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museum für naturkunde

A catalogue of the scutigeromorph centipedes in the Museum für Naturkunde, Berlin

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Abstract

An annotated catalogue of the type and non-type scutigeromorph centipedes (Chilopoda: Scutigeromorpha) held in the Museum für Naturkunde Berlin is presented. The collection includes material from throughout the world, with a focus on former German colonies. Notes on collectors and localities are provided where appropriate. Type material for 42 Recent species or subspecies is present; all described in the early 20th century by Karl Verhoeff. However, only seven of these names remain valid with the other thirty-five currently regarded as junior synonyms. The collection in its entirety includes material from nineteen currently valid species, making up about 20% of the known world fauna. The type of a fossil species in Eocene Baltic amber is also listed for completeness.

Introduction

Scutigeromorphs (Chilopoda: Scutigeromorpha) – colloquially known as house centipedes – are distinctive, long-legged myriapods widely perceived as the earliest branching clade within the Chilopoda. In fact they are one of the most ancient terrestrial arthropod groups, with fossils known from the late Silurian (Shear et al. 1998). Today they are mostly found throughout warmer regions of the world, although *Scutigera coleoptrata* Linnaeus, 1758 can show a synanthropic distribution into colder regions. Approximately 95 valid species are currently recognized (Giribet and Edgecombe 2013), conventionally divided into three familes: the Neotropical–Afrotropical Pselliodidae, the Afro–Malagasy Scutigerinidae and the largely cosmopolitan Scutigeridae; the latter containing the bulk of the species. Phylogenetic relationships have been investigated by Edgecombe and Giribet (2006, 2009) and Giribet and Edgecombe (2013). Scutigeromorph centipedes tend to be fast-moving animals, their long legs strongly adapted for running after prey. General notes on their biology can be found in reviews such as Acosta (2003) and Edgecombe (2011), and references therein.

Scutigeromorph types in the Museum für Naturkunde, Berlin (MfN) were initially listed by Moritz and Fischer (1979), as part of their wider catalogue of centipede type material which recognized 319 types and 709 species across Chilopoda as a whole. The present work draws extensively on their efforts. Today, we have additional online resources – in particular the excellent *ChiloBase 2.0* (Bonato et al. 2016) – which enable us to check the taxonomic status of both our type and non-type material. In what we hope will be a series of papers on the major centipede clades, this permits us to offer a full catalogue of the entire scutigeromorph collection with species placed according to the latest taxonomic opinions. Historical resources and online encyclopedias also mean we are now in a position to provide additional data and clarifications about type localities and historical notes on

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individual collectors which were not available to Moritz and Fischer.

The Berlin collection is unusual in that all 42 Recent scutigeromorph type series stem from a single worker, Karl [Carl] Verhoeff, who described them in seven publications between 1904 and 1939. Among myriapodologists it is widely recognized that Verhoeff was a 'splitter', emphasizing minor differences between specimens and using these to define a substantial number of species and subspecies. As a consequence, an unusually large percentage (83%: 35 out of 42) of our scutigeromorph types have since been reinterpreted as junior synonyms and only seven names currently remain valid: *Thereuopoda chinensis* Verhoeff, 1905, *Parascutigera dahli* Verhoeff, 1904, *Ballonema gracilipes* Verhoeff, 1904, *Podothereua insularum* Verhoeff, 1905; *Parascutigera noduligera pahangiensis* Verhoeff, 1937, *Thereuopodina tenuicornis* Verhoeff, 1905 and *Thereuonema turkestana* Verhoeff, 1905. In fairness, Verhoeff was not alone in creating synonyms for scutigeromorphs. A cursory glance at the synonymy lists for the more common and widespread species (Bonato et al. 2016) often reveals more than a dozen names proposed (unnecessarily) for these distinctive animals.

One could argue that this high level of synonymy weakens the overall significance of the Berlin collection, which at the present time (Table 1) consists of nineteen valid species (seven as types); or about 20% of the world fauna. We would argue that in fact this is an example of a thoroughly revised collection. Excessive numbers of unrecognized synonyms give a misleading picture of biodiversity, both at a local and at a global level. Thanks to the efforts of Muralewitsch (1910), Würmli (1975a, b, 1977, 1978, 1979, 2005), Stoev and Geoffroy (2004) and Giribet and Edgecombe (2013) most of these problems have hopefully already been addressed for the scutigeromorphs in Berlin, leaving us with a small but well-resolved collection which we hope will be valuable for studies of systematics and/or biogeography. In this context, we offer the following data as a resource to future specialists. A record of a fossil scutigeromorph type in the palaeontological collections of the Berlin Museum is also listed for completeness.

Methods

Most specimens have been assigned an individual repository number using our traditional acronym ZMB (for Zoologisches Museum Berlin). The existing Moritz and Fischer (1979) type data was cross-referenced with the original catalogue books. We also checked that the specimens recorded in 1979 are still present in the collection; only one slide was noted as being absent (see below). For the non-types, data were drawn directly from the original specimen labels and/or catalogue entries. All species names were checked against *ChiloBase 2.0* (Bonato et al. 2016). Note that type series are stored separately and alphabetically under their original species name; the current name is also provided below (see also Table 1). For non-types, jars were relabeled where necessary to reflect changes in nomenclature, but the original name under which the specimen(s) were catalogued is noted for completeness below. Localities are given in quotation marks in their original form as per the label, but were corrected in square brackets (as far as possible) to their current place name and/or country. Additional historical data on collectors were gathered from various museum internal and external resources. Citations are given in the 'Remarks' sections of individual species where appropriate below. Specimens can be presumed to be in the alcohol collection unless otherwise stated. In many cases Verhoeff made additional slide preparations and his slide numbers are included for reference as well.

Catalogue of type material

acinacifera Verhoeff, 1936

Thereuonema acinacifera Verhoeff, 1936

Type material. Syntype, 1♀, ZMB 13173; "Palastina"; collector and date not recorded.

Present name. Junior synonym of *Thereuonema microstoma* (Meinert, 1886); synonymized by Würmli (1975a).

aegyptica Verhoeff, 1905

Thereuonema syriaca var. *aegyptica* Verhoeff, 1905a

Type material. Paratypes, 1♂, 1♀, ZMB 3892 / 3892a–h (Verhoeff slide nrs 1608, 2958–2964); "Ägypten" [Egypt]; leg. Hemprich & Ehrenberg.

Present name. Junior synonym of *Thereuonema microstoma* (Meinert, 1886); synonymized by Würmli (1975a).

Remarks. The collectors were the famous explorers Friedrich Wilhelm Hemprich (1796–1825) and Christian Gottfried Ehrenberg (1795–1876), who were active in the Middle East from 1820 until Hemprich's death in 1825. Note that the alcohol type material of this subspecies is currently stored in the '*syriaca*' jar.

amokiana Verhoeff, 1904

Thereuonema (*Thereuopoda*) *amokiana* Verhoeff, 1904

Type material. Syntypes, 3♂, 4♀, 2 juv., ZMB 1399 / 1399a–m (Verhoeff slide nrs 2984–2995); "Tengger Gebirge, Ost Java" [Tengger massif, East Java, Indonesia]; leg. Fruhstorfer.

Present name. Junior synonym of *Thereuopoda longicornis* (Fabricius, 1793); synonymized by Würmli (1979).

Remarks. The collector was the explorer Hans Fruhstorfer (1866–1922), also a noted entomologist specializing on butterflies, who was active in Java from 1890–1893.

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Table 1. Systematic overview of the 19 currently valid species in the ZMB scutigeromorph centipede collection. * indicates a type, either as a valid species or a junior synonym. Species in square brackets are only present by virtue of their junior synonyms and are not found in the non-type collection.

Scutigeromorpha Pocock, 1895
- Pselliodidae Chamberlin, 1955
  - *Sphendononema* Verhoeff, 1904
    - 1. *Sphendononema guildingii* (Newport, 1845)
      - = *Pselliophora pulchritaris* Verhoeff, 1904*
    - 2. *Sphendononema rugosa* (Newport, 1844)
      - = *Pselliophora annuligera* Verhoeff, 1904*
      - = *Sphendononema annulipes* Verhoeff, 1905*
      - = *Sphendononema camerunense* Verhoeff, 1904*
      - = *Pselliophora maculata* Verhoeff, 1905*
      - = *Pselliophora marmorata* Verhoeff, 1905*
      - = *Pselliophora massaica* Verhoeff, 1905*
      - = *Pselliophora vagans* Verhoeff, 1905*

Scutigerinidae Attems, 1926
- *Scutigerina* Silvestri, 1904
  - 3. *Suctigerina weberi* Silvestri, 1904

Scutigeridae Leach, 1814
- *Allothereua* Verhoeff, 1905
  - 4. *Allothereua maculata* (Newport, 1844)
- *Ballonema* Verhoeff, 1904
  - 5. *Ballonema gracilipes* Verhoeff, 1904*
- *Lassophora* Verhoeff, 1905
  - 6. [*Lassophora nossibei* (de Saussure & Zehntner, 1902)]
    - = *Lassophora madagascariensis* Verhoeff, 1905*
- *Parascutigera* Verhoeff, 1904
  - 7. *Parascutigera dahli* Verhoeff, 1904*
  - 8. *Parascutigera noduligera pahangiensis* Verhoeff, 1937*
- *Podothereua* Verhoeff, 1905
  - 9. *Podothereua insularum* Verhoeff, 1905*
- *Scutigera* Lamark, 1801
  - 10. *Scutigera coleoptrata* (Linnaeus, 1758)
    - = *Scutigera asiaeminoris* Verhoeff, 1905*
    - = *Scutigera coleoptera graeca* Verhoeff, 1905*
    - = *Scutigera coleoptera insularum* Verhoeff, 1905*
    - = *Scutigera coleoptera natalensis* Verhoeff, 1905*
    - = *Scutigera mohamedanica* Verhoeff, 1936*
    - = *Scutigera muscivora* Verhoeff, 1905*
    - = *Scutigera rubrovittata* Verhoeff, 1905*
  - 11. *Scutigera rubrilineata* (Newport, 1844)
- *Tachythereua* Verhoeff, 1905
  - 12. [*Tachythereua hispanica* (Meinert, 1886)]
    - = *Tachythereua maroccana* Verhoeff, 1905*
- *Thereuonema* Verhoeff, 1904
  - 13. [*Thereuonema microstoma* (Meinert, 1886)]
    - = *Thereuonema acinacifera* Verhoeff, 1936*
    - = *Thereuonema syriaca* Verhoeff, 1905*
    - = *Thereuonema syriaca* var. *aegyptica* Verhoeff, 1905
  - 14. *Thereuonema tuberculata* (Wood, 1862)
    - = *Theuropoda annulata* Verhoeff, 1905*
    - = *Thereuonema annulata spinigera* var. *spingera* Verhoeff, 1905*
    - = *Therenonema dilatationis* Verhoeff, 1936*
    - = *Thereuonema hilgendorfi* Verhoeff, 1905*
    - = *Therenonema hilgendorfi* var. *koreana* Verhoeff, 1936*
    - = *Theuruonema mandschuria* Verhoeff, 1936*
  - 15. *Thereuonema turkestana* Verhoeff, 1905*

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Thereuopoda Verhoeff, 1904
16. *Thereuopoda clunifera* (Wood, 1862)
= *Thereuopoda ferox* Verhoeff, 1936*
17. *Thereuopoda chinensis* Verhoeff, 1905*
18. *Thereuopoda longicornis* (Fabricius, 1793)
= *Thereuonema* (*Thereuopoda*) *amokiana* Verhoeff, 1904*
= *Theuropoda decipiens* Verhoeff, 1905*
= *Theuropoda decipiens cavernicola* Verhoeff, 1937*
= *Thereuopoda flagellifera* Verhoeff, 1905*
= *Thereuopoda flagellifera rangoonensis* Verhoeff, 1939
= *Thereuopoda multidentata* Verhoeff, 1905*
= *Theuropoda nana* Verhoeff, 1905*
= *Theuropoda viridescens* Verhoeff, 1937*
Thereuopodina Verhoeff, 1905
19. *Thereuopodina tenuicornis* Verhoeff, 1905*

Figure 1. Alcohol material of scutigeromorph centipedes in the Museum für Naturkunde Berlin. **a.** Overview of the type collection on the shelves. **b.** Example of a jar containing type material, *Theuropoda decipiens cavernicola* Verhoeff, 1937 from Malaysia – a junior synonym of *Thereuopoda longicornis* (Fabricius, 1793) – with the historical external label and red ring indicating type material. **c.** A syntype of the same species, now removed from the jar, with the historical internal label. Note that some legs have become disarticulated as happens commonly with these centipedes.

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Figure 2. Examples of microscope slides from the Karl Verhoeff collection bearing dissected parts of the anatomy. ZMB 3840a–k, the complete type series of slides belonging to *Parascutigera dahli* Verhoeff, 1904 collected by Friederich Dahl from Ralum in Papua New Guinea; Verhoeff slide numbers 2824–2834. Type material in the slide collection is marked with red lines on the labels and usually complements alcohol material.

annulata Verhoeff, 1905

Theuropoda annulata Verhoeff, 1905a

Type material. Syntypes, 1♂, 1♀, ZMB 3899 / 3899a–e (Verhoeff slide nrs 1610, 2877–2880); "Tsingtau" [Qingdao, Shandong Province, China]; leg. Glaue.

Present name. Junior synonym of *Thereuonema tuberculata* (Wood, 1862); synonymized by Würmli (1975a).

Remarks. "Tsingtau" was a German colonial possession from 1898–1914. The collector may have been a naval officer, Dr H. Glaue, who was a student of the zoologist H. Korschelt from Kiel and who subsequently tried to establish a biological station in Tsingtau in 1912.

annuligera Verhoeff, 1904

Pselliophora annuligera Verhoeff, 1904

Type material. Syntypes, 2♂, 1♀, ZMB 3837 / 3837a–r (Verhoeff slide nrs 2568–2583); "Tanagebiet, D. O. Afrika" [Tanzania or Kenya?]; leg. Denhardt, 23.VIII.1895.

Present name. Junior synonym of *Sphendononema rugosa* (Newport, 1844); synonymized by Würmli (2005).

Remarks. The collector was probably Gustav Denhardt (1856–1917); one of a pair of brothers who undertook several expeditions to east Africa and were active in promoting the exploration and use of the Tana river. Gustav was still in the area in 1895, his brother having returned to Germany. Note that the Tana region may refer to the Tana river which today lies within the political boundaries of Kenya.

annulipes Verhoeff, 1905

Sphendononema annulipes Verhoeff, 1905a

Type material. Holotype, ♂, ZMB 3895 / 3895a–g (Verhoeff slide nrs 2835–2841); "Joh Albrechtshöhe, Kamerun" [Government Station Johann-Albrechts-Höhe, Cameroon]; leg. Conradt, 04.VIII.1896.

Present name. Junior synonym of *Sphendononema rugosa* (Newport, 1844); synonymized by Würmli (2005).

Remarks. The collector was Leopold Conradt (dates uncertain) who established the Johann-Albrechts-Höhe station in Cameroon during its time as a German colonial possession.

asiaeminoris Verhoeff, 1905

Scutigera asiaeminoris Verhoeff, 1905a

Type material. Syntypes, 1♂, 2♀, 3890 / 3890a–g (Verhoeff slide nrs 2690–2696); "Taurus, Cilicien" [Taurus Mountains, Çukurova, Turkey]; leg. Holtz 1896.

Present name. Junior synonym of *Scutigera coleoptrata* (Linnaeus, 1758); synonymized by Muralewitsch (1910).

camerunense Verhoeff, 1904

Sphendononema camerunense Verhoeff, 1904

Type material. Holotype, ♂, ZMB 3839 / 3839a–i (Verhoeff slide nrs 2842–2850); "Misahöhe Kamerun" [Missahoe, Togo]; leg. Baumann.

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Present name. Junior synonym of *Sphendononema rugosa* (Newport, 1844); synonymized by Würmli (2005).

Remarks. The collector was Ernst Baumann (1871–1895) who studied natural history before taking up a post at Missahoe in 1893 through the Colonial Department of the German Foreign Office. He collected zoological, botanical and ethnological material, but contracted malaria and died on his return to Germany. The type locality is a former German 'Kolonialstation' and now falls within the political boundaries of Togo. Note that slide number 2850 could not be found as of 2016.

cavernicola Verhoeff, 1937

Theuropoda decipiens cavernicola Verhoeff, 1937

Type material. Syntype, 1♀, ZMB 13178; "Malacca" [Malaysia]; collector and date not recorded.

Present name. Junior synonym of *Thereuopoda longicornis* (Fabricius, 1793); synonymized by Würmli (1979).

chinensis Verhoeff, 1905

Theuropoda (*Microthereua*) *chinensis* Verhoeff, 1905a

Type material. Holotype, ♀, ZMB 3898 / 3898a–h (Verhoeff slide nrs 2999–3006); "Macao, Südchina" [Macao Special Administrative Region of the People's Republic of China]; leg. Lehmann, 08. XI.1898.

Present name. *Thereuopoda chinensis* Verhoeff, 1905.

dahli Verhoeff, 1904

Parascutigera dahli Verhoeff, 1904

Type material. Holotype, ♀, ZMB 3840 / 3840a–k (Verhoeff slide nrs 2824–2834); "Ralum, Bismark-Archipel" [Bismarck Archipelago, Papua New Guinea]; leg. F. Dahl.

Present name. *Parascutigera dahli* Verhoeff, 1904.

Remarks. The collector was Friedrich Dahl (1856–1929), a former curator of arachnids in Berlin who collected extensively in the Bismark Archipelago in 1895–1896 as part of the 'Ralum project' before taking up his post in the Berlin museum.

decipiens Verhoeff, 1905

Theuropoda decipiens Verhoeff, 1905a

Type material. Holotype, ♂, ZMB 2015 / 2015a–f (Verhoeff slide nrs 2030–3035); "Pongoor, Vorderindien" [Pangkor Island, Malaysia?]; collector and date not recorded.

Present name. Junior synonym of *Thereuopoda longicornis* (Fabricius, 1793); synonymized by Würmli (1979).

Remarks. There is historical to reference to a "Pongoor bei Malakka" which implies a type locality in the Malacca State of Malaysia. It may well be an older name for Pangkor Island, whereby Fedor Jagor (1816–1900) is known to have collected material in "Pongoor" for the Berlin museum in 1873–1876 and again from 1890–1893.

dilatationis Verhoeff, 1936

Thereuonema dilatationis Verhoeff, 1936

Type material. Syntype, 1♂, ZMB 13174; "Mandschurei" ['Manchuria', northeast China]; collector and date not recorded.

Present name. Junior synonym of *Thereuonema tuberculata* (Wood, 1862); synonymized by Würmli (1975a).

ferox Verhoeff, 1936

Thereuopoda ferox Verhoeff, 1936

Type material. Holotype. ♀, ZMB 13179; "Japan"; collector and date not recorded.

Present name. Junior synonym of *Thereuopoda clunifera* (Wood, 1862); synonymized by Würmli (1979).

flagellifera Verhoeff, 1905

Thereuopoda flagellifera Verhoeff, 1905a

Type material. Holotype, ♂, ZMB 3896 / 3896a–i (Verhoeff slide nrs 3036–3044); "Palgoda Lake, Ceylon" [Sri Lanka]; collector and date not recorded.

Present name. Junior synonym of *Thereuopoda longicornis* (Fabricius, 1793); synonymised by Würmli (1979).

Remarks. The type locality could be a misrepresentation of Bolgoda Lake, south of the capital Colombo, the largest natural lake in Sri Lanka.

gracilipes Verhoeff, 1904

Ballomena gracilipes Verhoeff, 1904

Type material. Syntypes, 3♂, ZMB 1426 / 1426a–m (Verhoeff slide nrs 1716–1727); "Neu Guinea, Astrolabe-Bay" [Astrolabe Bay, Madang Province, Papua New Guinea]; leg. R. Rohde.

Present name. *Ballonema gracilipes* Verhoeff, 1904

Remarks. The collector could be Richard Rohde (dates uncertain), but a detailed biography is lacking.

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***graeca* Verhoeff, 1905**

Scutigera coleoptera graeca Verhoeff, 1905a

Type material. Syntype, 1♀, ZMB 2414 / 2414a–e (Verhoeff slide nrs 2771–2775); "Mykonos, Cykladen" [Mykonos, Cyclades, Greece]; leg. v. Oertzen IV.1887.

Present name. Junior synonym of *Scutigera coleoptrata* Linnaeus, 1758; synonymized by Muralewitsch (1910).

Remarks. The collector was Eberhard von Oertzen (1856–1908) who was a noted amateur specialist on beetles and collected extensively in the eastern Mediterranean (including the Greek islands) both in 1884–1885 and again in 1887. The present type material obviously stems from his second expedition. Further biographical notes can be found in Vrenozi and Dunlop (2013).

***hilgendorfi* Verhoeff, 1905**

Thereuonema hilgendorfi Verhoeff, 1905a

Type material. Syntype, 1♀, ZMB 1127 / 1127a (Verhoeff slide nr 2884); Yokohama [Japan]; leg. Martens. Syntypes 1381 / 1381a–f (Verhoeff slide nrs 2886-2890, 2895); Japan; leg. Hilgendorf. Syntype, 1♀, s 3900 / 3900a (Verhoeff slide nr 2885); Tokio [Tokyo, Japan]; leg. Brauns. Syntypes 3907 / 3907a–d (Verhoeff slide nrs 2883, 2891-2893); Japan; leg. Hilgendorf. Syntype, 1♀, 3908 / 3908a–b (Verhoeff slide nrs 2904–2905); Japan; leg. Hilgendorf. Syntype, 1♂, 3909 /3909a–b (Verhoeff slide nrs 2882, 2894; Japan; leg. Hilgendorf. Syntype, 1♀, 3910 / 3910a (Verhoeff slide nr. 2881); Japan; leg. Hilgendorf. Syntypes, 3♀, ZMB, 3911 /3911a–i (Verhoeff slide nrs 1613, 2896–2903; Japan leg. Hilgendorf.

Present name. Junior synonym of *Thereuonema tuberculata* (Wood, 1862); synonymized by Würmli (1975a).

Remarks. Eduard von Martens (1831–1904) was curator of molluscs at the Berlin museum and took part in the 1860 'Thetis' [or Eulenburg] Expedition to the Far East which included a port of call at Yokohama. Franz Hilgendorf (1839–1904) was another Berlin curator (for fish and crustaceans) and a pioneer of zoological research in Japan. He was active here from 1873–1876 as a lecturer at the Imperial Medical Academy in Tokyo. Details about the third collector (Brauns) were not available.

***insularum* Verhoeff, 1905**

Podothereua insularum Verhoeff, 1905b

Type material. Syntypes; ZMB 3841–3843, 3857, 3858; "Ralum" [Bismarck Archipelago, Papua New Guinea]; leg. F. Dahl.

Present name. *Podothereua insularum* Verhoeff, 1905

Remarks. For notes on the collector see *P. dahli*. Moritz and Fischer (1979) noted that ZMB 3857 and 3858 could not be found at the time of writing but may have been the source of the Verhoeff slides numbered 2505 and 2533. There are also several additional Verhoeff slides (nrs 2505–33) also from the "Ralum" type locality. They are not explicitly marked as types, but could potentially belong to the type series.

***insularum* Verhoeff, 1905**

Scutigera coleoptera insularum Verhoeff, 1905a

Type material. Syntypes, 1♂, 1♀, ZMB 3122 / 3122a–g (Verhoeff slide nrs 2781–2787); "Insel Thera" [Santorini, Greece]; collector and date not recorded.

Present name. Junior synonym of *Scutigera coleoptrata* Linnaeus, 1758; synonymized by Muralewitsch (1910).

***koreana* Verhoeff, 1936**

Therenonema hilgendorfi var. *koreana* Verhoeff, 1936

Type material. Holotype, ♀, ZMB 13172; Korea; collector and date not recorded.

Present name. Junior synonym of *Thereuonema tuberculata* (Verhoeff, 1905); synonymized by Würmli (1975a).

***maculata* Verhoeff, 1905**

Pselliophora maculata Verhoeff, 1905a

Type material. Holotype, ZMB 3894 / 3894a–d (Verhoeff slide nrs 2584–2587); "Uluguru" [Uluguru Mountains, Tanzania]; leg. Götze.

Present name. Junior synonym of *Sphendononema rugosa* (Newport, 1844); synonymized by Würmli (2005).

Remarks. The collector could be the explorer and later governor of German East Africa [Tanzania], Gustav Adolf Graf von Götzen (1866–1910). The expedition which led to this material was probably that undertaken from 1893–1894.

***madagascariensis* Verhoeff, 1905**

Lassophora madagascariensis Verhoeff, 1905a

Type material. Holotype, ♂, ZMB 3912 / 3912a–b (Verhoeff slide nrs 2130–2131); "Zentral-Madagaskar"; leg. Hildebrandt.

Present name. Junior synonym of *Lassophora nossibei* (de Saussure & Zehntner, 1902); synonymized by Würmli (1975b). Note that Giribet and Edgecombe (2013) res-

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urrected the generic name *Lassophora* from synonymy with *Scutigera*.

Remarks. The collector was the botanist and explorer Johann Maria Hildebrandt (1847–1881) who was active in Madagascar from 1880 until his death there from fever in 1881. A precise locality for the type material is not available.

mandschuria Verhoeff, 1936

Theuruonema mandschuria Verhoeff, 1936

Type material. Syntype, 1♂, ZMB 13175; "Mandschurei" ['Manchuria', northeast China]; collector and date not recorded.

Present name. Junior synonym of *Thereuonema tuberculata* (Wood, 1862); synonymized by Würmli (1975a).

marmorata Verhoeff, 1905

Pselliophora marmorata Verhoeff, 1905a

Type material. Syntypes, 1♂, 1♀, ZMB 3838 / 3838a–l (Verhoeff slide nrs 2589–2598); "D. O. Afrika, Kilwa" [Kilwa archipelago, Tanzania]; leg. Reimer.

Present name. Junior synonym of *Sphendononema rugosa* (Newport, 1844); synonymized by Würmli (2005).

maroccana Verhoeff, 1905

Tachythereua maroccana Verhoeff, 1905b

Type material. Syntypes, 1♂, 8♀, ZMB 3866–68; Tanger [Tangier] (3866, 3877) and Casablanca (3868) [both Morocco]; leg. Quedenfeldt.

Present name. Junior synonym of *Tachythereua hispanica* (Meinert, 1886); synonymized by Stoev and Geoffroy (2004).

Remarks. The collector was the explorer and ethnologist Max Quedenfeldt (1851–1891) who was active in Morocco (and neighboring lands) and was widely regarded by contemporaries as one of the most knowledgeable people about this country. Material from Tangier suggests a specific collecting trip made in 1885.

massaica Verhoeff, 1905

Pselliophora massaica Verhoeff, 1905a

Type material. Holotype, ZMB 2528 / 2528a–c (Verhoeff slide nrs 2599–2601); "D. O. Afrika, Massaisteppe" [Tanzania]; leg. Schillings.

Present name. Junior synonym of *Sphendononema rugosa* (Newport, 1844); synonymized by Würmli (2005).

Remarks. The collector was Carl Georg Schillings (1865–1921), a big game hunter and explorer who collected in Tanzania (as German East Africa) for the Berlin Museum during several trips made between 1896 and 1903.

mohamedanica Verhoeff, 1936

Scutigera mohamedanica Verhoeff, 1936

Type material. Syntype, ♀, ZMB 13171; "Palästina"; collector and date not recorded.

Present name. Junior synonym of *Scutigera coleoptrata* (Linnaeus, 1758); synonymised by Würmli (1977).

multidentata Verhoeff, 1905

Thereuopoda multidentata Verhoeff, 1905b

Type material. Holotype, ♀, ZMB 1456 / 1456a–l (Verhoeff slide nrs 3045–3055); "Nordborneo"; leg. Pagel.

Present name. Junior synonym of *Thereuopoda longicornis* (Fabricius, 1793); synonymized by Würmli (1979).

Remarks. Pagel appears to have been a doctor who was based in northern Borneo from 1891–1901. Without further information it is difficult to fix the type locality to a country, but a northern occurrence suggests Malaysia rather than Indonesia.

muscivora Verhoeff, 1905

Scutigera muscivora Verhoeff, 1905a

Type material. Syntypes, 2 specimens, ZMB 86 / 86a–e (Verhoeff slide nrs 2812–2816); "Ungarn" [Hungary]; collector and date not recorded.

Present name. Junior synonym of *Scutigera coleoptrata* (Linnaeus, 1758); synonymized by Muralewitsch (1910).

Remarks. The non-slide material is currently held in the dry collection.

nana Verhoeff, 1905

Theuropoda nana Verhoeff, 1905a

Type material. Syntype, 1♂ juv., ZMB 1099 / 1099a–c (Verhoeff slide nrs 3058, 3061–3062); "Barabei, Borneo" [Barabai, Borneo, Indonesia]; leg. Grabowsky. ZMB 1100 / 1100a–e (Verhoeff slide nrs 3056, 3057, 3059-3010, 3063); "Felang, Borneo" [probably Pelang, Borneo, Indonesia]; leg. Grabowsky.

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Present name. Junior synonym of *Thereuopoda longicornis* (Fabricius, 1793); synonymized by Würmli (1979).

Remarks. The collector was the ornithologist Friedrich [Fritz] Grabowsky (1857–1929), who collected in Borneo and other localities in Southeast Asia in 1881–1882 and later became director of the zoological gardens of Breslau, now Wrocław in Poland.

natalensis Verhoeff (1905)

Scutigera coleoptera natalensis Verhoeff, 1905a

Type material. Holotype, ♂, ZMB 3849 / 3849a–m (Verhoeff slide nrs 2791–2802); "Port Natal" [Durban, South Africa]; leg. Rabl-Rückhard.

Present name. Junior synonym of *Scutigera coleoptrata* Linnaeus, 1758; synonymized by Muralewitsch (1910).

Remarks. The collector could be the Berlin-based physician and medical staff officer ('Oberstabsarzt'), Hermann Rabl-Rückhard (1839–1905), although it's not clear from available biographical details whether he visited South Africa. Moritz and Fischer (1979) noted that the type material was originally numbered ZMB 751, but was inadvertently re-registered as number 3849 after being loaned to Verhoeff.

pahangiensis Verhoeff, 1937

Parascutigera noduligera pahangiensis Verhoeff, 1937

Type material. Syntypes, 1♂, 1♀, ZMB 13170; "Malacca, (Museum Singapore)" [Malaysia]; collector and date not recorded.

Present name. *Parascutigera noduligera pahangiensis* Verhoeff, 1937.

pulchritarsis Verhoeff, 1904

Pselliophora pulchritarsis Verhoeff, 1904

Type material. Holotype, ♀, ZMB 1455 / 1455a–p (Verhoeff slide nrs 2602–2616); Haiti; collector and date not recorded.

Present name. Junior synonym of *Sphendononema guildingii* (Newport, 1845); synonymized by Würmli (1978).

Remarks. At the time of writing this species is erroreously databased in Chilobase as "*pulchritaris*". The original spelling in Verhoeff's (1904: 259) paper in clearly "*pulchritarsis*".

rangoonensis Verhoeff, 1939

Thereuopoda flagellifera rangoonensis Verhoeff, 1939

Type material. Syntype, 1♂, ZMB 13703a–e (Verhoeff slide nrs 4021, 4032–4034); "Rangoon" [Yangon, Myanmar]; collector and date not recorded.

Present name. Junior synonym of *Thereuopoda longicornis* (Fabricius, 1793); synonymized by Würmli (1979).

Remarks. Type material consists of slide-mounted material only.

rubrovittata Verhoeff, 1905

Scutigera rubrovittata Verhoeff, 1905a

Type material. Holotype, ♂, ZMB 1233 / 1233a–e (Verhoeff slide nrs 2817–2821); "Keos, Cycladen" [Kea, Cyclades, Greece]; leg. v. Oertzen, IV.1887.

Present name. Junior synonym of *Scutigera coleoptrata* (Linnaeus, 1758); synonymized by Muralewitsch (1910).

Remarks. For notes on the collector see *S. coleoptera graeca*.

spinigera Verhoeff, 1905

Thereuonema annulata spinigera var. *spinigera* Verhoeff, 1905c

Type material. Syntype 1♂, ZMB 1124 / 1124a–b (Verhoeff slide nrs 2917, 2938); Tokio [Tokyo, Japan]; leg. Brauns. Syntype, 1♂, ZMB 1443, 1443a–k (Verhoeff slide nrs 2932–2936, 2942–2945); Japan; leg. Hilgendorf. Syntype 1♀, ZMB 3901 / 3901a–b (Verhoeff slide nrs 2916, 2951); Tokio [Tokyo, Japan]; leg. Brauns. Syntype, 1♂, 3902 / 3902a–c (Verhoeff slide nrs 2926, 2931, 2937); Japan; leg. Hilgendorf. Syntype, 1 juv. ♀, ZMB 3903 / 3903a–e (Verhoeff slide nrs 2940–2941, 2946–2948); Japan; leg. Hilgendorf. Syntypes 2♀, ZMB 3904 / 3904a–g (Verhoeff slide nrs 2918–2923);Japan; leg. Hilgendorf. Syntype, 1♀, ZMB 3905 /3905a (Verhoeff slide nr. 2925); Japan; leg. Hilgendorf. Syntype 1♀, ZMB 3960 /3906a–d (Verhoeff slide nrs 2927–2930; Japan; leg. Hilgendorf.

Present name. Junior synonym of *Thereuonema tuberculata* (Wood, 1862); synonymized by Würmli (1975a).

Remarks. For notes on the collector Hilgendorf see *T. hilgendorfi*.

syriaca Verhoeff, 1905

Thereuonema syriaca Verhoeff, 1905a

Type specimen. Holotype, ♂, ZMB 3891 / 3891a–g (Verhoeff slide nrs 2952–2957); "Nordsyrien, Amanus

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Gebirge 500 m, Sandschirli [*sic*]" [Sam'al, Turkey]; leg. Luschan 1895.

Present name. Junior synonym of *Thereuonema microstoma* (Meinert, 1886); synonymized by Stoev and Geoffery (2004).

Remarks. The collector was the anthropologist and archaeologist Felix von Luschan (1854–1924) who undertook excavations in Sam'al [formerly Sendschirli] which now lies in the Gaziantep Province of Turkey, close to the modern Syrian border.

tenuicornis Verhoeff, 1905

Thereuopodina tenuicornis Verhoeff, 1905a

Type material. Holotype, ♂, ZMB 1452 / 1452a–e (Verhoeff slide nrs 3077–3078, 3080–3082); "Südceylon, Panachnoll" [southern Sri Lanka]; V.1889.

Present name. *Thereuopodina tenuicornis* Verhoeff, 1905.

Remarks. It is not immediately clear whether "Panachnoll" refers to the type locality or, perhaps, to the collector. We were unable to match this word, neither to a modern place name in Sri Lanka, nor to an individual.

turkestana Verhoeff, 1905

Thereuonema turkestana Verhoeff, 1905a

Type material. Holotype, ♀, ZMB 87 / 87 a–c (Verhoeff slide nrs 1615, 2982–2983); "Buchara" [Bukhara, Uzbekistan]; leg. Eversmann.

Present name. *Thereuonema turkestana* Verhoeff, 1905.

Remarks. The collector was Eduard Friedrich Eversmann (1794–1860) who visited Bukhara in 1820 and became a professor of natural history at the University of Kazan. Eversmann sent specimens to Heinrich Lichtenstein, the then director of the Berlin Museum which had recently been founded (in 1810). Thus ZMB 87, collected only ten years later, is one of the oldest centipedes in the collection. The non-slide material is currently held in the dry collection.

vagans Verhoeff, 1905

Pselliophora vagans Verhoeff, 1905a

Type material. Holotype, ♂, ZMB 3893 / 3893a–e (Verhoeff slide nrs 2617–2621); "Chinchoxo" [Cabinda Province, Angola]; leg. Falkenstein, VI.1876.

Present name. Junior synonym of *Sphendononema rugosa* (Newport, 1844); synonymized by Würmli (2005), see also Stoev and Geoffrey (2004).

Remarks. The collector was Julius Falkenstein (1842–1917), a military doctor who took part in the 'Loango Expedition' of 1873–1876 to the Congo river delta under Paul Güßfeldt. "Chinchoxo", sometimes spelled Tschintschotscho, was a station on this expedition. The site of Chinchoxo is a few km north of the modern locality of Lândana, now in an enclave of Angola known as Cabinda Province, surrounded by both the Republic of the Congo to the north and the Democratic Republic of the Congo to the south.

viridescens Verhoeff, 1937

Theuropoda viridescens Verhoeff, 1937

Type material. Syntype, 1♂, ZMB 13181; "Malacca" [Malaysia]; collector and date not recorded.

Present name. Junior synonym of *Thereuopoda longicornis* (Fabricius, 1793); synonymized by Würmli (1979).

Catalogue of non-type material

Pselliodidae Chamberlin, 1955
Sphendononema Verhoeff, 1904

Sphendononema guildingii (Newport, 1845)

Material. 1 specimen, ZMB number and locality uncertain; leg. ?Gollmer.

Remarks. The number in the jar is not a ZMB catalogue number and the locality is, unfortunately, indecipherable. However, the collector could be Julius Gollmer a pharmacist who was active in northern South America (mostly Venezuela) around 1856.

Sphendononema rugosa (Newport, 1844)

Material. 1 dry specimen (as *Pselliophora vagans* Verhoeff, 1905); "Congo", leg. Heyne.

Sphenodonema spp.

Material. 3 dry specimens in poor condition (all labelled as *Pselliophora*). (a) Para, Brasil; leg Bertram, 1975. (b) "Ceylon" [Sri Lanka]; leg Nietner. (c) Zanzibar [Tanzania]; leg. Hildebrandt.

Remarks. The collector of the Sri Lankan material was Johannes Nietner (1828–1874), a gardener in the botanical garden in Paradeniya. Note that the identification of the Sri Lankan specimen should be treated with caution (G. Edgecombe, pers. comm.) as this would represent a considerable range extension both for the genus and the family Pselliodid as a whole.

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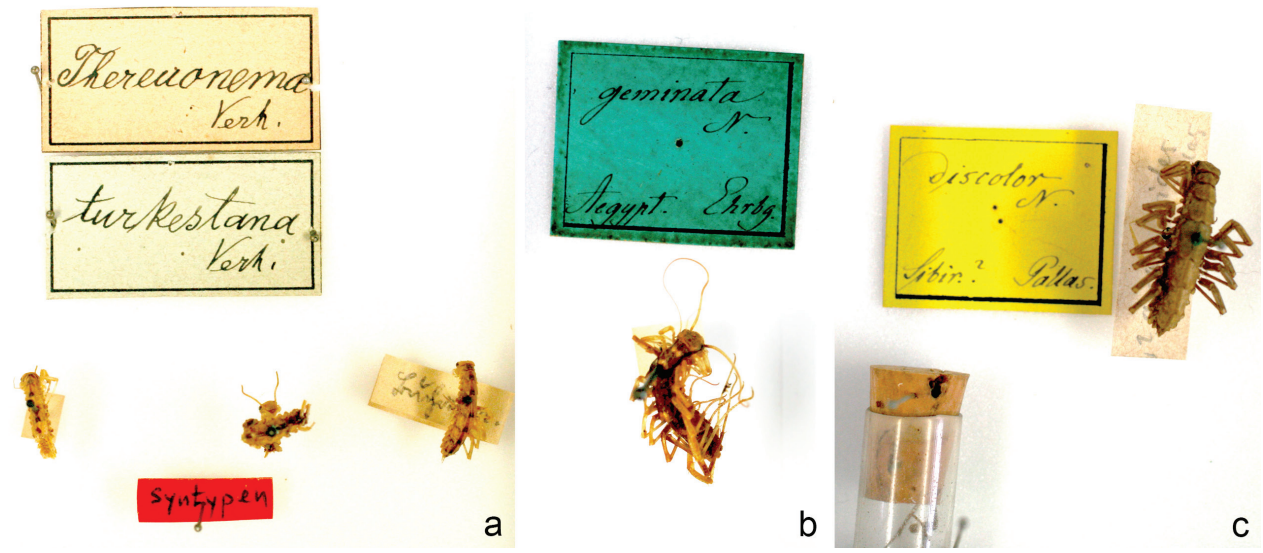

Figure 3. Historical dry, pinned specimens of scutigeromorph centipedes. **a.** ZMB 87, syntypes of *Thereuonema turkestana* Verhoeff, 1905 collected by Eduard Friedrich Eversmann in Bukhara in 1820. **b.** ZMB 88, *Scutigera* sp. collected by Christian Gottfried Ehrenberg in Egypt ca. 1820–1825. **c.** ZMB 89, *Scutigera* sp. apparently collected by Peter Simon Pallas possibly in Siberia ca. 1768–1774. Note that the specimens in b and c bear what appear to be (unpublished) manuscript names on the original labels.

Scutigerinidae Attems, 1926
***Suctigerina* Silvestri, 1904**

***Suctigerina weberi* Silvestri, 1904**

Material. 2 specimens; ZMB 4674; "Rifle Range, Simonstown" [Simons Town, South Africa]; leg. Deutsche Südpolar-Expedition, 22.VI.1903. 3 specimens; ZMB 13754; Otiiamonaombe, Namibia; leg. Deckert, Uhlig & Giere; 6.–20.IV.2002 (BIOTA project); det. Vohland.

Remarks. The "Deutsche Südpolar-Expedition" – sometimes referred to as the "Gauß-Expedition" – ran from 1901–1903 under the leadership of Erich von Drygalski. The Simons Town material was evidently collected during a stopover in South Africa on the return leg of the expedition. Silvestri (1904) described the species shortly afterwards, but the Berlin material does not belong to the type species which is cited as having come from "Zwarsberg" in South Africa with Max C. Weber as the collector. The BIOTA material stems from a major project on the southern African fauna and was collected by MfN staff members Jürgen Deckert, Manfred Uhlig and Peter Giere; with identification by Katrin Vohland.

Scutigeridae Leach, 1814
***Allothereua* Verhoeff, 1905**

***Allothereua maculata* (Newport, 1844)**

Material. 3 specimens; ZMB 3835; "Adelaide" [Australia]; leg. Zietz (or Hintz?). 1 specimen; ZMB 5140; "136 Harvey" [Western Australia]; leg. Süd-West Australien Expedition (Michaelsen & Hartmeyer); det. Carl von Attems; 27.VII.1905. 1 specimen; ZMB 5140; "Mundijong" [Western Australia]; leg. Süd-West Australien Expedition (Michaelsen & Hartmeyer); det. Carl von Attems; 21.IX.1905. 1 specimen; ZMB 5140; "Bridgetown" [Western Australia]; leg. Süd-West Australien Expedition (Michaelsen & Hartmeyer); det. Carl von Attems; 30/31.VII.1905. 1 specimen; ZMB 5140; "Brancaster" [Western Australia]; leg. John M. Whistler; det. Carl von Attems; 14.III.1910. 1 specimen; ZMB 5140; "S.W. Australien"; leg. Süd-West Australien Expedition (Michaelsen & Hartmeyer); 1905. 1 specimen; unnumbered; "Collie" [Western Australia]; leg. Süd-West Australien Expedition (Michaelsen & Hartmeyer); det. Carl von Attems; 26.VIII.1905.

Remarks. The collector of ZMB 3835 could either be an A. H. Zietz who was ca. 1892–1908 Assistant Director of the South Australian Museum, Adelaide, or a Eugene Hintz who collected beetles and other arthropods for the Berlin museum. Much of the material of this species stems from a 1905 expedition to southwest Australia by Wilhelm Michaelsen (1860–1937) and Robert Hartmeyer (1874–1923). The latter was from 1900 an assistant (later from 1908 curator) in Berlin for marine groups like bryozoans and echinoderms.

***Ballonema* Verhoeff, 1904**

***Ballonema gracilipes* Verhoeff, 1904**

Material. 1 specimen, ZMB 5382 "Sattelberg bei Finschhafen" [Sattelberg near Finschhafen, Morobe Province Papua New Guinea]; leg. Neuhauß, XII.1908. 1 specimen, ZMB 5383 "Neu Guinea, Sepik 1570 m lang N.68" [Sepik River, Papua New Guinea]; leg. Schultze, XI.1910.

Remarks. The collector of ZMB 5382 was Richard Neuhauss (1855–1915) a medical doctor and anthropologist

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who was active in New Guinea from 1908–1910. The collector of ZMB 5383 was Leonhard Schultze (1872–1955) a zoologist and anthropologist who took part in a Dutch–German expedition to New Guinea in 1910. Note that the identity of this material was confirmed in the literature by Butler et al. (2010: 548).

***Scutigera* Lamark, 1801**

***Scutigera coleoptrata* (Linnaeus, 1758)**

Material. 1 dry specimen; ZMB 90; "Carolin merid." [Central Carolina?, USA]; leg. Zimmerman (as *S. forceps* (Rafinesque,1820)). 1 dry specimen; unnumbered; "Castelnuovo" [many localities, mostly in Italy bear this name]; collector and date not recorded. 1 specimen; ZMB 1203; "Kreta" [Crete, Greece]; leg. von Oertzen. ZMB 1447 (legs only); "Triest" [Italy]; leg. Müller. ZMB 1449 (legs only); "Dalmatia" [Croatia]; leg. B. Novak. 1 specimen; ZMB 1453; "Matosinhos, Portugal"; collector and date not recorded. 2 specimens; ZMB 1822; "Dalmatia" [Croatia]; leg. Mehon; 1915. 2 specimens; ZMB 1832; "Corta [Mallorca]; det. Verhoeff. 1 specimen; ZMB 2396; "Coimbra" [Portugal]; leg. A. Möller. 4 specimens; ZMB 2603; "Canarische Inseln" [Canary Islands]; leg Hintz; 15.XII.1898.1 specimen, ZMB 2604; "Rovigno" [Croatia] Möbius. 1 specimen (without legs); ZMB 3845; "Canarische Inseln, La Palmas"; leg. Hintz, IV.1898. 3 specimens; ZMB 3846; "Sirmione am Gardasee" [Sirmione, Lake Garda, Italy]; leg. Verhoeff. 2 specimens; ZMB 3847; "Sirmione" [Italy]; leg. Verhoeff. 1 alcohol specimen; ZMB 3848; "Tenerife" [Canary Islands]; leg. Hastwig?. 3 specimens (as *S. capensis* (Templeton, 1843)); ZMB 4673 "Simonstown" [Simons Town, South Africa]; leg. Deutsche Südpolar-Expedition, 1903. 3 specimens; ZMB 13202; "Neapel" [Naples, Italy]; leg. Verhoeff. 1 specimen; ZMB 13719; Albena, Bulgaria; leg. D. Striebing, 10.VII.1984; det. M. Moritz, VIII.1989. 4 specimens; ZMB 13723; "Spanien, Calpe" [Calpe, Spain]; leg. Lüdecke, 30.VI.1993; det. Moritz, IV.1993. Unnumbered (legs only);ZMB 2587 "Tenerife" [Canary Islands]; Luckner? date uncertain. 1 specimen; unnumbered,"Bulgarien, Kap Kaliakra" [Bulgaria, Kaliakra]; leg. N. Jung; 17.VI.1975. 1 specimen; unnumbered; "Rovigno", [Croatia]; leg. Morbins?; III-IV.1993. 2 specimens; unnumbered; locality uncertain; leg. Knin, [Croatia]. VII.1928; det. Schubert 1934. 1 specimen; unnumbered (as *S. araneodes* [sic]); "St. Catharina" [Santa Catarina Brazil]; collector and date not recorded. 1 specimen; unnumbered; "Gaula" [Madeira]; leg. H. Wendt; 15.V.1994. Numerous Verhoeff slides nrs. 1461–63, 1612, 2699–770, 2776–2780, 2789–90, 2803–08 (with what may be an unpublished subspecies name), 2809–11 (as *S. forceps*), 2822–3; locality and collector uncertain.

Remarks. With respect to the dry record from Carolina, this predominantly southern European (but also synanthropic species) is also known from the USA and several other places, although it is not entirely clear whether *S. coleoptrata* is native or introduced here. Most of the material is from southern Europe and the Canary Islands. The collectors Dirk Striebing, Sepp Lüdecke and Hella Wendt were all former staff members of the MfN.

***Scutigera rubrilineata* (Newport, 1844)**

Material. 1 specimen (as *rubrolineata*); ZMB 3834; "Ceylon" [Sri Lanka]; collector and date not recorded. Thirteen Verhoeff slides (nrs. 3065–76); "Ceylon".

Remarks. The Sri Lankan material here was presumably assigned to *Cermatia rubrolineata*, described by Newport from 'India Orientali'; the status of which is currently uncertain (P. Stoev pers. comm., 2017). In Chilobase it is suggested that this species might be conspecific with *Thereuonema microstoma* (Meinert, 1886).

***Scutigera* sp.**

Material. 2 specimens; ZMB 4753; "Bellana, Abyssinien" [probably Ethiopia, precise locality unclear]; leg. C. Erlangen & O. Neumann 04.02.1900. 1 specimen; ZMB 5168; [Paraguay]; leg. A. Barbero; 1913. 3 specimens; ZMB 5137; [Palästina]; leg. Brühl; 1911/1912. 1 specimen; unnumbered; "Dire-Daua, Manoa" [Dire Dawa, Ethiopia]; leg. E. Wache. 1 alcohol specimen; unnumbered; "Mte. Vipera, Dalmatia No. 907" [Sveti Ilija, Croatia]; .1 dry specimen unnumbered; date, collector and placement uncertain.

Remarks. The Ethiopian material was collected by the ornithologists Carlo von Erlangen (1872–1932) and Oscar Neumann (1867–1946) who were active in East Africa. The Paraguayan material may stem from the botanist Andrés Barbero (1877–1951). Details of the other collectors are uncertain.

Two additional dry specimens, ZMB 88 ("Aegypt" [Egypt]; leg. Ehrenberg) and ZMB 89 ("Siber?" [Siberia?]; leg. Pallas are labelled with what we presume to be manuscript names of *Scutigera* under its junior synonym *Cermatia* Illiger, 1807. Neither of the species names in the museum catalogue could be found in Chilobase. Ehrenberg as collector is mentioned above, while Pallas is presumably Peter Simon Pallas (1741–1811) who carried out a famous collecting trip to Siberia from 1768 to 1774 at the bequest of the Russian empress Catherine the Great. If this specimen does originate from this journey it would be a strong candidate for being the oldest specimen in the myriapod collection; predating the founding of the museum in 1810. Note that Pallas lived in Berlin shortly before his death in 1811 and it is quite possible that some of his zoological material passed to the then newly founded museum.

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***Thereuonema* Verhoeff, 1904**

***Thereuonema tuberculata* (Wood, 1862)**

Material. 7 specimens; ZMB 3836; "Tsingtao" [Qingdao, China]; leg. Glaue. 1 specimen; ZMB 4542; "Japan?"; leg. Hilgendorf?; det. Verhoeff; 1905. 1 specimen; ZMB 13084; "Korea"; collector and date uncertain; det. Verhoeff. 1 specimen; ZMB 13177; "Kiangsee Yangtri China" [probably Yangtze River, Jiangxi, China]; leg. Seyéchéngé? 2 specimens; ZMB 13758; "China Stadtmauer Peking" [city wall, Beijing, China]; leg. Schoede, VIII.1913; det. G. Edgecombe. Eleven Verhoeff slides (nrs 2965–81) "Yinghan?"

***Theuronema turkestana* Verhoeff, 1905**

Material. 4 specimens. Unnumbered. "Alexandrowskajgebirge, Kappak-District, Turkestan" [Alexandrowskaja Mountains]; leg H. Rolle V.[19]06.

Remarks. We could not find a precise modern equivalent for this locality, but older atlases indicate an "Alexandergb." mountain range which corresponds to the Kyrgyz Ala-Too mountains east of Lake Issyk-Kul in Kyrgyzstan. There is also a town of "Alexandrowskaya" on older maps, probably close to the modern Baikonur Cosmodrome (Kazakhstan), but this is in lowlands nearer the Aral Sea.

***Thereuonema* sp.**

Material. 7 specimens; ZMB 732; [Japan]; leg. Hilgendorf. 5 specimens; ZMB 4351; "Kiantschou, Tsingtau und Umgegend" [Tsingtau and surroundings, China]; leg. Kptlt. Glaue; (arrived in Berlin) 19.V.1905. Several Verhoeff slides (nr. 1614, 2906–15) under what appears to be an invalid combination "*Thereuonema maculata*".

***Thereuopoda* Verhoeff, 1904**

***Thereuopoda clunifera* (Wood, 1862)**

Material. 1 specimen; ZMB 750; "Japan"; leg. Hilgendorf. 2 specimens; ZMB 2128; "Japan"; leg. Hilgendorf. 3 specimens; ZMB 1457; "Japan"; leg. Hilgendorf. 1 specimen; ZMB 3844; "Formosa" [Taiwan]; leg. Haberer; (arrived in Berlin 10.IX.1904). 1 specimen; ZMB 3897; "Japan"; leg. Hilgendorf. Two Verhoeff slides (nrs. 2697–8, as *Scutigera,* 3007–29); Japan.

Remarks. The collector Haberer could be the doctor and naturalist Karl Albert Haberer (1864–1941) who is noted as having been active in China and Japan around 1899. He collected a molar tooth in China that eventually led to the discovery of "Peking Man".

***Thereuopoda longicornis* (Fabricius, 1793)**

Material. 2 specimens (as *S. nobilis* (Templeton, 1843)); ZMB 93; "Ceylon" [Sri Lanka]; leg. Nietner. 3 specimens; ZMB 219; "Rambodde, Ceylon" [Sri Lanka]; leg. 1 specimen (as *Scutigera templetoni* Humbert, 1865); ZMB 5116; "Ceylon" [Sri Lanka] Escherich, 12.VIII.1911. 1 dry specimen; unnumbered; locality, collector and date not recorded (as *T. decipiens* Verhoeff, 1905). 1 specimen; ZMB 13180; "Swela, Lombok" [Indonesia]; leg. Sunda–Expedition Rensch; 1927. 1 specimen; ZMB 13757; "Central Sumatra" [Indonesia]; leg. Moszkowski, 1907; det. G. Edgecombe.

Remarks. ZMB 5116 was discovered in a termite mound belonging to the species *Odontotermes redemanni* (Wasmann): "Im Hügel von *Termes redemanni*". The collector was the forester and entomologist Karl Escherich (1871–1951) who authored a work about the termites and ants of Sri Lanka. The collector of 13180 was Bernhard Rensch (1900–1990) who worked in the Berlin Museum from 1925–1937 and took part in the 1927 Sunda Expedition. The collector of 13757 was Max Moszkowski, a physician who travelled in Sri Lanka and Sumatra in 1907 and later in New Guinea.

***Scutigeromorpha* indet.**

Material. 2 alcohol specimens; unnumbered; "Formosa" [Taiwan]; leg. Sauter. 1 alcohol specimen; unnumbered; [Taiwan]; leg. Sauter?; 28.XII.1907. 2 alcohol specimens; unnumbered; "Ceylon" [Sri Lanka]; leg. H. Schoede; 17.II.1906. 1 alcohol specimen; unnumbered; "Hogoofield"; leg. Barthmann. 1 alcohol specimen; unnumbered; "Afrika, Darsessalam, Pangani" [Dar es Salaam, Pangani, Tanzania]; leg. Regner; 1909. 1 alcohol specimen; unnumbered; [Transvaal, South Africa]; leg. Ulbrich; V.1914. 1 alcohol specimen; unnumbered; [eastern Africa]; leg. Scheffer; 1906. 1 alcohol specimen; unnumbered; placement, date and collector uncertain. 1 alcohol specimen; unnumbered; "in totem Nest von Banintermiten"; leg. Amani; 31.I.1905. 1 alcohol specimen; unnumbered; "Urwald" [jungle]; leg. Fr. Fischer. 2 alcohol specimens; unnumbered; leg. Garua; 23.IV.1909. 1 alcohol specimen; unnumbered; [Cameroon, Lake Chad]; leg. Riggenbach; 1909. 1 alcohol specimen; unnumbered, "Tabora" [Tanzania, Tabora]; leg. Zickendraht. 1 alcohol specimen; unnumbered; [Africa]; leg. Emmerling. 3 alcohol specimens; unnumbered; leg. Hügmens; VI-VII.1901. 2 alcohol specimens; unnumbered; "Formosa" [Taiwan]. 2 alcohol specimens; unnumbered; [Tokyo, Japan]; leg. Gottsche S. 3 alcohol specimens; unnumbered; [Takao, Taiwan]; 16.XI.1907. 4 alcohol specimens; unnumbered; "Funchal"; leg. W. Liebe; 10.VII.1925. 6 alcohol specimens; unnumbered; [Madeira]; leg. Liebe; 15.-20. VII.1924. 2 dry specimens; ZMB 5137; "Palästina, Jordantaufstelle" [Palestine]; leg. Brühl, Totes Meer Exp.,

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19.-23.XII.1911; 19.-23.XII.1912. 3 dry specimens; unnumbered; "Nisch Serbien" [Niš, Serbia]; leg. Konietzko; VI.1917. 1 dry specimen; unnumbered; "Nisch Serbien" [Niš, Serbia]; leg. Konietzko; 4.X.1917. 1 dry specimen; ZMB 5138; "Herzegowina" [Herzegovina]; leg. Schumacher Spaney; 13.VI.1913.

Fossil species

***illigeri* Koch & Berendt, 1854**

Cermatia illigeri Koch & Berendt, 1854

Type material. Holotype, MfN palaeontology collection Nr. 7317 (*ex* Berendt collection); Baltic amber (Eocene: Lutetian).

Present name. *Scutigera illigeri* (Koch & Berendt, 1854).

Remarks. The repository of another amber species described by these authors, *Cermatia leachi* Koch & Berendt, 1854, unfortunately remains equivocal. It could not be traced in the Berlin palaeontology collection at the time of writing (C. Neumann, pers. comm.).

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