Talcahuano, Chile; Montevideo, Uruguay. [3 specimens.]
Allolobophora constricta Rosa, 1884 = *Dendrobaena constricta.* Valdivia, Chile.*

Allolobophora foetida (Savigny, 1826) = *Eisenia fetida.* Chile, Argentine and Uruguay.*
Allolobophora putris Savigny = *Dendrobaena puter* Hoffmeister 1845. Chile, Uruguay.*
Allolobophors rosea (Savigny, 1826). Quilota and Talcahuano, Chile.*
Allolobophora venata Rosa, 1886 = *Dendrobaena venata.* Santiago, Quinta normal, Chile. [2 specimens.]
Allurus tetraedrus (Eisen) = *Eiseniella tetraedra* (Savigny, 1826). [2 specimens.]

102. Oligochaeta (Earthworms, etc.) and Hirudinea (Leeches). *Cambridge Natural History* 2. 345–408. London: Macmillan & Co. Ltd.

Anatomy, reproduction, bionomics, distribution, classification.

1897

103. On a collection of earthworms from South Africa belonging to the genus *Acanthodrilus. Proceedings of the Zoological Society of London* **1897**: 336–349.

Except *Iridodrilus roseus,* specimens collected by Mr Purcell and sent to Mr W. L. Sclater from South Africa.
Acanthodrilus africanus Beddard, 1897 = *Chilota africana.* "Forest of George Town". [2 specimens (syntypes).]
Acanthodrilus arenarius Beddard, 1897 = *Eodrilus arundinis.* [6 specimens (syntypes).]
Acanthodrilus arundinis Beddard, 1897 = *Eodrilus arundinis.* [1 specimen (holotype).]
Acanthodrilus excavatus Beddard, 1897 = *Parachilota excavata.* Knysna Forest. [3 specimens (? syntypes).]
Acanthodrilus falcatus Beddard, 1897 = *Eodrilus arundinis* (Beddard, 1897). Cape Flats. [1 specimen (syntype).]
Acanthodrilus lucifuga Beddard, 1897 = *Chilota lucifuga.* Knysna Forest. [1 specimen (syntype).]
Acanthodrilus purcelli Beddard, 1897 = *Chilota purcelli.* Newlands Slope. [4 specimens (syntypes).]
Acanthodrilus sclateri Beddard, 1897. Re-det. *Parachilota excavata.* [2 specimens (syntypes).]
Acanthodrilus photodilus Beddard, 1897 = *Parachilota photodilus.* Knysna Forest. [2 specimens (syntypes).]
General remarks on the distribution of *Acanthodrilus* spp.
Iridodrilus Beddard, 1897
Iridodrilus roseus Beddard, 1897 = *Hyperiodrilus roseus.* Received from Kew Gardens, originally from West Africa. [1 specimen (holotype).]

1899

104. A note upon phosphorescent earthworms. *Nature, London* **60**: 52.

Microscolex sp. (near *modestus*) = *Microscolex phosphoreus* (Dùges, 1837). Collected by Mr Carleton Rea from the neighbourhood of Worcester, England.*

105. (& Fedarb, S.M.). Notes upon two earthworms, *Perichaeta biserialis* and *Trichochaeta hesperidum. Proceedings of the Zoological Society of London* **1899**: 803–809.

Perichaeta biserialis Perrier, 1875 = *Polypheretima elongata* (Perrier, 1872) 18 specimens received from Guyana, sent by Mr Cecil Lilley.*
Trichochaeta hesperidum Beddard, 1893 = *Hesperoscolex hesperidum.* Specimens sent by Mr Nicholson from Kew Gardens. Locality not given.*

106. On a collection of earthworms from New Britain, the Solomon Islands, the New Hebrides, and the Loyalty Islands. *Zoological Results based on material from New Britiain, the Solomon Islands, the New Hebrides, and the Loyalty Islands collected during the years 1895, 1896 and 1897 by Arthur Willey.* Part II, pp. 181–194. Cambridge. University Press.

Benhamia spp., New Britain and Lifu.*
Perichaeta esafatae Beddard, 1902 = *Amynthas esafatae.* I. of Esafate, New Hebrides.*
Perichaeta loriae Beddard, 1899 (non Rosa, 1898) = *Metapheretima pickfordi* (Gates, 1957). Guadalcanal, Solomon Is.*

Perichaeta malamaniensis Benham, 1891 = *Pheretima* (*Pheretima*) *montana* Kinberg, 1867. New Britain on Gazelle Peninsula, on the I. of Pines, New Caledonia, Lifu and at Mare in the Loyalty Is. and at Esafate, New Hebrides.*
Perichaeta novae-britanniae (Benham, 1897) = *Amynthas novaebritanniae.* New Britain.*
Perichaeta pacifica Beddard, 1899 = *Pithemera pacifica.* New Britain.*
Perichaeta solomonis Beddard, 1899 = *Amynthas solomonis.* Narowol and Rubiana, New Georgia, Solomon Is.*
Perichaeta upoluensis Beddard, 1887 = *Amynthas taitensis* (Grube, 1866). Esafate or Sandwich I. in the New Hebrides group. Specimens: see **23.**
Pontodrilus matsushimensis Iizuka, 1898. Shore of I. of Pines.*

1900

107. On a species of earthworm from western tropical Africa belonging to the genus *Benhamia. Proceedings of the Zoological Society of London* **1900**: 167–173.

Benhamia caecifera (W. B. Benham, 1894). = *Millsonia caecifera.* Collected by Mr Martin Woodward from Ghana. [2 specimens.]

108. A revision of the earthworms of the genus *Amyntas* (*Perichaeta*). *Proceedings of the Zoological Society of London* **1900**: 609–652.

Amyntas Kinberg, redefined. Revision of the genus including species definitions.
Amyntas bosschae (Horst, 1893) = *Pheretima* (*Pheretima*) *darnleiensis* (Fletcher, 1886). Borneo. [3 specimens.]
Amyntas hesperidum (Beddard, 1892) = *Metaphire californica* (Kinberg, 1866). Hong Kong, Hawaii, Barbados. [4 specimens originally determined as *Perichaeta sandvicensis* Beddard, 1896 (from Hong Kong).] See also **77.**
Amyntas papulosus (Rosa, 1896). = *Amynthas papulosus.* Sumatra. [1 specimen.]
Perichaeta taprobanae Beddard, 1892 = *Polypheretima taprobanae.* Collected by Professor Moseley from Sri Lanka. Re-examination of type specimens. See **77.**

109. On the structure of a new species of earthworm of the genus *Benhamia. Proceedings of the Zoological Society of London* **1900**: 653–659.

Benhamia budgetti Beddard, 1900. Collected by Mr Budgett (Trinity College, Cambridge), from McCarthy I., Gambia. [3 specimens and 1 micro-slide (syntypes).]

110. On the earthworms collected during the "Skeat Expedition" to the Malay Peninsula, 1899–1900. *Proceedings of the Zoological Society of London* **1900**: 891–911.

Amyntas aringeanus Beddard, 1900 = *Polypheretima aringeanus.* [7 specimens (syntypes).]
Amyntas biporus Beddard, 1900 = *Metaphire biporus.* [2 specimens (syntypes).]
Amyntas bosschae (Horst, 1893) = *Pheretima* (*Pheretima*) *darnleiensis* (Fletcher, 1886). [2 specimens.]
Amyntas evansi Beddard, 1900 = *Metaphire malayanus* (Beddard, 1900). [3 specimens (syntypes).]
Amyntas kelantanensis Beddard, 1900 = *Metaphire houletti* (Perrier, 1872). [*ca* 10 specimens (syntypes).]
Amyntas malayanus Beddard, 1900 = *Metaphire malayanus.* [3 specimens (syntypes).]
Amyntas minutus Beddard, 1900 = *Polypheretima polytheca* (Beddard, 1900). [1 specimen (holotype).]
Amyntas papulosus (Rosa, 1896) = *Amynthas papulosus.* [1 specimen.]
Amyntas perichaeta Beddard, 1900 = *Metaphire houletti* (Perrier, 1872). [1 specimen (? holotype).]
Amyntas polytheca Beddard, 1900 = *Polypheretima polytheca.* [1 specimen (? holotype).]
Amyntas posthumus Vaillant, 1868 = *Metaphire posthuma.* Seebpore, Calcutta and Burma. [*ca* 25 specimens.]
Amyntas pulauensis Beddard, 1900 = *Metaphire pulauensis.* [3 specimens (syntypes).]
Amyntas virgo Beddard, 1900 = *Metaphire virgo.* [4 specimens (syntypes).]

111. On a new species of earthworm from India belonging to the genus *Amyntas. Proceedings of the Zoological Society of London* **1900**: 998–1002.

Amyntas alexandri Beddard, 1900 = *Amynthas alexandri.* Collected in the neighbourhood of Calcutta, India. Received from Kew Gardens through Mr Nicholson. [1 specimen (holotype).]

1901

112. Note upon a new form of spermatophore in an earthworm (*Stuhlmannia*). *Nature*, London **63**: 515.

Stuhlmannia sp. innom. Locality not given. [*ca* 20 specimens.]

113. On a freshwater annelid of the genus *Bothrioneron* obtained during the "Skeat Expedition' to the Malay Peninsula. *Proceedings of the Zoological Society of London* **1901** Vol. 1. 81–87.

Bothrioneron Stole, redefined, key to species.
Bothrioneron iris Beddard, 1901. Malaya. [*ca* 30–40 specimens (syntypes) and 3 micro-slides.]

114. Contributions to the knowledge of the structure and systematic arrangement of earthworms. *Proceedings of the Zoological Society of London* **1901** Vol. 1: 187–206

Polytoreutus gregorianus Beddard, 1895. Collected by Dr J. W. Gregory from Giriama, near Fuladoya, Kenya. Detailed redescription and notes including comparison with *P. kilindinensis* and *P. finni*. Specimens: see **98.**
Typhoeus Beddard, 1883, redefined. Systematic and distribution notes. The seven known species characterized.
Typhoeus incommodus Beddard, 1901 = *Eutyphoeus incommodus*. Received from Kew Gardens through Mr Nicholson. Originally from the neighbourhood of Calcutta, India.*
Typhoeus masoni Bourne, 1889 = *Eutyphoeus masoni*. [1 specimen received from Kew Gardens. Originally from Dehru Dun, India.]
Typhoeus nicholsoni Beddard, 1901 = *Eutyphoeus nicholsoni*. Received from Kew Gardens through Mr Nicholson. Originally from the neighbourhood of Calcutta, India.*

115. On the clitellum and spermatophores of an annelid of the genus *Alma*. *Proceedings of the Zoological Society of London* **1901** Vol. 1: 215–222.

Alma sp. innom. Collected by Mr J. S. Budgett from McCarthy Island, River Gambia, Gambia.*

116. On some earthworms from British East Africa: and the spermatophores of *Polytoreutus* and *Stuhlmannia*. *Proceedings of the Zoological Society of London* **1901** Vol. 1: 336–365.

Gordiodrilus Beddard, 1892. Note on species from Lagos, Nigeria.
Gordiodrilus papillatus Beddard, 1901. Collected by Mr Alvan Milson from Lagos, Nigeria.*
Gordiodrilus robustus Beddard, 1895. 2 examples from Lagos, Nigeria. Collected by Mr Alvan Millson.*
Polytoreutus hindei Beddard, 1901. Collected by Mr E. S. Hinde from Titui, Kenya. [2 specimens (holotype and paratypes).]
Notes on the ovaries, oviducts and sperm-ducts of *Stuhlmannia*.

117. On some species of earthworms of the genus *Benhamia* from tropical Africa. *Proceedings of the Zoological Society of London* **1901** *Vol. 2: 190–216.*

Benhamia Michaelsen, characters of seven species compared with *B. gambiana* and *B. michaelseni*.
Benhamia austeni Beddard, 1901 = *Dichogaster austeni*. Collected by Mr Austen from Blantyre, Malawi. [*ca* 20 specimens (syntypes).]
Benhamia gambiana Beddard, 1901. Collected by Mr Budgett from McCarthy I., Gambia.*
Benhamia johnstoni Beddard, 1901 = *Dichogaster itoliensis* (Michaelsen, 1892). Collected by Sir Harry Johnston KCB. from Mt Ruwenzori (6,500 ft.). [4 specimens (holotype and paratypes).] Also 2 micro-slides (prepared and re-named *Dichogaster johnstoni* by J. Stephenson).
Benhamia michaelseni Beddard, 1901. Collected by Mr Budgett from McCarthy I., Gambia.*
Benhamia mollis Beddard, 1901. = *Dichogaster mollis*. Collected by Mr Moore from near Lake Nyasa (= Lake Malawi). [1 specimen (holotype) and 1 micro-slide.]
Benhamia moorei Beddard, 1901 = *Dichogaster moorei*. Collected by Mr J. E. S. Moore from Kurungu Mts., north of Lake Kivu, Zaire. [1 specimen (holotype) and 1 micro-slide.]

118. Preliminary note on the spermatophores of certain earthworms. *Zoologischer Anzeiger* **24**: 220–223.

Alma ? stuhlmanni (Michaelsen, 1892). Locality or origin of specimens not given.*
Polytoreutus sp. innom. Locality or origin not given.*

119. The earthworms of the Hawaiian Archipelago. *Fauna Hawaiensis* **2** (Part 4): 413–426.

Specimens collected by Mr R. L. Perkins and /or Dr D. Sharp.
Allolobophora foetida (Savigny, 1826) = *Eisenia fetida.**
Allolobophora limicola Michaelsen, 1890. [2 specimens (syntypes).]
Allolobophora nordenskioldii Eisen, 1879.*
Allolobophora putris Savigny = *Dendrobaena puter* Hoffmeister, 1845.*
Allolobophora rosea (Savigny, 1826).*
Amyntas Kinberg, nomenclatorial note.
Amyntas hawayanus Rosa, 1891 = *Amynthas gracilis* (Kinberg, 1867). [4 specimens.]
Amyntas perigrinus Fletcher, 1886 = *Amynthas corticus* (Kinberg, 1867). Molokai and Mauna Loa.*
Amyntas hesperidum (Beddard, 1892) = *Metaphire californica* (Kinberg, 1866). Specimens also examined from Hong Kong. [4 specimens (from Hong Kong).] See **108.**
Amyntas schmardae (Horst, 1883) = *Metaphire schmardae.* Collected by Mr R. L. Perkins from Honolulu. Also found in imported earth from Hong Kong.*
Pontoscolex Schmarda, systematic note.

1902

120. On the spermatophores of the earthworms of the genus *Benhamia. Proceedings of the Zoological Society of London* **1901** Vol. 2: 704–709.

Benhamia austeni Beddard, 1901 = *Dichogaster austeni.* Collected by Mr Austen from tropical eastern Africa. Specimens: see **116.**

121. A note upon the gonad ducts and nephridia of *Eudrilus. Proceedings of the Zoological Society of London* **1902** Vol. 2: 89–97.

Eudrilus sp. innom. (? *E. eugeniae*). Specimens examined from Guyana.*

122. (& Fedarb, S.M.) On a new coelomic organ in an earthworm. *Proceedings of the Zoological Society of London* **1902** Vol. 2: 164–169.

Pheretima (Perichaeta) posthuma (Vaillant, 1869) = *Metaphire posthuma.* [*ca* 15 specimens received from Mr F. Finn, Calcutta, India.]

123. On some new species of earthworms belonging to the genus *Polytoreutus* and on the spermatophores of the genus. *Proceedings of the Zoological Society of London* **1902** Vol. 2: 190–210.

Polytoreutus bettonianus Beddard, 1902. Collected by Mr Stuart Betton from "Lagari, eastern Africa" (? Kenya) [5 specimens (syntypes).]
Polytoreutus kenyaensis Beddard, 1902. Collected by Mr S. L. Hinde from Kenya. [15 specimens (12 syntypes and 3 figured specimens).]
Polytoreutus montis-kenyae Beddard, 1902. Collected by Mr S. L. Hinde from Mt Kenya region, Kenya. [*ca* 60 specimens (syntypes and figured specimens).]
Notes on the spermatophores and ovaries of *Polytoreutus.*

124. On two new earthworms of the family Megascolecidae. *Annals and Magazine of Natural History* (7) **9**: 456–463.

Benhamia tanganyikae Beddard, 1902. Collected by Mr J. E. S. Moore from Tanzania.*
Octochaetus beatrix Beddard, 1902. Collected by Mr F. Finn from Calcutta, India. [1 specimen (holotype).]

1903

125. On a new genus and two new species of earthworms of the family Eudrilidae, with some notes upon other African Oligochaeta. *Proceedings of the Zoological Society of London* **1903** Vol. 1: 210–222.

Bettonia Beddard, 1903.
Bettonia lagariensis Beddard, 1903. Collected by Mr Stuart Betton from "Lagari", Kenya.*
Pareudrilus Beddard, anatomical notes.
Pareudrilus sp. innom. Collected by Mr Crossland from Africa. [No further locality given].*
Stuhlmannia Beddard, 1903
Stuhlmannia michaelseni Beddard, 1903. Collected by Mr S. L. Hinde from Mt Kenya district, Kenya. [12 specimens (syntypes).]
Notes on the clitellum of *Alma stuhlmanni* and a possible new species *A. budgetti* collected by Mr Crossland from the shores of Lake Victoria.*

126. The earthworms of the Maldive and Laccadive Islands. In: *The Fauna and Geography of the Maldive and Laccadive Archipelagos* – being the account of the work carried out on and of the collections made by an expedition during the years 1899 and 1900. Edited by J. Stanley Gardener. Vol. I: 374–375. Cambridge.

Megascolex mauritii Kinberg, 1867 = *Lampito mauritii.**
Pontodrilus laccadivensis Beddard, 1903 = *P. bermudensis* Beddard, 1891.*

1905

127. On a new species of worm of the genus *Pontodrilus* from the shores of the Red Sea. *Proceedings of the Zoological Society of London* **1905** Vol. 2: 558–561.

Pontodrilus crosslandi Beddard, 1905. Collected by Mr Cyril Crossland from the shores of Khor Dongola, Red Sea. [4 specimens (syntypes).]

128. On a new enchytraeid worm (*Henlea lefroyi* sp. nov.) from India destructive to the eggs of the locust (*Acridium* sp.). *Proceedings of the Zoological Society of London* **1905** Vol. 2: 562–564.

Henlea lefroyi Beddard, 1905. Collected by Mr H. Maxwell Lefroy from India. Specimens received from Dr S. F. Harmer.*

128a. On a new enchytraeid worm (*Henlea lefroyi* sp. n.) from India. *Journal of the Bombay Natural History Society* **17**: 797–799.

Extract from the above paper.

1906

129. Report on the oligochaetes. Zoological Results of the Third Tanganyika Expedition conducted by Dr W. A. Cunningham 1904–5. *Proceedings of the Zoological Society of London* **1906** Vol. 1: 206–218.

Alluroides Beddard, 1894, redefined, species distinction.
Alluroides tanganyikae Beddard, 1906. Lake Tanganyika. [1 micro-slide (holotype).]
Metschaina tanganyikae Beddard, 1906. Near Lake Tanganyika. [1 specimen (holotype).]
Ocnerodrilus (*Ilyogenia*) *cunningtoni* Beddard, 1906. Lake Tangayika. [4 specimens and 2 on 1 micro-slide (? syntypes).]
Stuhlmannia inermis Beddard, 1906. Lake Tanganyika. [9 specimens (syntypes).]

130. Exhibition of examples of the earthworm *Benhamia johnstoni* from Mt Ruwenzori. *Proceedings of the Zoological Society of London* **1906** Vol. 2: 901.

Benhamia johnstoni Beddard, 1901 = *Dichogaster itoliensis* (Michaelsen, 1892) Specimens received from Mr W. R. Ogilvie-Grant. See **117.**

1907

131. On two new species of the African genus *Microchaetus* belonging to the collection of Oligochaeta in the Museum of Christiania. *Proceedings of the Zoological Society of London* **1907**. 277–281.

Specimens collected by Dr Robert Collett from Zululand. ("Christiania" = ? Christiana, near Bloemfontein, Orange Free State, South Africa.)
Microchaeta collettii Beddard, 1907.*
Microchaeta zuluensis Beddard, 1907.*

132. On some new species of earthworms of the family Eudrilidae, belonging to the genera *Polytoreutus, Neumanniella* and *Eminoscolex* from Mt Ruwenzori. *Proceedings of the Zoological Society of London* **1907**: 415–431.

All specimens collected from Mt Ruwenzori during the Ruwenzori Expedition 1905–06. Received from Mr W. R. Ogilvie-Grant.
Eminoscolex ruwenzori Beddard, 1907.*
Neumanniella ruwenzori Beddard, 1907.*
Polytoreutus granti Beddard, 1907.*
Polytoreutus ruwenzori Beddard, 1907.*
See also **135.**

1908

133. The oligochaetus fauna of Lake Birket el Qurun and Lake Nyasa. *Nature,* London **77**: 608.

All specimens collected by Messrs Cunningham and Boulenger.
Dero sp. Lake Nyasa.*
Nais sp. Lake Nyasa.*
Paranais littoralis (Müller. 1784). Lake Birket, northern Africa.*
Pristina longiseta Ehrenberg, 1828. Lake Nyasa.*

134. A note on the occurrence of a species of *Phreatothrix* (Vejdovsky) in England, and on some points in its structure. *Proceedings of the Zoological Society of London* **1908**: 365–369.

Phreatothrix cantabrigiensis Beddard, 1908 = *Trichodrilus cantabrigiensis.* Cambridge, England. [3 microslides, 1 wholemount and 2 sections (syntypes).] Originally in Cambridge Museum.
Phreatothrix sp. near *P. pragensis* = *Trichodrilus pragensis* Vejdovsky, 1875. Cambridge, England.*

1909

135. Zoological Results of the Ruwenzori Expedition 1905–1906. 3. Vermes. *Transactions of the Zoological Society of London* **19** Part 1: 25–41.

All specimens from Mount Ruwenzori, as **132.***

1911

136. On the spermatophores in earthworms of the genus *Phretima* (= *Perichaeta*). *Proceedings of the Zoological Society of London* **1911**: 412–420.

Pheretima cingulata (Schmarda, 1861) = *Pheretima (Pheretima) darnleiensis* (Fletcher, 1886).*
Peretima montana Kinberg, 1867.*

1912

137. The Oligochaeta Terricolae of the Philippines Part 1. The genus *Pheretima*. *Philippine Journal of Science* Manila, P.I.D. 7: 179–205, 1 pl.

All specimens collected by Mr R. C. McGregor from the Philippines.
Phretima albobrunnea Beddard, 1912 = *Amynthas albobrunnea.* *
Pheretima americanorum Beddard, 1912 = *Amynthas americanorum.* *
Pheretima benguetensis Beddard, 1912 = *Pheretima (Pheretima) darnleiensis* (Fletcher, 1886).*
Pheretima decipiens Beddard, 1912 = *Metaphire decipiens.* *
Pheretima incerta Beddard, 1912 = *Metaphire incerta.* *
Pheretima monticola Beddard, 1912 = *Polypheretima monticola.* *
Pheretima orientalis Beddard, 1912 = *Amynthas orientalis.* *
Pheretima pauaiensis Beddard, 1912 = *Amynthas pauaiensis.* *
Pheretima sodalis Beddard, 1912 = *Amynthas sodalis.* *

138. *Earthworms and their allies.* Cambridge: University Press. pp. vi + 150, 11 text illust.

This little volume, which includes anatomical and ecological data, surveys the geographical distributions of earthworms.

1920

139. On the genus *Trichodrilus* and on a British species of the genus. *Annals and Magazine of Natural History* (9) **6**: 227–239.

Trichodrilus icenorum Beddard, 1920. Collected by Rev. B. Barton (England). Received from Sir Sidney F. Harmer. [1 specimen and 4 micro-slides (syntypes).]

1921

140. On a new species of the oligochaeta genus *Thamnodrilus* (Beddard) with notes on *Th. guliemi*. *Annals and Magazine of Natural History* (9) **7**: 153–161.

Thamnodrilus cognetti Beddard, 1921. Collected from South America and received from Mr R. H. Burne.*
Thamnodrilus gulieme Beddard, 1887. Collected by Mr W. L. Sclater from Guyana. Re-examination of type specimens. See **20** and **64.**

1922

141. On the genus *Notykus* (Mich.) and on a new species of that genus. *Annals and Magazine of Natural History* (9) **10**: 599–607.

Notykus Michaelsen, notes on the genus.
Notykus kilossensis Beddard, 1922. Collected by Mr Loveridge in Tanzania and received from Dr Baylis. [3 specimens (syntypes).]

1925

142. On a new species of the genus *Polytoreutus* and on a variety of the same. *Annals and Magazine of Natural History* (9) **15**: 60–64.

Polytoreutus hexatheca Beddard, 1925. Collected by Mr Loveridge in Tanzania. [4 specimens (syntypes).]

APPENDIX

Types of species described by Beddard

In this appendix the names of species described by Beddard are listed alphabetically under the genus name he used. The location of type specimens is identified (* = type not located).

Abbreviations of institutions

BMNH British Museum (Natural History), London.
MNHN Muséum National d'Histoire Naturelle, Paris.
MNHU Zoologisches Museum für Naturkunde der Humboldt Universitat, Berlin.
MZUT Museo ed Instituto di Zoologia Sistematica dell Universita di Torino.
RNHL Rijksmuseum van Natuurlijke Historie, Leiden.
USNM National Museum of Natural History, Smithsonian Institution, Washington.
WNHM Naturhistorisches Museum, Wien.
ZMUH Zoologisches Institut und Zoologisches Museum, Hamburg.

Species	Institution	Item No.
Acanthodrilus africanus, 1897	BMNH	**103**
A. albus, 1895	ZMUH	**96, 101**
A. annectens, 1888	BMNH	**37**
A. antarcticus 1889	BMNH	**47**
A. aquarumdulcium, 1893	*	**86**
A. arenarius, 1897	BMNH	**103**
A. arundinis, 1897	BMNH	**103**
A. bicinctus 1895	BMNH, ZMUH	**96, 101**
A. capensis, 1889	BMNH	**8**
A. carneus, 1895	BMNH, ZMUH, USNM	**96, 101** **96, 101**
A. chilensis, 1895	ZMUH, USNM	**96, 101**
A. cingulatus, 1895	ZMUH, USNM	**96, 101**
A. corralensis, 1895	BMNH, ZMUH	**96, 101**
A. dalei, 1889	BMNH	**50**
A. decipiens, 1895	ZMUH, USNM	**96, 101**
A. dissimilis, 1885	BMNH	**7**
A. excavatus, 1897	BMNH, ZMUH	**103**
A. falcatus. 1897	BMNH	**103**
A. falclandicus 1893	BMNH	**86**
A. layardi, 1886	BMNH	**13**
A. lucifuga. 1897	BMNH	**103**
A. macquariensis. 1896	BMNH	**100**
A. magellanicus, 1895	BMNH, ZMUH	**96, 101**
A. minutus, 1895	BMNH, ZMUH, USNM	**96, 101**
A. multiporus, 1885	BMNH	**7**
A. neglectus, 1887	*	**23**
A. novaezelandicae,,1885	BMNH	**7**
A. occidentalis, 1895	ZMUH, USNM	**96, 101**
A. paludosus, 1893	BMNH	**86**
A. parkeri, 1895	BMNH	**98**
A. photodilus, 1897	BMNH	**103**
A. plumbeus, 1895	*	**98**
A. purcelli, 1897	BMNH	**103**
A. purpureus, 1895	ZMUH	**96, 101**
A. putablensis, 1895	ZMUH, USNM	**96, 101**
A. rosae	BMNH	**47, 50**
A. schmardae, 1892	WNHM	**80**
A. sclateri, 1897	BMNH	**103**
A. simulans, 1895	ZMUH, USNM	**96, 101**
A. smithii, 1893	BMNH	**86**
A. valdiviensis, 1895	BMNH	**88**
Aeolosoma headleyi, 1888	*	**32, 49, 53**
Alluroides pordagei, 1894	BMNH	**94**
A. tanganyikae, 1906	BMNH	**130**
Alma budgetti, 1903	*	**125**
Alvania millsoni, 1893	BMNH	**85**
Amyntas alexandri, 1900	BMNH	**111**
A. aringeanus, 1900	BMNH	**110**
A. biporus, 1900	BMNH	**110**
A. evansi, 1900	BMNH	**110**
A. kelantanensis, 1900	BMNH	**110**
A. malayanus, 1900	BMNH	**110**
A. minutus	BMNH	**110**
A. perichaeta, 1900	BMNH	**110**
A. polytheca, 1900	BMNH	**110**
A. pulauensis, 1900	BMNH	**110**
A. virgo, 1900	BMNH	**110**
Anteus horsti, 1892	RNHL	**80**
Benhamia austeni, 1901	BMNH	**117**
B. budgetti, 1900	BMNH	**109**
B. crassa, 1893	BMNH	**86**
B. gambiana, 1901	*	**117**
B. indica, 1896	*	**100**
B. johnstoni, 1901	BMNH	**117**
B. michaelseni, 1901	*	**117**
B. mollis, 1901	BMNH	**117**
B. moorei, 1901	BMNH	**117**

Species	Institution	Item No.
B. tanganyikae, 1902	*	**124**
B. whytei, 1893	*	**86**
Bettonia lagariensis, 1903	*	**125**
Bothrioneron americanum, 1894	ZMUH	**93**
B. iris, 1901	BMNH	**113**
Brachiomma intermedium, 1888	*	**26**
Branchiura sowerbyi, 1891	*	**66, 82**
Chloeia merguiensis, 1888	*	**26**
Cryptodrilus fletcheri, 1887	*	**22**
Deinodrilus benhami, 1888	BMNH	**37**
Deodrilus jacksoni, 1890	BMNH	**59**
Diachaeta littoralis, 1892	WNHM	**80**
D. windlei, 1890	BMNH	**29**
Dichogaster damonis, 1888	*	**38**
Eminoscolex ruwenzorii, 1907	*	**132**
Eudriloides brunneus, 1894	BMNH	**94**
E. cotterilli, 1894	*	**94**
E. durbanensis, 1893	*	**86**
Eudrilus boyeri, 1886	BMNH	**15**
E. sylcicola, 1887	BMNH	**21, 31**
Eupompe indica, 1888	*	**26**
Fridericia antarctica, 1893	*	**89**
Gordiodrilus ditheca, 1892	*	**81**
G. dominicensis, 1892	BMNH	**81**
G. elegans, 1892	BMNH	**81**
G. papillatus 1901	*	**116**
G. robustus, 1892	BMNH	**81**
G. tenuis, 1892	BMNH	**81**
G. zanzibaricus, 1894	BMNH	**94**
Heliodrilus lagosensis, 1891	BMNH	**71**
Henlea lefroyi, 1905	*	**129**
Hesperodrilus albus, 1894	BMNH	**93, 101**
H. branchiatus, 1894	BMNH	**91,93 101**
H. niger, 1894	BMNH	**93, 101**
H. pellucidus, 1894	BMNH	**93, 101**
Hyperiodrilus africanus, 1891	BMNH	**61, 71**
Ilyogenia africana, 1893	*	**86**
Iridodrilus roseus, 1897	BMNH	**103**
Kerria halophila, 1892	*	**78**
K. rosae, 1895	BMNH, ZMUH	**96, 101**
K. saltensis, 1895	BMNH, ZMUH	**96, 101**
Libyodrilus violaceus, 1891	BMNH	**69, 72**
Metschaina tanganyikae, 1906	BMNH	**129**
Microchaeta rappii, 1886	BMNH	**14, 15**
M. colletti, 1907	*	**131**
M. zuluensis, 1907	*	**131**
Microdrilus saliens, 1893	BMNH	**86**
Microscolex algeriensis, 1892	BMNH	**76**
M. corralensis, 1895	ZMUH	**96, 101**
M. diversicolor, 1895	BMNH, MNHU, ZMUH	**96, 101**
M. gracilis, 1895	BMNH, ZMUH	**96, 101**
M. griseus, 1895	BMNH, MNHU, MZUT, ZMHU	**96, 101**
M. longiseta, 1895	BMNH, MZUT, ZMUH	**96, 101**
M. michaelseni, 1895	BMNH, MMHN, RNHL, USNM, ZMUH	**96, 101**
M. monticola, 1895	BMNH	**98**
M. novazelandiae, 1893	BMNH	**89**
M. papillosa, 1895	BMNH, ZMUH, MNHN	**96, 101**
M. poultoni, 1892	*	**76**
M. robustus, 1895	BMNH, ZMUH	**96, 101**
Millsonia nigra, 1894	BMNH	**92**
M. rubens, 1894	BMNH	**92**
Moniligaster bahamensis, 1893	*	**86**
M. barwelli, 1886	BMNH	**73**
M. viridis, 1895	BMNH	**98**
Nannodrilus africanus, 1894	BMNH	**92**
Neumanniella ruwenzorii, 1907	*	**132**
Neodrilus monocystis, 1887	BMNH	**23, 47**
Notykus kilossensis, 1922	BMNH	**141**
Ocnerodrilus (Ilyogenia) cunningtoni, 1906	BMNH	**130**
O. eiseni, 1891	BMNH	**75**
Octochaetus beatrix, 1902	BMNH	**124**
O. huttoni, 1893	BMNH	**86**
O. thomasi, 1892	BMNH	**86**
Pareudrilus stagnalis, 1894	BMNH	**94**
Pelodrilus violaceus, 1891	BMNH	**74**
Perichaeta acystis, 1895 (= *P. biserialis:* Beddard, 1890, *nec* Perrier)	BMNH	**56, 98**
P. armata, 1883	BMNH	**42**
P. barbadensis, 1872	BMNH	**77**
P. bermudensis, 1892	BMNH	**77**
P. ceylonica, 1886	BMNH	**18**
P. dyeri, 1892	BMNH	**77, 98**
P. esafatae, 1899	*	**106**
P. everetti, 1895	BMNH	**97**
P. forbesi, 1890	BMNH	**52, 56**
P. hesperidum, 1892	BMNH	**77**

Species	Institution	Item No.
P. horsti, 1886	BMNH	**14**
P. insulae, 1896	BMNH	**100**
P. intermedia, 1889	BMNH	**47, 50**
P. kinabaluensis, 1895	*	**97**
P. masatakae, 1892	BMNH	**83, 84**
P. mauritiana, 1892	BMNH	**76, 77**
P. merabahensis, 1895	BMNH, ZMUH	**96, 97**
P. molokaiensis, 1896	*	**100**
P. morrisi, 1892	BMNH	**77**
Perichaeta newcombei, 1887	BMNH	**23**
P. nipponica, 1892	BMNH	**84**
P. novaezelandiae, 1888 n.n.	*	**42**
P. pacifica, 1899	*	**106**
P. padasensis, 1895	BMNH	**97**
P. papillata, 1895	BMNH	**97**
P. perkinsi, 1896	*	**100**
P. rokugo, 1892	BMNH	**84**
P. sanctijacobi, 1895	ZMUH	**96**
P. sandvicensis, 1896	BMNH	**100**
P. sarawacensis, 1895	BMNH	**97**
P. sinensis, 1892	*	**77**
P. solomonis	*	**106**
P. taprobanae, 1892	BMNH	**77**
P. tokioensis, 1892	BMNH	**84**
P. trinitatis, 1896	BMNH	**100**
P. trityphla, 1896	BMNH	**100**
P. upoluensis, 1887	BMNH	**23, 106**
P. vaillanti, 1890	BMNH	**56**
P. violacea, 1895	BMNH	**98**
P. vitiensis, 1892	WNHM	**80**
Perionyx intermedius, 1893	*	**86**
P. macintoshii, 1883	BMNH	**86**
Pheretima albobrunnea, 1912	*	**137**
P. americanorum, 1912	*	**137**
P. benguetensis, 1912	*	**137**
P. decipiens, 1912	*	**137**
P. incerta, 1912	*	**137**
P. monticola, 1912	*	**137**
P. orientalis, 1912	*	**137**
P. pauaiensis, 1912	*	**137**
P. sodalis, 1912	*	**137**
Phreatothrix cantabrigiensis, 1908	BMNH	**134**
Phreodrilus subterraneus, 1891	BMNH	**74**
Phreoryctes smithii, 1888	BMNH	**44, 47, 60**
Pleurochaeta moseleyi, 1881	*	**1, 2**
Polytoreutus bettonianus, 1902	BMNH	**123**
P. finni, 1894	BMNH	**94**
P. granti, 1901	*	**132**
P. gregorianus, 1895	BMNH	**98, 114**
P. hexatheca, 1925	BMNH	**142**
P. hindei, 1901	BMNH	**116**
Polytoreutus kenyaeensis, 1902	BMNH	**123**
P. kilindiensis, 1894	BMNH	**94**
P. magilensis, 1893	BMNH	**85**
P. montiskenyae, 1902	BMNH	**123**
P. ruwenzorii, 1907	*	**132, 135**
P. violaceus, 1894	BMNH	**94**
Pontodrilus bermudensis, 1891	*	**70**
P. crosslandi, 1905	BMNH	**127**
P. hesperidum, 1893	*	**89**
P. laccadivensis, 1903	*	**126**
Pontoscolex hawaiensis, 1895	*	**98, 100**
Pristina proboscidea, 1895	ZMUH	**98, 101**
Pygmaeodrilus lacuum, 1893	BMNH	**88**
Rhododrilus minutus, 1889	BMNH	**47**
Siphonogaster millsoni, 1891	BMNH	**85**
Stuhlmannia inermis, 1906	BMNH	**129**
S. michaelseni, 1903	BMNH	**125**
Thamnodrilus cognettii, 1921	*	**140**
T. guliemi, 1887	BMNH	**20, 64 140**
Trichochaeta barbadensis, 1893	*	**86**
T. hesperidum, 1893	BMNH	**85**
Trichodrilus icenorum, 1920	BMNH	**139**
Typhoeus gammii, 1888	BMNH	**37**
T. incommodus, 1901	*	**114**
T. nicholsoni, 1901	*	**114**
T. orientalis, 1883	*	**3**
Urochaeta australiensis, 1891	BMNH	**64**

INDEX OF SCIENTIFIC NAMES

Current valid names are printed in roman type, family names in small capital letters; names placed in synonymy are printed in italic type. The numerals indicate the item numbers in the bibliography not page numbers.

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