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Taxonomy and distribution of African chiggers (Acariformes, Trombiculidae)

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Abstract. Chigger mites of the African continent are reviewed using data acquired from the literature and examination of the collections deposited at the Royal Museum for Central Africa (Tervuren, Belgium) and the Natural History Museum (London, UK). All findings for 443 valid chigger species belonging to 61 genera are reported, along with details on their collection locality and host species. Three new synonyms are proposed: *Straelensia* Vercammen-Grandjean & Kolebinova, 1968 (= *Anasuscuta* Brown, 2009 syn. nov.); *Herpetacarus (Herpetacarus)* Vercammen-Grandjean, 1960 (= *Herpetacarus (Lukoschuskaaia)* Kolebinova & Vercammen-Grandjean, 1980 syn. nov.); *Gahrliepia brennani* (Jadin & Vercammen-Grandjean, 1952) (= *Gahrliepia traubi* Audy, Lawrence & Vercammen-Grandjean, 1961 syn. nov.). A new replacement name is proposed: *Microtrombicula squirreli* Stekolnikov, 2017 nom. nov. pro *Eltonella myonacis heliosciuri* Vercammen-Grandjean, 1965 (praeocc. Vercammen-Grandjean, 1965). Ninety new combinations are proposed. Keys to subfamilies, genera and subgenera of African trombiculid larvae and diagnoses of these taxa are given.

Keywords. Chigger mites, fauna, taxonomy, Africa.

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In memory of Paul Henry Vercammen-Grandjean (1915–1995), a Belgian acarologist who made an indispensable contribution to African chigger studies.

Introduction

Trombiculidae Ewing, 1944 constitute one of the largest groups of parasitic mites including more than 2000 or 3000 species, according to some estimates (Brennan & Goff 1977; Fernandes & Kulkarni 2003). Larvae of trombiculids (chiggers) parasitize terrestrial and amphibious vertebrates of all classes throughout the world, while their active postlarval forms (deutonymphs and adults) are mainly soil-dwelling predators feeding on small insects and their eggs (Wharton & Fuller 1952). Thus, trombiculids are temporary parasites that spend only a small part of their life time on a host. As a result, their species are rather habitat- than host-specific, although preferential connections with some host taxa caused by a coincidence of their preferred habitats may occur; e.g., cave-dwelling chiggers parasitize mainly bats (Kudryashova 1998).

Chigger mites are well known as causative agents of acute dermatitis (trombiculiasis or trombiculosis) in humans and domestic animals, including pets, livestock and poultry, throughout the world (Mullen & OConnor 2009). The significance of trombiculids as specific vectors of *Orientia tsutsugamushi* (causative agent of scrub typhus) is most known in the Asia-Pacific region and Western South America (Weitzel *et al.* 2016); however, reports of indigenous scrub typhus supported by serological data were published for some African countries as well (Giroud & Jadin 1951; Osuga *et al.* 1991; Ghorbani *et al.* 1997; Thiga *et al.* 2015; Maina *et al.* 2016). Moreover, trombiculids can serve as reservoirs, if not vectors, of some other pathogens, namely *Ehrlichia*, *Borrelia*, and *Rickettsia* (Fernandez-Soto *et al.* 2001; Literak *et al.* 2008; Mit'ková *et al.* 2015). Generally, the diversity of chiggers having medical or veterinary importance is under-reported, even in Europe (Ripka & Stekolnikov 2006; Stekolnikov *et al.* 2014, 2016). As for Africa, the absence of publications summarizing faunistic and taxonomic data on chiggers from the continent during the last 50 years impedes new investigations of these mites.

Chigger mites of Africa were studied intensively from the 1950s to 1970s. The leading experts on African chiggers in that period were C.D. Radford, P.H. Vercammen-Grandjean, and R. Taufflieb, whose investigations covered North, Southern, West, East, and Central Africa. An outstanding contribution to the knowledge of South African chiggers was made also by R.F. Lawrence (1897–1987). In addition to descriptions of new species (e.g., Radford 1948, 1954a; Lawrence 1949; Taufflieb 1958a, 1960c, 1962, 1966b; Vercammen-Grandjean 1971a), revisions of some genera represented in Africa by many species were carried out (Vercammen-Grandjean 1958a, 1958b, 1965a). In the following decades, studies on African trombiculids were restricted to numerous descriptions of new species (e.g., Kolebinova 1981, 1984b; Goff 1983a, 1990, 1995; Goff & Lukoschus 1983; Nadchatram & Puylaert 1987; Brown 2004, 2006a, 2007, 2008). The last summary of African chigger fauna (Zumpt 1961) should now be regarded as completely outdated. This situation has resulted in serious defects in recent ecological and veterinary studies of African chiggers, which usually identify these mites to generic level only or do not have a taxonomic basis at all (Otto & Jordaan 1992; Matthee *et al.* 2010; Barnard *et al.* 2015; Hoffmann *et al.* 2016).

Here, I provide an up-to-date summary of the African chigger fauna based on literature and a complete re-examination of the trombiculid collection deposited in the Royal Museum for Central Africa, Tervuren, Belgium (RMCA), which is the most representative European collection of African chiggers. I also had an opportunity to examine chigger types in the Natural History Museum (BMNH, London, UK) during my visit to England in November 2017. The data from the literature were revised to bring them in accordance with the current state of trombiculid taxonomy and the taxonomy of their hosts. Coordinates and actual names were established for all collection localities using public geoinformation resources.

Material and methods

Information resources

To the best of my knowledge, I collated all literature sources containing taxonomic descriptions or reports of chigger species on hosts or localities in Africa. Works on African chiggers without at least new faunistic data were ignored. Many papers were examined in the library of the Zoological Institute, Russian Academy of Sciences (Saint Petersburg, Russia) or received from authors as hard copies and, except for large monographs, digitized using the computer program for optical character recognition ABBYY FineReader ver. 9.0 (ABBYY, Moscow, Russia). A few gaps in the library collection of *Revue de zoologie et de botanique africaines* were filled during my visit to RMCA. Some old papers absent in the library were found online using such resources as the Biodiversity Heritage Library (http://www.biodiversitylibrary.org), JSTOR (https://www.jstor.org), the medical library BIU Santé (http://www.biusante.parisdescartes.fr), the Sabinet African ePublications (http://journals.co.za), and other online collections. I should note that some papers are stored in these collections as subsets of

unrecognized scanned images of pages from journal volumes; in such cases they cannot be found by online search for author name or paper title, but can be located using journal title, volume number and page numbers. In addition, PDFs of recent publications were downloaded from journal websites or received via a social network for scientists, ResearchGate (http://researchgate.net), and an online search engine Sci-Hub (https://sci-hub.tw). The collection of PDFs created as a result of my work is preserved using the cloud storage online service Google Drive (Google Inc., Mountain View, CA, US); I can provide free access to it for any colleague interested in chigger taxonomy.

Reliable data on the coordinates of collection localities obtained with the use of satellite navigation systems occur in publications on chiggers since 2005 only (Brown 2006b, 2008; Wohltmann *et al.* 2007). All coordinates in older works are not reliable, because authors never reported a method for obtaining this information (by navigation instruments, by topographic maps, or with a reference book – in the case of coordinates of populated places). This uncertainty is redoubled by infrequent misprints in the values of coordinates or cardinal directions (e.g., W instead of E). Thus, establishment of coordinates was required for almost all places mentioned in the literature on African chiggers.

To find coordinates of populated places or mountains I used mainly the database of geographic names supported by the US National Geospatial-Intelligence Agency (http://geonames.nga.mil/namesgaz/). This online service includes different variants of names or spellings for each geographic point, as well as information of its country location and administrative subdivisions. In case of an imprecise site definition ("10 km N of…"), coordinates of the locality were specified approximately with the use of the program Google Earth (https://www.google.com/earth). Moreover, this program allows a selection among places with identical names when the altitude of a collection locality is known, an approximate location of a collection site on the basis of expedition photographs or descriptions of landscapes in field protocols (Stekolnikov & Daniel 2012), alongside other methods of geographic analysis. Some chiggers were collected from mammal hosts preserved in the collection of RMCA; therefore, collection data on mammals can be used to complement those for chiggers. Thus, I used the online database African Rodentia (http://projects.biodiversity.be/africanrodentia/) to establish coordinates for some collection sites in Central Africa. The list of all collection localities is given in Appendix 1.

In the present work, the names of mammalian hosts are given after Wilson & Reeder (2005). Names of avian hosts were verified by the online database Zoonomen (Zoological Nomenclature Resource): Birds of the World (http://www.zoonomen.net/avtax/frame.html). Names of reptilian hosts were checked using the Reptile Database (http://www.reptile-database.org). The systematic list of all hosts is given in Appendix 2. In the lists of hosts for particular chigger species, only African records are listed, including those from original species descriptions and from all posterior works. In some secondary sources, for example in the checklist edited by Zumpt (1961), host names were obviously corrections of those given in original descriptions. In such cases, I cite both host names with an appropriate note, e.g.,: "*Mastomys coucha* (original data), *M. natalensis* (Zumpt 1961)". Data on a type host (the host species from which the holotype was collected) are provided when available. In case of a species with only one known host, the note "host species" is omitted as evident.

Morphological terminology

I follow the standard chigger terminology summarized by Goff *et al.* (1982). The abbreviations and diagnostic formulas below are used in the descriptions of genera and in the key.

i) The synthetic identification formula developed by Vercammen-Grandjean (1960b), e.g., SIF = 7BS-B-3-3111.1000, which includes the following characters (separated with hyphens and a point):

- Chaetome of palpal tarsus: number of branched setae (B) and presence of nude subterminala S (eupathidium ζ). The basal tarsala (solenidion ω) is always present and therefore not indicated.
- Condition of galeal (deutorostral) seta (B = branched; N = nude; b = bearing small cilium; f = forked).
- Number of prongs of palpal claw.
- Number of genualae I (solenidia σ); number of genualae II (solenidia σ); number of genualae III (solenidia σ); number of tibialae III (solenidia φ).
- Number of mastitarsalae III (long whip-like setae on leg tarsus III, usually nude or having few small cilia); number of mastitibialae III; number of mastigenualae III or additional genualae III; number of mastifemoralae III.

ii) Palpal setal formula, e.g., fPp = B/B/NNB, including conditions (N = nude; B = branched, etc.) of palpal femoral seta, palpal genual seta, and three palpal tibial setae (dorsal, lateral, and ventral).

iii) Leg formula, e.g., fsp = 7.7.7, including number of segments in legs I, II, and III. A seven-segmented leg includes coxa, trochanter, basifemur, telofemur, genu, tibia, and tarsus. In six-segmented legs, the basifemur and telofemur are fused to form one segment (femur).

iv) Sternal setal formula, e.g., fSt = 2.2, including numbers of anterior (between coxae I) and posterior (between coxae III) sternal setae.

v) Coxal setation formula, e.g., fCx = 1.1.1, including numbers of setae on leg coxae I, II, and III.

vi) Scutal formula, e.g., fSc = PL > AL > AM, which expresses the relative lengths of scutal setae (AM, anteromedian seta; AL, anterolateral setae; PL, posterolateral setae).

vii) Ip, total length of legs (including coxae and excluding tarsal claws) from one side of symmetry axis.

viii) Chaetotaxy and standard measurements of the scutum are given in Fig. 1, the characters of the idiosoma in Fig. 2, the characters of palps in Fig. 3, and specialized leg setae in Fig. 4.

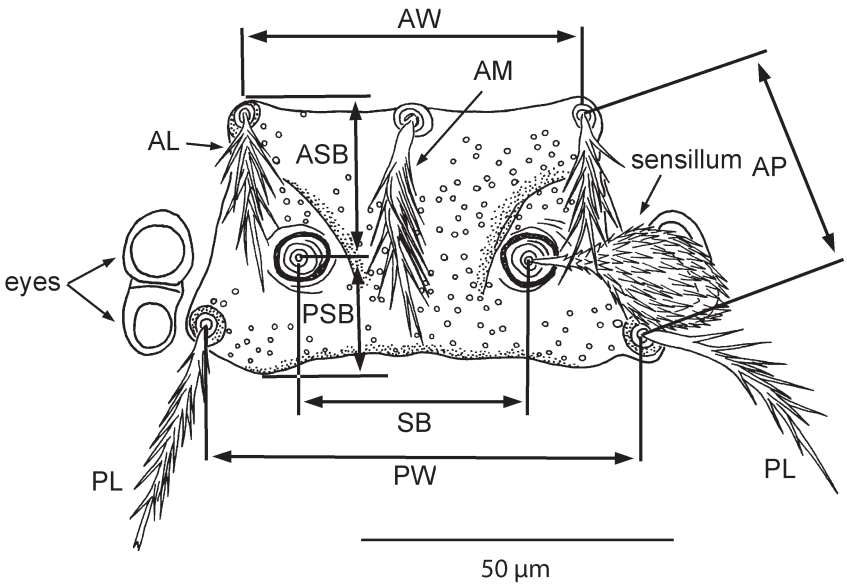

Fig. 1. Scutum of an example of *Schoutedenichia* sp.

Systematic approach

Revision of the systematics of the Trombiculidae is not among the objectives of this work. I believe that creation of an adequate hierarchical system for these mites should be based on detailed morphological data for all stages of the life cycle and possibly molecular data, which have generally not been obtained for trombiculids to date. In the generic placement of species, I follow mainly the checklist of Trombiculinae of the world compiled by Vercammen-Grandjean (1965c); diagnoses of genera are also given according to this work and the most important of the subsequent taxonomic revisions (Vercammen-Grandjean 1968b; Vercammen-Grandjean & Langston 1976; Kudryashova 1998; Fernandes & Kulkarni 2003). However, in most cases, I do not recognize the large combined genera proposed by Vercammen-Grandjean; I prefer to retain initially described and more homogeneous genera. For example, I consider *Ericotrombidium* Vercammen-Grandjean, 1966 and *Hypotrombidium* Vercammen-Grandjean, 1966 as separate genera, and not as subgenera within *Leptotrombidium* Nagayo, Miyagawa, Mitamura & Imamura, 1916.

As in my previous works, I follow here the system of Trombiculidae where this family is divided into four subfamilies – Apoloniinae Wharton, 1947, Leeuwenhoekiinae Womersley, 1944, Gahrliepiinae Womersley, 1952, and Trombiculinae Ewing, 1929 (Kudryashova 1998) – that seems rational and well-grounded by the larval morphology (Shatrov & Kudryashova 2008).

I accept the system of Gahrliepiinae used by Fernandes & Kulkarni (2003) where this subfamily is comprised of three genera: *Gahrliepia* Oudemans, 1912, with two or more pairs of usurped setae on the scutum (dorsal idiosomal setae situated on the scutum as a result of its expansion in the posterior direction), *Schoengastiella* Hirst, 1915, with a pair of usurped setae, and *Walchia* Ewing, 1931, without

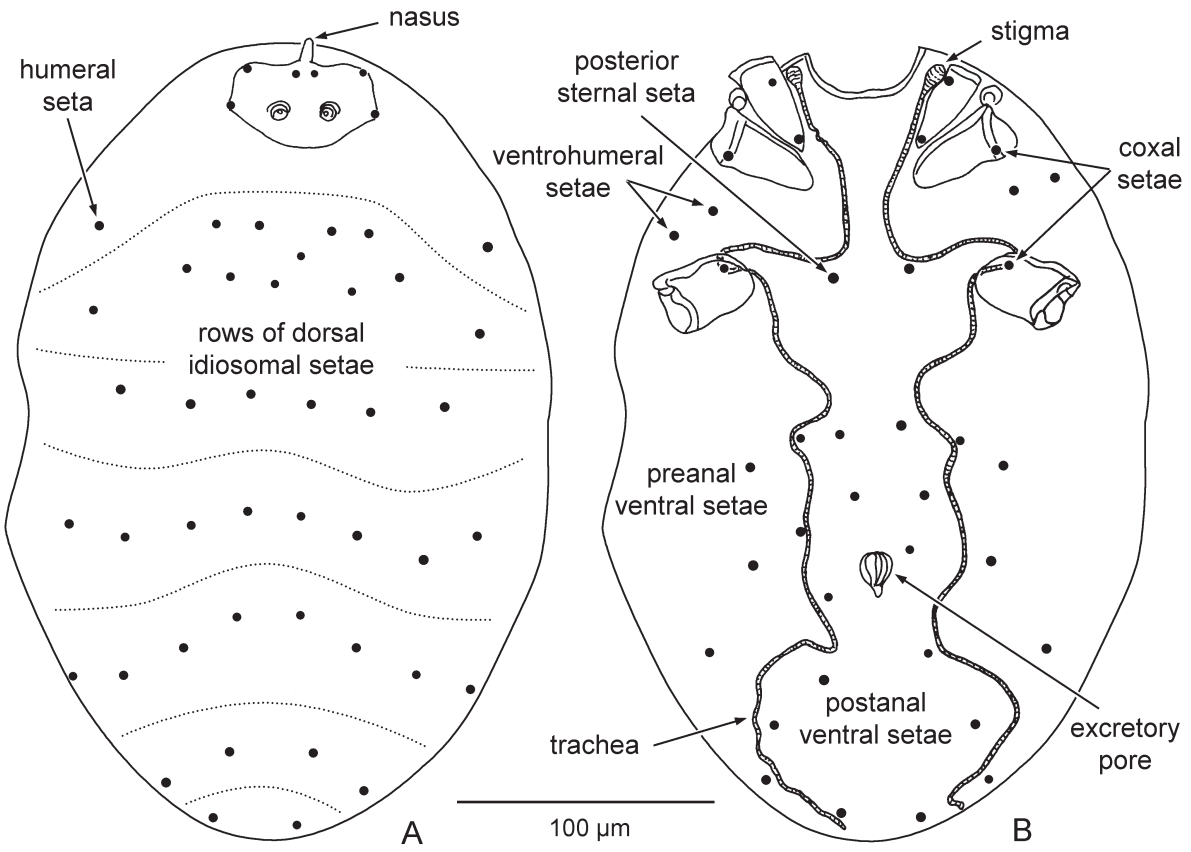

Fig. 2. Idiosoma of Leeuwenhoekiinae Womersley, 1944. **A**. Dorsal aspect. **B**. Ventral aspect.

usurped setae. A more detailed system developed by Vercammen-Grandjean, where each of these genera was divided into several subgenera (Kolebinova & Vercammen-Grandjean 1978), is not followed here. Following Goff (1979), I include *Eltonella* Audy, 1956 in *Microtrombicula* Ewing, 1950; since the distribution of African species between *Microtrombicula* s.s. and *Eltonella* is not evident, the subgeneric division of *Microtrombicula* is not used in the present work.

As well as in the case of hierarchical classification at the generic level, I maintain that using the category of subspecies is not grounded in trombiculid taxonomy with our present state of knowledge. Therefore, I raise here all previously described subspecies to species without special note. Some taxa of African chiggers were described as "varieties" and were not raised to subspecies or species later, namely, *Leptotrombidium buttneri* var. *psammodromi* Taufflieb, 1959, *Neotrombicula roubaudi* var. *lemni* Taufflieb, 1960, *Neotrombicula roubaudi* var. *orycti* Taufflieb, 1960, and *Trombicula canestrinii* var. *strinatii* Cooreman, 1951. According to the ICZN Code (Art. 45.6.4), I regard these names as valid subspecies and raise them to species with original authors and dates.

For each species with known deutonymphs, Vercammen-Grandjean, in addition to larval holotype, designated one deutonymph as a "nymph-type". In all his species descriptions, designation of a holotype always preceded designation of the respective "nymph-type". In the RMCA collection, such nymphal types bear labels "type" or "holotype", in the same way as true larval holotypes. However, they must be treated as paratypes, because these nymphal types are (1) definitely members of the type series and (2) other specimens than the larval holotype designated before them in the original description. Thus, they are paratypes, according to the ICZN Code (Art. 72.4.5), irrespective of their labels. Below I list such specimens among paratypes without special notes.

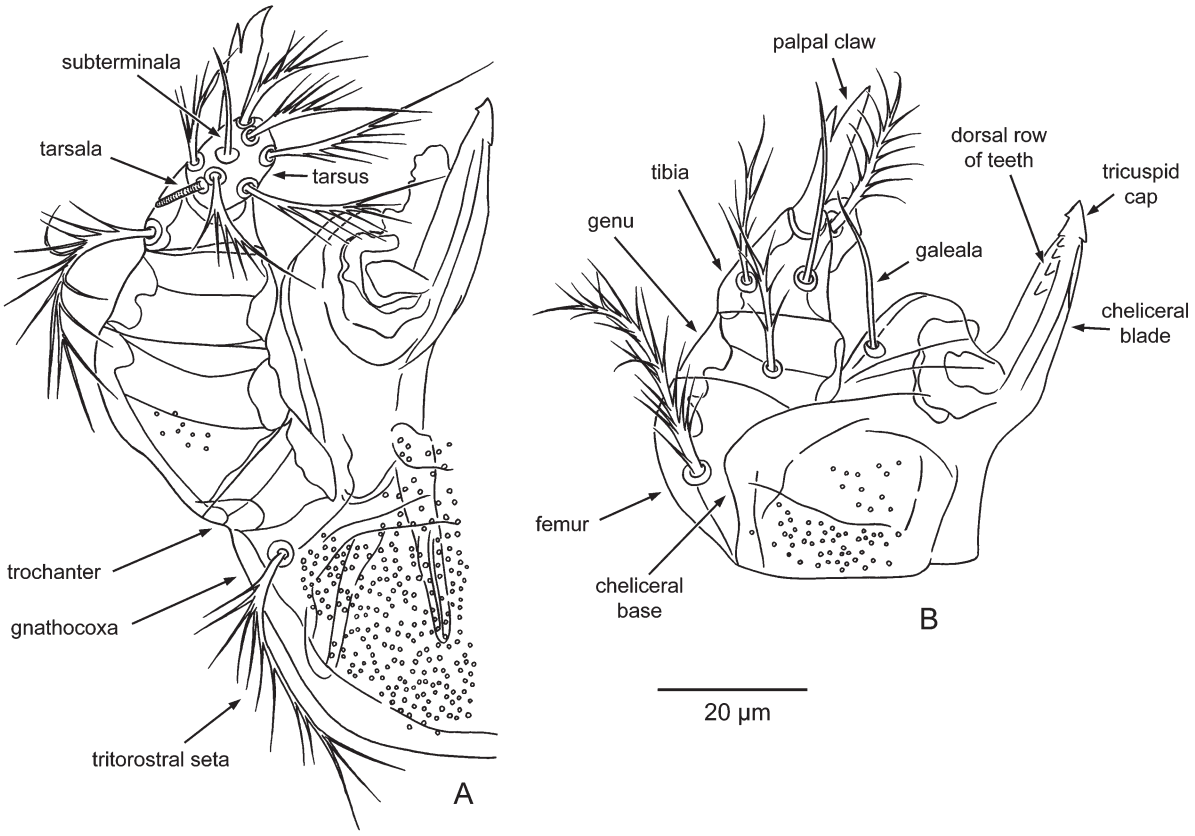

Fig. 3. Palps of an example of *Schoengastia* sp. **A**. Ventral aspect. **B**. Dorsal aspect.

Because some of the slides in the RMCA collection include more than one specimen, the number of paratypes given for some species can exceed the number of slides.

I write the name *Schöngastia* and all its derivatives, such as *Ascoschöngastia* and *Euschöngastia*, as *Schoengastia*, according to ICZN Code recommendations, irrespective of the form used in each concrete reference originally.

Examination of the RMCA collection

I performed a revision of the collection during my visit to RMCA in September 2016. Microscopic slides were examined with a Leica DM LB (Leica Microsystems GmbH, Wetzlar, Germany) microscope with differential interference contrast. All slides were photographed from both sides (to document all labels) using a Canon EOS 600D camera (Canon Inc., Tokyo, Japan) with subsequent image enhancement in the program Photoshop CS5.1 (Adobe Systems Inc., Mountain View, CA, US). The bank of images created this way contains 2928 files in TIFF format, RGB color and a resolution of 300 dpi, with a total size of 11 GB. The files are stored in 42 folders, according to the collection boxes where the slides were deposited. I am ready to share this image collection with any colleague who is interested in chigger taxonomy.

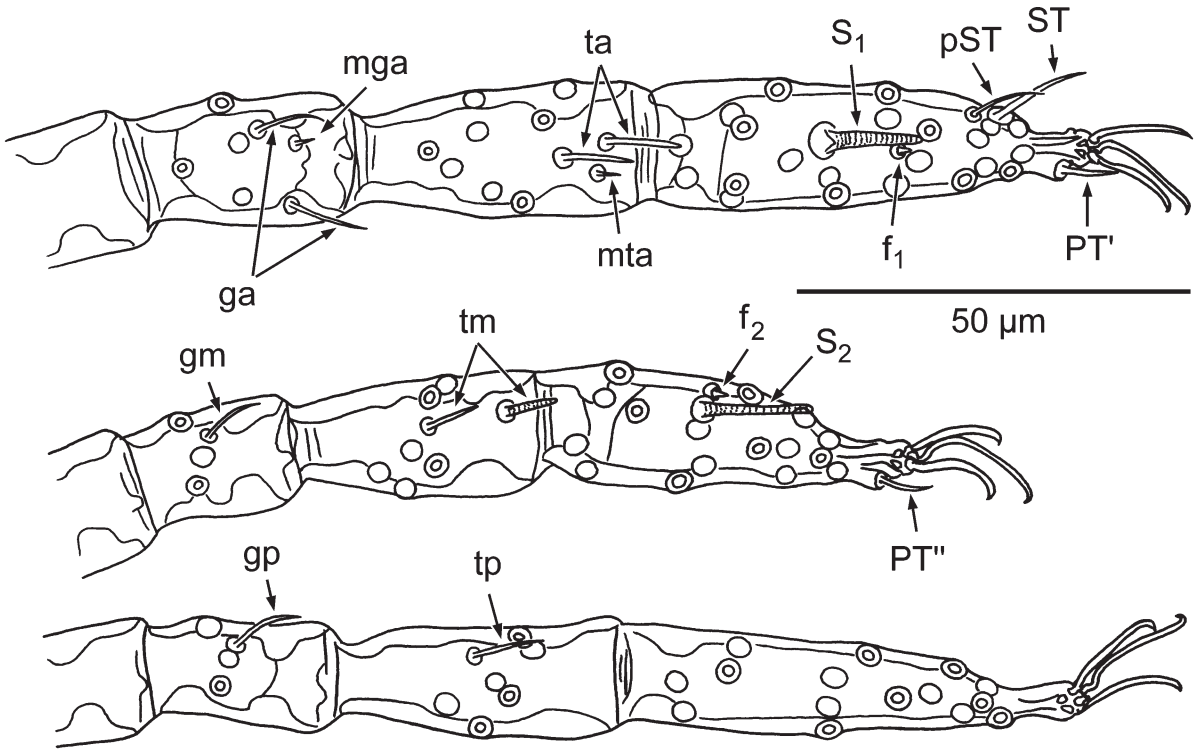

Fig. 4. Specialized setae of legs I, II and III of an example of *Ericotrombidium* sp. Double circles represent the bases of unspecialized tactile setae; single circles correspond to the unspecialized setae situated on the opposite side of the leg. Abbreviations: ga = genualae I (solenidia σ); mga = microgenuala I; ta = tibialae I (solenidia φ); mta = microtibiala I; S_1 = tarsala I (solenidion ω); f_1 = microtarsala I (famulus ε); pST = parasubterminala; ST = subterminala (eupathidium ζ); PT′ = pretarsala I (eupathidium ζ); gm = genuala II; tm = tibialae II; f_2 = famulus II; S_2 = tarsala II; PT″ = pretarsala II; gp = genuala III; tp = tibiala III.

Electronic supplements

The present work includes three electronic supplements, as follows.

Supplement A. List of species records. This document is a Microsoft Excel 2010 workbook consisting of five worksheets. The first worksheet includes the following columns:

Subfamily	=	subfamily according to the classification accepted in the present work.
Genus in reference	=	genus and subgenus according to the cited source.
Genus	=	genus and subgenus according to the classification accepted in the present work.
Species	=	species or subspecies name according to the cited source. The following information may be given in brackets after the name: (a) later variant of spelling, if different from original, e.g., *aethomys* (= *aethomyia*); (b) notes on synonymy, e.g., *duboisi* (syn. of *schoutedeni*); (c) notes on taxonomic status, e.g., *gilleti* (= *paradoxa* var. *gilleti*).
Author	=	author(s) of species or subspecies description.
Year	=	year of species or subspecies description.
Country	=	country according to the cited source, e.g., Zaire.
Country revised	=	country according to the modern nomenclature, e.g., DR Congo.
Locality	=	collection locality according to the cited source, e.g., Elisabethville (Katanga).
Locality revised	=	name of collection locality, if different from that in the cited source, e.g., Lubumbashi.
Coordinates original	=	coordinates according to the cited source.
Reference point	=	name of the geographic point, coordinates of which are used finally as exact or arbitrary position of the collection site.
Coordinates of Reference point	=	coordinates of the reference point obtained from geoinformation resources.
Altitude	=	altitude of the collection site according to the cited source.
Host	=	name of the host according to the cited source.
Host revised	=	name of the host corrected according to up-to-date taxonomic and nomenclature data.
Host order	=	order of the host in the modern system.
Host class	=	class of the host.
Host collection number	=	collection number of the host if present in the cited source.
Instar	=	to note if the record is of an active postlarval form (deutonymph or adult) of trombiculid.
Act	=	taxonomic act or other scientific status of the record in the cited source (description of a new species, redescription, new combination, new name, creation of *nomen nudum*, finding on a new host or in a new locality, simple citation).
N.sp.	=	description of a new species (1) or any other status of the record (0).
Holotype	=	place of holotype deposition.
Reference	=	reference to the cited source.
Reference year	=	year of publication.
Page	=	page with the species name and figure numbers in the cited source.

The References worksheet includes full references to all cited sources, with short codes identical to those in column 23 of the first worksheet, and links to online versions of full texts. The Depositories worksheet includes abbreviations of museums identical to those in column 22 of the first worksheet and full names of the museums supplied with links to their websites. The Hosts worksheet repeats the columns Host class, Host order and Host revised from the first worksheet; the data are sorted by class, order and species name. The Localities worksheet repeats the columns Country revised, Reference point and Coordinates of Reference point from the first worksheet; the data are sorted by name of country and locality.

This workbook was used for creation of the list of species, tables with localities and host names, and the online map of collection localities. To create the list of species, I wrote simple Excel macros using Visual Basic Editor.

Supplement B. Results of the revision of the RMCA collection. It is a Microsoft Excel 2010 workbook including the following columns:

Box	=	number and name of the collection box.
Position	=	position of the slide in the collection box (from 1 to 100; some positions may be empty) or interval of positions for the slides, which were not examined in detail.
Species	=	species name according to the slide label.
Status	=	type, holotype, paratype (as noted on the slide label).
Reg. no. of paratype	=	sequential number of the paratype in the series (if present on the label).
No. original	=	field number or original collection number. For most slides labeled by Vercammen-Grandjean, this number (e.g., L: 26156/E/56) includes identification of instar (L = larva, N = deutonymph, Ex = larval exuvium), date of collection (e.g., 21455 = 21 April 1955; 2754 = 2 July 1954), a conventional designation of mite species (by a capital letter), and probably, number of the slide in the series.
Reg. no. RMCA	=	number of slide (or interval of numbers) according to the RMCA catalogue, usually on a separate label.
Instar	=	to note postlarval instars.
Details	=	morphological structures suitable or unsuitable for examination in the specimen (id: idiosoma, sc: scutum, pp: palps, lg: legs, S: sensilla; -: unsuitable, ?: dubious, ±: ambivalent, +: good, ++: very good, !: excellent); number of specimens on the slide; number of skipped slides; other comments.
Suitable for examination	=	estimation of the slide quality on the four-point scale (no, ambivalent, yes, excellent).
Defect	=	note on the main defect of slide or specimen (crystallized, bad slide, too flattened, destroyed).
Number of slides	=	number of skipped slides (which were not examined by microscope); 1 for each examined slide.
Number of suitable slides	=	1 for each slide suitable for examination.

Supplement C. Electronic map of the collection localities that was created by uploading an Excel file containing the data from the worksheet 'Localities' of Supplement A to the Google Map service. This map is accessible online by the following link:
https://drive.google.com/open?id=1WYQTOpE7lSE5A7Y8_CuFjfxez10&usp=sharing
Moreover, it can be downloaded as a KML file suitable for using with Google Earth or Google Map programs.

List of depositories

BMNH = The Natural History Museum, London, UK (formerly British Museum of Natural History)
BPBM = Bernice P. Bishop Museum, Honolulu, Hawaii, USA
FMNH = Field Museum of Natural History, Chicago, Illinois, USA
IPM = Institut Pasteur in Morocco, Casablanca, Morocco
IRSNB = Institut royal des Sciences naturelles de Belgique, Brussels, Belgium
MNHN = Muséum national d'Histoire naturelle, Paris, France
NHMW = Naturhistorisches Museum Wien, Vienna, Austria
NMSA = Natal Museum, Pietermaritzburg, Kwa-Zulu Natal, South Africa
RMCA = Musée royal de l'Afrique Centrale, Tervuren, Belgium
RML = Rocky Mountain Laboratories, Montana, USA
RMNH = Naturalis Biodiversity Centre, Leiden, Netherlands (formerly Rijksmuseum van Natuurlijke Historie)
SAIMR = South African Institute for Medical Research, Johannesburg, South Africa
SAM = South Australian Museum, Adelaide, South Australia, Australia
SAMC = Iziko Museum of Capetown, Cape Town, South Africa (formerly South African Museum)
SEMC = Snow Entomological Museum, University of Kansas, Lawrence, Kansas, USA
SMF = Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt-am-Main, Germany
TMSA = Ditsong National Museum of Natural History, Pretoria, Gauteng, South Africa (formerly Transvaal Museum)
USNM = National Museum of Natural History, Washington, DC, USA (formerly United States National Museum)
ZFMK = Zoologisches Forschungsmuseum "Alexander Koenig", Bonn, Germany
ZMUH = Zoologisches Institut und Zoologisches Museum, Universität von Hamburg, Hamburg, Germany

Accession numbers of specimens revised by myself are given for the RMCA and BMNH collections, as well as for other depositories if they are known from the literature. Accession numbers are absent in some museum collections, for example, the chigger collection of USNM (Easton & Brown 2008).

Results

Key to subfamilies, genera and subgenera of African trombiculid larvae

1. Scutum with 2 AM setae, with or without anteromedian process (nasus), fsp = 6.6.6, fSt = 0.2, sensilla flagelliform (subfamily Leeuwenhoekiinae) 7
– Scutum without AM setae, fsp = 7.6.6, sensilla expanded, fusiform or clavate (subfamily Gahrliepiinae) 6
– Scutum with 1 AM seta (absent in *Afrotrombicula quadriscutala* (Taufflieb, 1965) only), without nasus, fsp = 7.7.7 (7.6.6 or 6.6.6 in some rare cases) (subfamily Trombiculinae) 11
– Scutum with 2 AM setae or 1 AM + nasus, fsp = 7.7.7 (subfamily Apoloniinae) 2

2. Sensilla expanded, palpal claw 2-pronged, PL setae on scutum, genualae II and III present, microgenuala II present 3
– Sensilla flagelliform, palpal claw with 3–4 prongs, PL setae extrascutal (peniscutum), genualae II and III absent, microgenuala II absent 4

3. Two genualae I, scutum with biconvex posterior margin, fCx = 1.2.1 .....
.....***Afracarella*** Vercammen-Grandjean & Kolebinova, 1968
– Three genualae I, scutum with very prominent and rounded posterior margin, fCx = 1.1.1 .....
..... ***Sauracarella*** Lawrence, 1949

4. Two anterior and two posterior sternal setae; fCx = 1.1.1; galealae branched ..... ***Afropolonia*** Goff, 1983
– Two sternal setae between coxae I, two sternal setae between coxae II, and many setae between coxae III; humeroventral setae situated between coxae II and III; fCx = 1.2.1 or 1.1.1; galealae branched or nude 5

5. Eyes 2 + 2, nasus present (absent in *Straelensia monosetosa*), microgenuala I present, genuala I absent, palpal tarsus with 4 branched setae and nude subterminala ..... ***Straelensia*** Vercammen-Grandjean & Kolebinova, 1968
– Eyes 1 + 1 or absent, nasus absent, microgenuala I and genuala I present, palpal tarsus with 5 branched setae and nude subterminala ..... ***Vargatula*** Brennan & Yunker, 1966

6. Scutum with posterior margin extending far beyond level of PL setae to include two or more pairs of dorsal idiosomal setae ..... ***Gahrliepia*** Oudemans, 1912
– Scutum with posterior margin extending beyond level of PL setae to include one pair of dorsal idiosomal setae ..... ***Schoengastiella*** Hirst, 1915
– Scutum subpentagonal, with posterior margin angulate or rounded, with four setae only (2 AL and 2 PL) ..... ***Walchia*** Ewing, 1931

7. Cheliceral blade with large apical cap bearing numerous lateral teeth, scutum in shape of crescent, much wider than long, with nasus, sensillary bases posterior to PL, dorsal idiosomal setae sometimes expanded 8
– Cheliceral blade with dorsal subapical tooth and ventral teeth or with dorsal and ventral rows of teeth, scutum subpentagonal or trapezoidal, with nasus 9
– Cheliceral blade long, with large, recurved ventral row of teeth and dorsal teeth or hooks, scutum wide, sometimes striplike, without nasus, legs very long (Ip = 1000–2550). Parasites of bats ..... ***Whartonia*** Ewing, 1944

8. PL and dorsal idiosomal setae expanded, blunt-tipped, with very long expanded branches ..... ***Austrombicula*** Lawrence, 1949
– PL not expanded, dorsal idiosomal setae without giant branches ..... ***Austracarus*** Lawrence, 1949

9. Palpal tarsus with 7 branched setae, tracheae and stigmae present, onychotriches present, number of branched setae on leg femur I, II, and III – 6.6.5. Parasites of reptiles ..... ***Matacarus*** Vercammen-Grandjean, 1956
– Palpal tarsus with 6 branched setae, leg claws often with 2 conspicuous onychotriches 10
– Palpal tarsus with 5 branched setae, tracheae and stigmae absent, onychotriches absent, multiple mastisetae present on leg III ..... ***Mastalacarus*** Goff & Lukoschus, 1983
– Palpal tarsus with 4 branched setae, AM setae with one accessory branch, tracheae and stigmae absent, onychotriches absent ..... ***Tateracarus*** Goff, 1983

10. Cheliceral blade with ventral row of denticles and dorsal teeth, tracheae and stigmae present, sensilla usually branched ..... ***Acomatacarus*** Ewing, 1942
– Dorsal teeth on cheliceral blade absent, tracheae and stigmae absent, sensilla usually nude ..... ***Hyracarus*** Lawrence, 1949

11. Sensilla expanded, fusiform to globose (tribe Schoengastiini) 12
– Sensilla flagelliform, usually branched (tribe Trombiculini) 33

12. Scutum wide, crescent-shaped, with rounded or concave posterior margin, sensillary bases posterior to PL, AL and PL setae approximate to each other, eyes absent, two or more pairs of humeral setae, scutal and idiosomal setae covered with long thin barbs, galeal setae branched ..... ***Brunehaldia*** Vercammen-Grandjean, 1960
– Scutum not crescent-shaped 13

13. Tibiala III absent, palpal tarsus with 3–5 branched setae and sometimes nude subterminala 14
– Tibiala III present, palpal tarsus with 4–7 branched setae and sometimes nude subterminala 20

14. Three mastitarsalae, 3 mastitibialae, and 1 mastifemorala present, genualae II and III absent ..... ***Gerbillicula*** Kolebinova, 1984
– Mastisetae absent, genualae II and III usually present 15

15. Cheliceral blade with one dorsal tooth and large hook, posterior scutal margin prominent, sensillary bases posterior to PL, eyes absent ..... ***Tauffliebiella*** Vercammen-Grandjean, 1960
– Cheliceral blade with tricuspid cap, sometimes with ventral row of small teeth or dorsal serration, eyes usually present 16

16. Palpal claw usually divided by more than 3 prongs (4–12), distance between sensillary bases almost the same as distance from sensillary base to lateral scutal margin, cheliceral blade sometimes with ventral row of small teeth, palpal tarsus with 4 branched setae, always 4 humeral setae ..... ***Cheladonta*** Lipovsky, Crossley & Loomis, 1955
– Palpal claw always 3-pronged, sensillary bases situated far apart, closer to lateral scutal margin than to each other (genus *Schoutedenichia*) 17

17. Palpal tarsus with 3 branched setae, fCx = 1.1.9, Ip = 485 ..... ***Schoutedenichia (Trisetichia)*** Vercammen-Grandjean, 1958
– Palpal tarsus with 5 branched setae, cheliceral blade with dorsal serration ..... ***Schoutedenichia (Pentachia)*** Vercammen-Grandjean, 1958
– Palpal tarsus with 4 branched setae 18
– Palpal tarsus with 4 branched setae and nude subterminala, scutum small, as wide as long, SD > AW, fPp usually N/N/NNN, galealae nude, fsp = 7.7.7 or 7.6.6, fCx = 1.1.(2–7). Intranasal parasites of mammals ..... ***Schoutedenichia (Nasichia)*** Vercammen-Grandjean, 1958

18. One genuala I, galealae always branched, PL setae sometimes foliate, Ip = 670–760 ..... ***Schoutedenichia (Platytrichia)*** Vercammen-Grandjean, 1960
– Two genualae I 19

19. AL > PL > AM ..... ***Schoutedenichia (Brennanichia)*** Vercammen-Grandjean, 1960
– PL > AL ..... ***Schoutedenichia (Schoutedenichia)*** Jadin & Vercammen-Grandjean, 1954

20. Palpal tarsus with 4–5 branched setae 21
– Palpal tarsus with 6–7 branched setae and sometimes nude subterminala 25

21. Cheliceral blade with one large dorsal hook, palpal claw 2-pronged (axial prong internal), galeal setae nude, scutum small, trapezoidal, elongated, longer than width, 3 genualae I ..... ***Holubicula*** Daniel & Vercammen-Grandjean, 1985
– Cheliceral blade with tricuspid cap, palpal claw 3-pronged 22

22. Scutum with reduced posterior angles (peniscutum), PL setae extrascutal ..... ***Trisetica*** Traub & Evans, 1950
– PL setae situated on scutum 23

23. Tarsala I in distal position (level of subterminala), sensillary bases situated close to each other ..... ***Helenicula*** Audy, 1954
– Tarsala I situated clearly posterior to level of subterminala 24

24. Scutum with cuticular striations around sensillary bases, fPp = B/B/NNB, galealae nude, mastitarsalae and mastitibialae ciliated in basal part sometimes present ..... ***Ornithogastia*** Vercammen-Grandjean, 1960
– Scutum without cuticular striations, galealae branched or nude, mastisetae absent ..... ***Susa*** Audy & Nadchatram, 1960

25. Palpal tarsus with 6 branched setae (6B), scutum with anterolateral shoulders, mastitarsala III usually present 26
– Palpal tarsus with 6 branched setae and nude subterminala (6BS), or 7B, or 7BS, scutum without anterolateral shoulders 27

26. Scutum subquadrate ..... ***Ascoschoengastia*** Ewing, 1946
– Scutum very long, with posterior margin extending far beyond level of PL setae (to level of 2nd row of dorsal setae), sensillary bases situated far anterior to PL and close to lateral scutal margins ..... ***Elianella*** Vercammen-Grandjean, 1956

27. Cheliceral blade serrate along its dorsal edge or having large dorsal and lateral hooks, palpal tarsus with 7 branched setae and nude subterminala, galealae nude, scutum subpentagonal, sensilla globose 28
– Cheliceral blade with tricuspid cap only, scutum trapezoidal 29

28. Cheliceral blade usually serrate on their dorsal edge, 2–3 genualae I ..... ***Schoengastia*** Oudemans, 1910
– Cheliceral blade with 2 large dorsal hooks and 1 lateral hook, 4–5 genualae I. Parasites of batrachians ..... ***Endotrombicula*** Ewing, 1931

29. Scutum with cuticular striations around sensillary bases, sensillary bases situated far anterior to PL, sensilla pyriform or globose. Parasites of birds ..... ***Neoschoengastia*** Ewing, 1929
– Scutum without cuticular striations or striated on its posterior half or margins 30

30. Eyes absent, legs with expanded (lanceolate) claws and empodia, tarsi with supplementary bars or semi-bars. Parasites of bats ..... ***Riedlinia*** Oudemans, 1914
– Eyes 2 + 2, leg claws unexpanded 31

31. Tarsala I long and slender, twice as long as tarsala II, scutum with concave lateral margins, sensilla fusiform, mastitarsala usually present. Parasites of bats ..... ***Trombigastia*** Vercammen-Grandjean & Brennan, 1957
– Tarsala I normal, scutum wider than long, with convex or biconvex posterior margin, sensilla globose to fusiform, sensillary bases often situated far apart (closer to lateral scutal margins than to each other), mastitarsala and mastitibiala sometimes present (genus *Herpetacarus*) 32

32. Palpal tarsus with 7 branched setae, sensilla globose or claviform, sensillary bases situated far apart ..... ***Herpetacarus (Abonnencia)*** Vercammen-Grandjean, 1960
– Palpal tarsus with 6 branched setae and nude subterminala, sensilla fusiform, sensillary bases situated not too far apart, mastisetae absent. Parasites of reptiles ..... ***Herpetacarus (Cricacarus)*** Vercammen-Grandjean, 1966
– Palpal tarsus with 7 branched setae and nude subterminala, sensilla fusiform, PL always longest scutal setae. Parasites of reptiles ..... ***Herpetacarus (Herpetacarus)*** Vercammen-Grandjean, 1960

33. Palpal tarsus with 5 branched setae, 3 genualae I. Parasites of bats 34
– Palpal tarsus with 6B, 7B or 7BS 35

34. Scutum subquadrate or subpentagonal, 2 genualae III (one genuala can be regarded as mastigenuala) ..... ***Sasatrombicula*** Vercammen-Grandjean, 1960
– Scutum trapezoidal, PL setae sometimes extrascutal (peniscutum), pretarsala I paired, subterminala and parasubterminala absent, tarsalae I and II long and slender ..... ***Grandjeana*** Koçak & Kemal, 2009

35. PL setae extrascutal (peniscutum) 36
– PL setae situated on scutum 37

36. Palpal claw 2-pronged, eyes 1 + 1 ..... ***Sauriscus*** Lawrence, 1949
– Palpal claw 3-pronged, eyes 2 + 2, palpal tarsus with 6 setae, galealae nude, 1 genuala I, genualae II and III absent, 2–3 mastitarsalae III and 1–2 mastitibialae III present ..... ***Zumptrombicula*** Vercammen-Grandjean, 1967

37. Palpal tarsus with 6 branched setae 38
– Palpal tarsus with 7 branched setae and sometimes with nude subterminala 40

38. Scutum without anterolateral shoulders, scutal and dorsal idiosomal setae expanded, rod-like, 5 genualae I, 2 genualae II, fCx = 1.3.3, Ip > 1300 ..... ***Multigniella*** Vercammen-Grandjean & Fain, 1957
– Scutum with anterolateral shoulders, scutal and dorsal idiosomal setae unexpanded, setiform, 2–3 genualae I, 1 genuala II, Ip = 400–900 39

39. Scutum trapezoidal, wider than long, eyes absent, 2 genualae III ..... ***Marcandrea*** Vercammen-Grandjean, 1960
– Scutum subtrapezoidal, subpentagonal or subquadrate, its length and width subequal, eyes usually 2 + 2, 1 genuala III ..... ***Microtrombicula*** Ewing, 1950

40. Genualae II and III absent, mastitarsala and mastitibiala III present, palpal claw 2-pronged ..... ***Blanciella*** Vercammen-Grandjean, 1960
– Genualae II and III present (genuala III absent in some *Miyatrombicula* only) 41

41. Cheliceral blade with large terminal hooks, tarsala I gigantic, much longer than tarsala II, 3–4 genualae I. Parasites of amphibians and reptiles ..... ***Vercammenia*** Audy & Nadchatram, 1957
– Cheliceral blade with tricuspid cap only, tarsala I gigantic, more than twice as long as tarsala II, 3 genuala I, galeal setae with one branch, fPp = B/N/NNB, scutum rectangular ..... ***Tanautarsala*** Vercammen-Grandjean, 1960
– Cheliceral blade with tricuspid cap only (rarely with few dorsal teeth), tarsala I not gigantic (except for *Blankaartia (Megaciella)*), 1–3 genualae I 42

42. Scutum rectangular or trapezoidal, with posterior margin sinuous, concave, slightly bilobate or almost straight 43
– Scutum subpentagonal or subhexagonal, with more or less prominent, rounded or angulate posterior margin 48

43. Mastitarsala III present, galeal setae nude, palpal claw 2-pronged, fPp = B/B/NNN or B/N/NNN, 3 genualae I, Ip = 1022–1455 ..... ***Whartonacarus*** Vercammen-Grandjean, 1960
– Femorala III present, galeal setae branched, palpal claw 3-pronged, fPp = N/N/NNN, 2 genualae I. Parasites of bats ..... ***Oudemansidium*** Vercammen-Grandjean & André, 1966
– Extra genuala III or mastigenuala III present, mastifemorala III present, galeal setae nude, palpal claw 3-pronged, fPp = N/N/NNN or B/N/NNN, 2 genualae I. Parasites of bats ..... ***Chiroptella*** Vercammen-Grandjean, 1960
– Mastisetae, extra genualae or femoralae absent 44

44. Scutum trapezoidal, with anterolateral shoulders (AL setae inserted on lateral scutal margins far from anterior scutal margin), galeal setae branched or nude, 3 or 2 genualae I. Parasites of bats ..... ***Myotrombicula*** Womersley & Heaslip, 1943
– Scutum without anterolateral shoulders (AL setae inserted in anterolateral angles of scutum), galeal setae always branched, 2 genualae I 45

45. Palpal tarsus with 7 branched setae and nude subterminala 46
– Palpal tarsus with 7 branched setae, without nude subterminala 47

46. Setae on palpal femur, genu and tibia nude (fPp = N/N/NNN). Parasites of bats, occasionally on other hosts ..... ***Willmannium*** Vercammen-Grandjean & Langston, 1976
– Palpal femoral seta always branched, palpal genual seta branched or nude ..... ***Ericotrombidium*** Vercammen-Grandjean, 1966

47. Palpal femoral and genual seta usually nude, dorsal palpal tibial seta usually branched ..... ***Leptotrombidium*** Nagayo, Miyagawa, Mitamura & Imamura, 1916
– Palpal femoral seta branched, palpal genual seta branched or nude, dorsal palpal tibial seta always nude ..... ***Hypotrombidium*** Vercammen-Grandjean, 1966

48. Scutum pentagonal, with pointed posterior margin and anterolateral shoulders, sensillary bases situated far apart and clearly anterior to PL, puncta on leg coxae arranged in longitudinal lines (genus *Blankaartia*) 49
– Scutum without anterolateral shoulders, puncta on leg coxae distributed irregularly 50

49. Galeal setae nude, rarely branched, posterior scutal margin rounded, AW nearly as large as PW, PL never as long as PW, leg tarsala I only slightly longer than leg tarsala II, Ip = 800–1100 ..... ***Blankaartia (Blankaartia)*** Oudemans, 1911
– Galeal setae branched, scutum striated, posterior scutal margin acute, PW much larger than AW, idiosomal setae slender and very long (> 70 μm), PL much longer than PW, leg tarsala I gigantic, at least twice as long as leg tarsala II, Ip = 1200–1520 ..... ***Blankaartia (Megaciella)*** Vercammen-Grandjean, 1960

50. Two or more additional setae present on posterior scutal margin and/or between scutal margin and eyes 51
– Scutum with 5 setae only (1 AM, 2 AL and 2 PL) 52

51. Scutum large, with prominent posterior margin, 4–10 PPL setae present, AL and PL situated close to each other ..... ***Heaslipia*** Ewing, 1944
– Scutum subpentagonal or nearly trapezoidal, with rounded posterior margin, two or more PPL or scuto-ocular setae present, AL and PL situated not close to each other ..... ***Xinjiangsha*** Wen & Shao, 1984

52. Palpal claw 2-pronged, galeal setae nude, scutum subtrapezoidal, with broadly rounded posterior margin ..... ***Eutrombicula*** Ewing, 1938
– Palpal claw 3-pronged 53

53. Scutum pentagonal, with prominent angulate posterior margin, palpal tarsus with 7B or 7BS, galeal setae branched or nude, fCx = 1.1.(1–9), mastitarsala I frequently present ..... ***Miyatrombicula*** Sasa, Kawashima & Egashira, 1952
– Scutum subpentagonal, with prominent rounded posterior margin, palpal tarsus with 7BS, galeal setae branched, legs long and thin, Ip = 883–1002, 1–2 mastitarsalae III present. Parasites of reptiles and birds ..... ***Pentidionis*** Vercammen-Grandjean & Loomis, 1967
– Scutum subhexagonal, wider than long, with rounded posterior margin, palpal tarsus with 7B, galeal setae nude or branched, 1–2 mastitarsalae III present or absent, mastitibiala sometimes present ..... ***Neotrombiculoides*** Vercammen-Grandjean, 1960
– Scutum subpentagonal, subquadrate, subhexagonal or subtrapezoidal, with rounded posterior margin, palpal tarsus with 7BS, galeal setae branched or nude, mastisetae present or absent 54

54. Galeal setae branched, fPp = B/B/NNB, scutum almost as wide as long, sensillary bases far anterior to PL, 3 genualae I, 1 mastitarsala III present or absent ..... ***Afrotrombicula*** Kolebinova & Vercammen-Grandjean, 1978
– Galeal setae branched or nude, scutum wider than long, sensillary bases usually at level of PL, slightly anterior or posterior of PL, 2–3 (rarely 1) genualae I, mastitarsala III usually present, additional 1–2 mastitarsalae, 1–2 mastitibialae, and 1 mastifemorala sometimes present ..... ***Neotrombicula*** Hirst, 1925

Systematics

Family Trombiculidae Ewing, 1944

Subfamily **Apoloniinae** Wharton, 1947

Diagnosis

Scutum with 1–2 AM setae + nasus or 2 AM setae without nasus, peniscutum in some genera, sensilla flagelliform or expanded, two anterior sternal setae, posterior sternal setae multiple in some genera, tracheae absent (present in *Arabapolonia*), legs 7-segmented (fsp = 7.7.7), onychotriches absent or present, microgenuala II present or absent.

Afracarella Vercammen-Grandjean & Kolebinova, 1968

Diagnosis

SIF = 6BS-N-2-2111.0000; fsp = 7.7.7; fSt = 2.2; fCx = 1.2.1; Ip = 640–670. Cheliceral blade with tricuspid cap only; galeal setae nude; palpal claw 2-pronged; palpal tarsus with 6 branched setae and nude subterminala. Scutum with biconvex posterior margin, with nasus, 2 AM, 2AL, 2 PL setae and expanded sensilla. Eyes 2 + 2; two anterior and two posterior sternal setae. Legs 7-segmented; 2 genualae I, microgenuala I and microgenuala II present; coxae I and III with 1 seta, coxa II with 2 setae.

Afracarella africana (Lawrence, 1949)

Sauracarella africana Lawrence, 1949: 451, fig. 37.

Sauracarella africana – Wharton & Fuller 1952: 91. — Zumpt 1961: 180.
Afracarella africana – Vercammen-Grandjean & Kolebinova 1968: 257, pl. F. — Brown 2006b: 222.

Syntypes

SAMC 8717 (Lawrence 1949); NMSA 8717 (Wharton & Fuller 1952; Vercammen-Grandjean & Kolebinova 1968).

Distribution

South Africa (Franschhoek, Knysna).

Host

Tetradactylus seps.

Afropolonia Goff, 1983

Diagnosis

SIF = 5BS-B-3-0001.0000; fsp = 7.7.7; fSt = 2.2; fCx = 1.1.1; Ip = 595–617. Cheliceral blade strongly recurved, lacking denticles; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 5 branched setae and nude subterminala. Scutum with reduced posterior angles (peniscutum), with nasus, 2 AM, 2 AL setae and flagelliform sensilla with basal barbs and distal branches; 2 PL setae extrascutal. Eyes 2 + 2; two anterior and two posterior sternal setae. Legs 7-segmented; subterminala and parasubterminala I absent; 1 microgenuala I, genuala I absent; genualae II and III absent; each leg coxa with 1 seta.

Remarks

The seta on genu I was regarded as genuala in the original description (Goff 1983b). On the base of its morphology and position, I believe it is microgenuala, like in *Straelensia* (Kudryashova 1998), while genuala I is absent.

Afropolonia tgifi Goff, 1983

Afropolonia tgifi Goff, 1983b: 2, fig. 1.

Afropolonia tgifi – Brown 2006b: 222.

Holotype

IRSNB.

Distribution

South Africa (Studers Pass).

Host

Micaelamys namaquensis.

Sauracarella Lawrence, 1949

Diagnosis

SIF = 7BS-N-2-3111.0000; fsp = 7.7.7; fSt = 2.2; fCx = 1.1.1; Ip = 620–650. Cheliceral blade with tricuspid cap only; galeal setae nude; palpal claw 2-pronged; palpal tarsus with 7 branched setae and nude subterminala. Scutum with very prominent and rounded posterior margin, with nasus, 2 AM, 2AL, 2 PL setae and expanded sensilla. Eyes 2 + 2; two anterior and two posterior sternal setae. Legs 7-segmented; parasubterminala I branched; 3 genualae I, microgenuala I and microgenuala II present; each leg coxa with 1 seta.

Sauracarella montana Lawrence, 1949

Sauracarella montanus Lawrence, 1949: 452, fig. 38.

Sauracarella montana – Wharton & Fuller 1952: 91. — Zumpt 1961: 180. — Vercammen-Grandjean & Kolebinova 1968: 257, pl. E. — Brown 2006b: 222.

Syntypes

SAMC 8388 (Lawrence 1949); NMSA 8388 (Wharton & Fuller 1952; Vercammen-Grandjean & Kolebinova 1968).

Distribution

South Africa (Mont-aux-Sources).

Host

Tropidosaura cottrelli.

Sauracarella whartoni Lawrence, 1949

Sauracarella whartoni Lawrence, 1949: 450, fig. 36.

Sauracarella whartoni – Wharton & Fuller 1952: 91. — Zumpt 1961: 180, fig. 99j. — Vercammen-Grandjean & Kolebinova 1968: 256, pl. E. — Brown 2006b: 222.

Syntypes

NMSA 4829.

Distribution

South Africa (Bushman's Nek Pass, Herschel).

Host

Pseudocordylus subviridis.

Straelensia Vercammen-Grandjean & Kolebinova, 1968

Anasuscuta Brown, 2009: 1, figs 1–2 **syn. nov**.

Diagnosis

SIF = 4BS-B(N)-3-0000.0000; fsp = 7.7.7; fSt = 2.2.n; fCx = 1.2.1; Ip = 500–700. Cheliceral blade with tricuspid cap only; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 4 branched setae and nude subterminala. Scutum with reduced posterior angles (peniscutum), with nasus (nasus absent in *S. monosetosa* (Brown, 2006) comb. nov.), 1 AM, 2 AL setae and flagelliform sensilla with basal barbs and distal branches; 2 PL setae extrascutal. Eyes 2 + 2; idiosomal setae numerous; two sternal setae between coxae I, two sternal setae between coxae II and many setae between coxae III; humeroventral setae situated between coxae II and III. Legs 7-segmented; pretarsala II absent; 1 microgenuala I, genualae I, II and III absent; tibiala III absent; coxae I and III with 1 seta, coxa II with 2 setae.

Remarks

The monotypic genus *Anasuscuta* Brown, 2009 differs from *Straelensia* in the absence of an anteromedian projection of scutum (nasus) only. This single case of reduction undoubtedly does not constitute a separate genus. I therefore regard *Anasuscuta* as a synonym of *Straelensia*.

Straelensia africana Vercammen-Grandjean, 1971

Straelensia africana Vercammen-Grandjean, 1971b: 99, figs 1–6.

Straelensia africana – Brown 2006b: 222.

Holotype

SAIMR.

Distribution

South Africa (Mafikeng).

Host

Galerella sanguinea.

Straelensia monosetosa (Brown, 2006) comb. nov.

Liuella monosetosa Brown, 2006b: 218, fig. 1.

Anasuscuta monosetosa – Brown 2009: 248.

Holotype

USNM.

Distribution

Morocco (Tazenakht, Aouinet Torkoz, Tuisgui Remz, Foum Zguid).

Hosts

Gerbillus sp., *Meriones libycus*.

Straelensia variocula Brown, 2006

Straelensia variocula Brown, 2006b: 218, fig. 2.

Holotype

USNM.

Distribution

Morocco (Fes Missour, Ouarzazate, Figuig), Burkina Faso (Natiaboani).

Hosts

Elephantulus rozeti (type host), *Genetta thierryi*, *Gerbillus* sp., *Meriones libycus*.

Vargatula Brennan & Yunker, 1966

Diagnosis

SIF = 5BS-N-3(4)-1001(0).0000; fsp = 7.7.7; fSt = 2.2.n; fCx = 1.2(1).1; Ip = 530–654. Cheliceral blade with 1 minute dorsal tooth only; galeal setae nude; palpal claw 3-pronged or 4-pronged; palpal tarsus with 5 branched setae and nude subterminala. Scutum with reduced posterior angles (peniscutum), without nasus, 2 AM, 2 AL setae, and flagelliform or slightly expanded heavily barbed sensilla; 2 PL setae extrascutal. Eyes 1 + 1 or absent; idiosomal setae numerous; two sternal setae between coxae I, two sternal setae between coxae II, and many setae between coxae III; humeroventral setae situated between coxae II and III. Legs 7-segmented; parasubterminala I absent; pretarsala II absent or present; 1 microgenuala I, 1 genuala I; genualae II and III absent; tibiala III present or absent; coxae I and III with 1 seta, coxa II with 2 or 1 setae.

Vargatula somaliensis Goff, 1983

Vargatula somaliensis Goff, 1983c: 618, fig. 1.

Vargatula somaliensis – Brown 2006b: 222.

Holotype

FMNH 74337.

Distribution

Somalia.

Host

Heterocephalus glaber.

Subfamily **Gahrliepiinae** Womersley, 1952

Diagnosis

Scutum without AM setae and nasus, its posterior margin in genera *Gahrliepia* Oudemans, 1912 and *Schoengastiella* Hirst, 1915 extends far beyond level of PLs to include two or more pairs of dorsal idiosomal setae, sensilla expanded, two anterior sternal setae, tracheae and stigmae absent, anterior legs 7-segmented, middle and posterior legs 6-segmented (fsp = 7.6.6), onychotriches absent, always 2 genualae I, microgenuala II absent, tibiala III absent.

Gahrliepia Oudemans, 1912

Diagnosis

SIF = 4B, 4BS, 5B, 6B-N(f)-3-2110.0000; fsp = 7.6.6. Cheliceral blade with tricuspid cap only; galeal setae nude, rarely forked; palpal claw 3-pronged; palpal tarsus with 4–6 branched setae, rarely with nude subterminala. Scutum with posterior margin extending far beyond level of PLs to include two or more pairs of dorsal idiosomal setae (usurped setae), AM setae absent, 2 AL and 2 PL setae, sensilla expanded, fusiform to globose. Eyes 2 + 2 or 1 + 1, rarely absent. Leg I 7-segmented, legs II and III 6-segmented; 2 genualae I; genuala II and III present; tibiala III absent.

Gahrliepia angolensis Taufflieb, 1965

Gahrliepia (Gahrliepia) angolensis Taufflieb, 1965a: 30, fig. 3.

Holotype

Museu do Dundo 17482-5.

Distribution

Angola (Dundo, Nhefo).

Hosts

Funisciurus bayonii, *Malacomys longipes*, *Praomys jacksoni.*

Gahrliepia bellieri Taufflieb, 1965

Gahrliepia (Gahrliepia) bellieri Taufflieb, 1965b: 516, fig. C.

Gahrliepia (Gahrliepia) bellieri – Whitaker *et al.* 1983: 31.
Gahrliepia (Giroudia) bellieri – Kolebinova & Vercammen-Grandjean 1978: 123.

Holotype

MNHN.

Distribution

Ivory Coast (Lamto), Nigeria (Ibadan).

Hosts

Crocidura sp. (type host), *Lophuromys sikapusi*.

Gahrliepia brennani (Jadin & Vercammen-Grandjean, 1952)

Giroudia brennani Jadin & Vercammen-Grandjean, 1952: 640, pl. 14.
Gahrliepia (Giroudia) traubi Audy, Lawrence & Vercammen-Grandjean in Zumpt, 1961: 174 (new name for *Giroudia brennani* Jadin & Vercammen-Grandjean, 1952) **syn. nov.**

Gateria (Gateria) brennani – Vercammen-Grandjean & Jadin 1956a: 360, figs 1–2.
Gateria (Giroudia) brennani – Taufflieb & Mouchet 1959: 243.
Gahrliepia (Giroudia) brennani – Kolebinova & Vercammen-Grandjean 1978: 123.

Gahrliepia (Gahrliepia) traubi – Taufflieb 1965b: 515.
Gahrliepia (Giroudia) traubi – Kolebinova & Vercammen-Grandjean 1978: 126.

Holotype

RMCA 76149.

Material revised

Holotype (not suitable for examination) and paratype (No. 76150, not suitable for examination), 47 specimens including 9 nymphs, not designated as paratypes, and 86 more specimens labeled as "*Gahrliepia (Giroudia) breunani*" [sic], all from RMCA.

Distribution

Rwanda (Butare), DR Congo (Beni, Bukavu, Lwiro, Kabunga).

Hosts

Atilax paludinosus, *Arvicanthis niloticus*, *Crocidura* sp., *Dasymys incomtus* (type host), *Lophuromys flavopunctatus*, *Mastomys natalensis*, *Mus triton*, *Oenomys hypoxanthus*, *Pelomys fallax*, *Stochomys longicaudatus.*

Remarks

The name *Gahrliepia (Giroudia) traubi* was proposed after 1960 to fix secondary homonymy with *Gahrliepia (Walchia) brennani* Womersley, 1952 (Zumpt 1961; Taufflieb 1965b), but in modern systems the genus *Walchia* separates from *Gahrliepia* (Kudryashova 1998; Fernandes & Kulkarni 2003; Stekolnikov & Daniel 2012). Thus, *Gahrliepia traubi* is synonymized here with *G. brennani* (Jadin & Vercammen-Grandjean, 1952) according to ICZN Code (Art. 59.4). Both names, *G. brennani* (Jadin & Vercammen-Grandjean, 1952) and *G. traubi* (Audy *et al.*, 1961), were used by Kolebinova & Vercammen-Grandjean (1978) simultaneously, without any discussion on their relation.

The deutonymph was described (Vercammen-Grandjean & Jadin 1956a).

Gahrliepia grenieri Taufflieb, 1965

Gahrliepia (Gahrliepia) grenieri Taufflieb, 1965b: 510, fig. A.

Gahrliepia (Gahrliepia) grenieri – Taufflieb *et al.* 1967: 121.

Holotype

MNHN.

Distribution

Central African Republic (Bangui).

Host

Crocidura sp.

Gahrliepia lawrencei Jadin & Vercammen-Grandjean, 1952

Gahrliepia lawrencei Jadin & Vercammen-Grandjean, 1952: 625, pl. 9.

Gahrliepia (Gahrliepia) lawrencei – Traub & Morrow 1955: 67, fig. 187. — Zumpt 1961: 174, fig. 97b–c. — Taufflieb 1965b: 515.

Holotype

RMCA 76131.

Material revised

Holotype, labeled as "*Gahrliepia laurencei*" [sic]. This slide includes in total six specimens of various chigger genera.

Distribution

Rwanda (Butare).

Host

Dasymys incomtus.

Gahrliepia liberiensis Kolebinova & Vercammen-Grandjean, 1978

Gahrliepia (Giroudia) liberiensis Kolebinova & Vercammen-Grandjean, 1978: 124, pl. 8.

Holotype

ZMUH.

Distribution

Liberia (Njebele).

Host

Lophuromys sikapusi.

Gahrliepia longiscutullata (Jadin & Vercammen-Grandjean, 1952)

Giroudia longiscutullata Jadin & Vercammen-Grandjean, 1952: 637, pl. 13.

Gahrliepia (Giroudia) longiscutullata – Zumpt 1961: 174. — Kolebinova & Vercammen-Grandjean 1978: 123.

Holotype

RMCA 76105.

Material revised

Holotype (not suitable for examination) and 30 paratypes from RMCA.

Distribution

Rwanda (Butare), DR Congo (Bukavu).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Crocidura* sp., *Dasymys incomtus*, *Mus triton*, *Otomys tropicalis* (original data), *O. irroratus* (Zumpt 1961).

Gahrliepia lundae Taufflieb, 1965

Gahrliepia (Gahrliepia) lundae Taufflieb, 1965a: 32, fig. 4.

Holotype

Museu do Dundo 17533-5.

Distribution

Angola (Dundo).

Host

Praomys jacksoni.

Gahrliepia megaspis Kolebinova & Vercammen-Grandjean, 1978

Gahrliepia (Gateria) megaspis Kolebinova & Vercammen-Grandjean, 1978: 122, pl. 7.

Holotype

ZMUH.

Distribution

Liberia (Njebele).

Host

Lophuromys sikapusi.

Gahrliepia micropotamogalei Nadchatram & Puylaert, 1987

Gahrliepia (Gahrliepia) micropotamogalei Nadchatram & Puylaert, 1987: 469, figs 1–8.

Holotype

RMCA 152.247.

Material revised

Holotype and three paratypes of the same accession number from RMCA.

Distribution

DR Congo (Tshabunda).

Host

Micropotamogale ruwenzorii.

Gahrliepia mireillae Taufflieb, 1965

Gahrliepia (Gahrliepia) mireillae Taufflieb, 1965b: 519, fig. D.

Gahrliepia (Giroudia) mireillae – Kolebinova & Vercammen-Grandjean 1978: 123.

Holotype

MNHN.

Distribution

Angola (Luita, Cuilo).

Hosts

Otomys anchietae, *Rhabdomys dilectus*.

Gahrliepia moucheti Vercammen-Grandjean, 1960

Gahrliepia moucheti Vercammen-Grandjean, 1960a: 214, figs 1–5.

Gahrliepia (Gahrliepia) moucheti – Taufflieb 1965b: 519.
Gahrliepia (Ozosetiella) moucheti – Kolebinova & Vercammen-Grandjean 1978: 127.

Holotype

No data.

Distribution

DR Congo (Lemera, Bukavu).

Host

Chrysochloris stuhlmanni.

Gahrliepia nana (Oudemans, 1910)

Typhlothrombium nanus Oudemans, 1910b: 105.

Typhlothrombium nanus – Oudemans 1912: 83, fig. U.
Gahrliepia nanus – Radford 1942: 64, fig. 33. — Thor & Willmann 1947: 333, fig. 398. — Lawrence 1951a: 117. — Fuller 1952: 213. — Traub & Morrow 1955: 52, figs 151–158.
Gahrliepia nana – Wharton & Fuller 1952: 93.
Gahrliepia (Gahrliepia) nana – Zumpt 1961: 174. — Taufflieb 1965b: 512.

Holotype

Private collection of Trägårdh, Stockholm (Oudemans 1912), lost (Fuller 1952), RMNH (Wharton & Fuller 1952).

Material revised

One specimen from RMCA (No. 74229), labeled as "*Gahrliepia nanus*" by the hand of Radford, not suitable for examination.

Distribution

South Africa (Durban, Johannesburg), Sierra Leone (Wellington). The last record is added on the basis of material revised.

Hosts

Cryptomys hottentotus, *Hipposideros caffer* (type host), *Mastomys erythroleucus*, *Micaelamys namaquensis.*

Gahrliepia philipi (Jadin & Vercammen-Grandjean, 1952)

Gateria philipi Jadin & Vercammen-Grandjean, 1952: 629, pl. 10.

Gahrliepia (Gahrliepia) philipi – Traub & Morrow 1955: 67, fig. 186. — Zumpt 1961: 174. — Taufflieb 1965b: 518.

Holotype

RMCA 76132.

Material revised

Holotype, not suitable for examination.

Distribution

Rwanda (Butare).

Host

Dasymys incomtus.

Gahrliepia pyriformis Nadchatram & Fain, 1980

Gahrliepia (Gahrliepia) pyriformis Nadchatram & Fain, 1980: 521, figs 1–8.

Holotype

RMCA 152.192.

Material revised

Holotype and two paratypes from RMCA, on the same slide as holotype but under a separate cover glass.

Distribution

DR Congo (Tshabunda).

Host

Micropotamogale ruwenzorii.

Gahrliepia ritae Taufflieb, 1962

Gahrliepia (Gahrliepia) ritae Taufflieb, 1962: 139, figs 2–3.

Gahrliepia (Gahrliepia) ritae – Taufflieb 1965a: 33; 1965b: 518.

Holotype

MNHN.

Distribution

Angola (Dundo, Nhefo), Congo (Pointe-Noire).

Hosts

Aethomys sp., *Colomys goslingi*, *Crocidura* sp., *Funisciurus bayonii*, *Grammomys dolichurus*, *Lophuromys aquilus* (type host), *Malacomys longipes*, *Mastomys natalensis*, *Praomys jacksoni*, *P. morio.*

Gahrliepia vincenti Taufflieb, 1965

Gahrliepia (Gahrliepia) vincenti Taufflieb, 1965b: 513, fig. B.

Holotype

MNHN.

Distribution

Congo (Nganga Lingolo).

Host

Grammomys poensis.

Schoengastiella Hirst, 1915

Diagnosis

SIF = 4B, 4BS, 5B-N-3-2110.0000; fsp = 7.6.6; fSt = 2.2; fCx = 1.1.1(2–n). Cheliceral blade with tricuspid cap only; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 4–5 branched setae, rarely with nude subterminala. Scutum with posterior margin extending beyond level of PLs to include one pair of dorsal idiosomal setae (usurped setae), AM setae absent, 2 AL and 2 PL setae, sensilla expanded, fusiform to globose. Eyes 2 + 2 or 1 + 1. Leg I 7-segmented, legs II and III 6-segmented; 2 (rarely 1) genualae I; genuala II and III present (rarely absent); tibiala III absent.

Schoengastiella adami (Taufflieb, 1964) comb. nov.

Gahrliepia (Schoengastiella) adami Taufflieb, 1964: 469, fig. 8.

Holotype

MNHN.

Distribution

Congo (Méya).

Host

Atherurus africanus.

Schoengastiella berriti (Taufflieb, 1964) comb. nov.

Gahrliepia (Schoengastiella) berriti Taufflieb, 1964: 461, fig. 3.

Holotype

MNHN.

Distribution

Congo (Pointe-Noire).

Host

Crocidura sp.

Schoengastiella caeca André, 1951

Schoengastiella caeca André, 1951b: 369, figs 1–4.

Schoengastiella caeca – André 1951c: 374. — Le Gac 1952a: 749.
Gahrliepia (Schoengastiella) caeca – Zumpt 1961: 173.
Schoengastiella (Dureniella) caeca – Kolebinova & Vercammen-Grandjean 1978: 117, pl. 6; 1980b: 71.
Gahrliepia (Schoengastiella) coeca [sic] – Taufflieb 1964: 460; 1965a: 30. — Taufflieb *et al.* 1967: 120.

Holotype

MNHN (Kolebinova & Vercammen-Grandjean 1978).

Distribution

Central African Republic (Sibut, Bangui, Soulemaka), Congo (Brazzaville), DR Congo (Libenge), Uganda (Buhugu), Angola (Dundo).

Hosts

Aethomys sp., *Crocidura olivieri occidentalis*, *Deomys ferrugineus*, *Mastomys natalensis*, *Mus (Nannomys)* sp., *Mylomys dybowskii*, *Oenomys hypoxanthus*, *Potamogale velox*, *Rattus rattus*, *Taterillus emini* (type host).

Schoengastiella chippauxi (Taufflieb, 1964) comb. nov.

Gahrliepia (Schoengastiella) chippauxi Taufflieb, 1964: 463, fig. 5.

Gahrliepia (Schoengastiella) chippauxi – Taufflieb *et al.* 1967: 120.

Holotype

MNHN.

Distribution

Central African Republic (Bangui).

Host

Crocidura sp.

Schoengastiella combesi (Taufflieb, 1964) comb. nov.

Gahrliepia (Schoengastiella) combesi Taufflieb, 1964: 468, fig. 7.

Gahrliepia (Schoengastiella) combesi – Taufflieb *et al.* 1967: 120.

Holotype

MNHN.

Distribution

Central African Republic (Bangui).

Hosts

Aethomys sp. (original data), *A. medicatus* (Taufflieb *et al.* 1967).

Schoengastiella sp. cf. ***combesi***

Gahrliepia (Schoengastiella) cf. *combesi* – Whitaker *et al.* 1983: 31.

Distribution

Nigeria (Ibadan).

Host

Rattus rattus.

Schoengastiella dureni Jadin & Vercammen-Grandjean, 1952

Schoengastiella dureni Jadin & Vercammen-Grandjean, 1952: 615, pl. 5.

Gahrliepia (Schoengastiella) dureni – Zumpt 1961: 173, fig. 97a. — Taufflieb 1964: 458.

Holotype

RMCA 76044.

Material revised

Holotype and three paratypes from RMCA, not suitable for examination.

Distribution

Rwanda (Butare).

Hosts

Crocidura sp., *Dasymys incomtus*.

Schoengastiella evillensis Vercammen-Grandjean, 1975

Schoengastiella (Audya) evillensis Vercammen-Grandjean, 1975: 402, fig. B1–7.

Holotype

RMCA 86407.

Material revised

Holotype and paratype (No. 86734–86738, not suitable for examination) from RMCA.

Distribution

DR Congo (Baya, Kikuswe).

Hosts

Grammomys dolichurus, *Mastomys natalensis*.

Schoengastiella hypoderma Vercammen-Grandjean, 1956

Schoengastiella (Jadiniella) hypoderma Vercammen-Grandjean, 1956c: 354, figs 1–2.

Gahrliepia (Jadiniella) hypoderma – Zumpt 1961: 173, fig. 97h–i.

Holotype

RMCA 82424.

Material revised

Holotype and 19 paratypes from RMCA, including nine nymphs.

Distribution

DR Congo (Bukavu, Lwiro).

Hosts

Lophuromys aquilus, *L. flavopunctatus*, *Mastomys natalensis*, *Stochomys longicaudatus*.

Remarks

The deutonymph was described (Vercammen-Grandjean 1956c).

Schoengastiella meyai (Taufflieb, 1964) comb. nov.

Gahrliepia (Schoengastiella) meyai Taufflieb, 1964: 456, fig. 1.

Holotype

MNHN.

Distribution

Congo (Méya).

Host

Atherurus africanus.

Schoengastiella nasicola (Vercammen-Grandjean, 1956)

Audya nasicola Vercammen-Grandjean, 1956b: 350.

Audya nasicola – Vercammen-Grandjean 1956a: 92, figs A–B.
Gahrliepia (Audya) nasicola – Zumpt 1961: 174, fig. 97f–g.
Audya nasicola – Taufflieb 1965a: 30.
Schoengastiella (Audya) nasicola – Vercammen-Grandjean 1975: 402, fig. B8.

Holotype

RMCA 82444.

Material revised

Holotype and four paratypes from RMCA.

Distribution

DR Congo (Mbandaka), Angola (Dundo).

Hosts

Potamogale velox, *Rattus rattus*.

Schoengastiella ocellata Kolebinova & Vercammen-Grandjean, 1978

Schoengastiella (Dureniella) ocellata Kolebinova & Vercammen-Grandjean, 1978: 113, pl. 4.

Holotype

ZMUH.

Distribution

Liberia (Njebele).

Host

Lophuromys sikapusi.

Schoengastiella pauliani (Taufflieb, 1964) comb. nov.

Gahrliepia (Schoengastiella) pauliani Taufflieb, 1964: 466, fig. 6.

Holotype

MNHN.

Distribution

Congo (Lac Cayo).

Host

Lophuromys sp.

Schoengastiella petteri (Taufflieb, 1964) comb. nov.

Gahrliepia (Schoengastiella) petteri Taufflieb, 1964: 458, fig. 2.

Holotype

MNHN.

Distribution

Congo (Inoni).

Host

Crocidura sp.

Schoengastiella rickenbachi (Taufflieb, 1964) comb. nov.

Gahrliepia (Schoengastiella) rickenbachi Taufflieb, 1964: 463, fig. 4.

Gahrliepia (Schoengastiella) rickenbachi – Taufflieb *et al.* 1967: 121.

Holotype

MNHN.

Distribution

Central African Republic (Bangui).

Hosts

Aethomys sp. (original data), *A. medicatus* (Taufflieb *et al.* 1967).

Schoengastiella subcaeca Kolebinova & Vercammen-Grandjean, 1978

Schoengastiella (Dureniella) subcaeca Kolebinova & Vercammen-Grandjean, 1978: 115, pl. 5.

Holotype

ZMUH.

Distribution

Liberia (Njebele).

Host

Lophuromys sikapusi.

Schoengastiella tauffliebi Lavoipierre, 1955

Schoengastiella tauffliebi Lavoipierre, 1955: 124, figs 4–9.

Schoengastiella tauffliebi – Taufflieb 1961: 582, fig. 3.
Gahrliepia (Schoengastiella) tauffliebi – Taufflieb 1964: 461.

Holotype

MNHN (Taufflieb 1964).

Distribution

Congo (Brazzaville).

Hosts

Mastomys coucha, *Praomys jacksoni* (original data), *P. tullbergi* (Taufflieb 1964).

Schoengastiella teras Kolebinova, 1984

Schoengastiella (Schoengastiella) teras Kolebinova, 1984b: 105, figs 1–5.

Holotype

SMF pA.64.1983.1.

Distribution

Gabon (Makokou).

Host

Atherurus africanus.

Schoengastiella vattierae (Taufflieb, 1964) comb. nov.

Gahrliepia (Schoengastiella) vattierae Taufflieb, 1964: 472, fig. 9.

Gahrliepia (Schoengastiella) vattierae – Taufflieb *et al.* 1967: 121.

Holotype

MNHN.

Distribution

Central African Republic (M'Baiki, Boukoko).

Host

Chiroptera gen. sp.

Schoengastiella wansoni Wolfs & Vercammen-Grandjean, 1953

Schoengastiella wansoni Wolfs & Vercammen-Grandjean, 1953: 207, figs 1–7.

Gahrliepia (Schoengastiella) wansoni – Zumpt 1961: 173. — Taufflieb 1964: 460.

Holotype

RMCA (not found).

Material revised

One specimen from RMCA (No. 82324), ex *Pelomys fallax*, collected 9 October 1953, designated as "topotype 8", labeled by the hand of Vercammen-Grandjean, not suitable for examination. One specimen from BMNH (1956.9.15.60), ex *Crocidura* sp., collected 22 February 1954, designated as "topotype 25".

Distribution

DR Congo (Bukavu). This species was also recorded in Kyrgyzstan (Osh and Aravan) on *Crocidura suaveolens* and *Meriones libycus* (Kudryashova 1998).

Hosts

Crocidura sp., *Pelomys fallax*, *Rattus rattus* (type host). The first two records are added on the basis of material revised.

Remarks

Described from a single specimen.

Walchia Ewing, 1931

Diagnosis

SIF = 4(5)B-N-3-2(1)110.0000; fsp = 7.6.6; fSt = 2.2; fCx = 1.1.1; Ip = 320–800. Cheliceral blade with tricuspid cap, but dorsal cuspid can look like large hook (Stekolnikov & Daniel 2012; Chaisiri *et al.* 2016); galeal setae nude; palpal claw 3-pronged; palpal femoral, genual and tibial setae usually nude; palpal tarsus with 4–5 branched setae. Scutum subpentagonal, with posterior margin angulate or rounded, AM setae absent, 2 AL and 2 PL setae, sensilla expanded, fusiform to globose. Eyes 2 + 2 or 1 + 1, rarely absent. Leg I 7-segmented, legs II and III 6-segmented; 2 (sometimes 1) genualae I; genuala II and III present (rarely absent); tibiala III absent.

Walchia acutalis (Jadin, Vercammen-Grandjean, Herman, Thienpont & Fain, 1954) comb. nov.

Fainiella womersleyi var. *acutalis* Jadin, Vercammen-Grandjean, Herman, Thienpont & Fain, 1954 in Jadin *et al.* 1954b: 9, figs A–E.

Gahrliepia (Fainiella) acutalis – Vercammen-Grandjean & Fain 1957a: 286, fig. 1Fa. — Zumpt 1961: 173.

Holotype

RMCA 80561.

Material revised

Holotype.

Distribution

Rwanda (Akanyaru River).

Host

Dendrohyrax arboreus.

Walchia felis (Vercammen-Grandjean & Fain, 1957) comb. nov.

Gahrliepia (Fainiella) felis Vercammen-Grandjean & Fain, 1957a: 287, fig. 1Ff.

Gahrliepia (Fainiella) felis – Zumpt 1961: 173.

Holotype

No data.

Distribution

Rwanda (Mugesera).

Hosts

Felis silvestris lybica (Zumpt 1961), *F. silvestris ugandae* (original data).

Walchia katangaensis Vercammen-Grandjean, 1975

Walchia (Fainiella) womersleyi katangaensis Vercammen-Grandjean, 1975: 398, fig. A.

Holotype

RMCA 144.731.

Material revised

Holotype and three paratypes from RMCA.

Distribution

DR Congo (Baya).

Host

Cricetomys ansorgei.

Walchia manis (Vercammen-Grandjean & Fain, 1957) comb. nov.

Gahrliepia (Fainiella) manis Vercammen-Grandjean & Fain, 1957a: 288, fig. 1Fm.

Gahrliepia (Fainiella) manis – Zumpt 1961: 173.

Holotype

No data.

Distribution

DR Congo (Bukavu).

Host

Manis tricuspis.

Walchia womersleyi (Vercammen-Grandjean, 1953)

Fainiella womersleyi Vercammen-Grandjean, 1953: 19, figs A–G.

Fainiella womersleyi – Vercammen-Grandjean 1954: 29, figs A–B.
Gahrliepia (Fainiella) womersleyi – Vercammen-Grandjean & Fain 1957a: 285, figs 1–2Fw. — Zumpt 1961: 173, fig. 97d–e.
Walchia (Fainiella) womersleyi – Vercammen-Grandjean 1975: 398.

Holotype

RMCA 76151.

Material revised

Holotype, 34 paratypes from RMCA, including three nymphs, and 24 more specimens, including two nymphs, labeled as "*Fainiella wormersleyi*" [sic].

Distribution

Rwanda (Butare).

Hosts

Cricetomys emini (original data), *C. gambianus* (Zumpt 1961).

Remarks

The deutonymph was described (Vercammen-Grandjean 1954; Vercammen-Grandjean & Fain 1957a).

Subfamily **Leeuwenhoekiinae** Womersley, 1944

Diagnosis

Scutum with 2 AM setae, with or without nasus, sensilla flagelliform, anterior sternal setae absent, always two posterior sternal setae (fSt = 0.2), tracheae and stigmae present or absent, all legs 6-segmented (fsp = 6.6.6), onychotriches present or absent, two coxal setae I, microgenuala II present.

Acomatacarus Ewing, 1942

Diagnosis

SIF = 6B-B-(2-8)-2(1)1(0)1(0)1.0(1)000; fsp = 6.6.6; fSt = 0.2; fCx = 2.1.1; Ip = 800–1020. Cheliceral blade with ventral row of denticles and dorsal teeth; galeal setae branched; palpal claw with different number of prongs (from 2 to 8); palpal tarsus with 6 branched setae. Tracheae and stigmae present. Scutum nearly trapezoidal, with nasus and rounded posterior margin, 2 AM, 2 AL, and 2 PL setae, sensilla flagelliform, usually ciliated. Legs 6-segmented; leg claws often with 2 conspicuous onychotriches; parasubterminala barbed or absent; tarsala II with more or less expanded apex; 2 (sometimes 1) genualae I; genuala II and III present or absent; tibiala III present; tarsala III or mastitarsala III sometimes present.

Remarks

Acomatacarus differs from *Odontacarus* Ewing, 1929 by a single trait (palpal tarsus bearing 6 vs 7 branched setae) and is thus frequently regarded as a synonym of the latter (Fernandes & Kulkarni 2003).

Acomatacarus gateri (Radford, 1942)

Leeuwenhoekia gateri Radford, 1942: 70, fig. 69.

Acomatacarus gateri – Radford 1947: 583, figs 5–6.
Acomatacarus (Acomatacarus) gateri – Wharton & Fuller 1952: 98. — Zumpt 1961: 177.

Holotype

BMNH 1946.12.18.2.

Material revised

Holotype.

Distribution

South Africa (Holfontein).

Hosts

Gerbilliscus afra (Zumpt 1961), *G. brantsii* (original data).

Acomatacarus geckobius Lawrence, 1949

Acomatacarus geckobius Lawrence, 1949: 454, fig. 40.

Acomatacarus (Acomatacarus) geckobius – Wharton & Fuller 1952: 98. — Zumpt 1961: 177.

Syntypes

TMSA 7.

Distribution

Namibia (Kamanjab).

Hosts

Pachydactylus bicolor, *Rhoptropus barnardi*.

Acomatacarus jaegerskioeldi (Oudemans, 1911)

Leeuwenhoekia jaegerskioeldi Oudemans, 1911: 138.

Leeuwenhoekia jaegerskioeldi – Oudemans 1912: 79, fig. T. — Radford 1942: 70, fig. 67. — Thor & Willmann 1947: 322, fig. 383.
Acomatacarus jaegerskioeldi – Fuller 1952: 230.
Acomatacarus (Acomatacarus) jaegerskioeldi – Wharton & Fuller 1952: 99.

Holotype

Private collection of Trägårdh, Stockholm (Oudemans 1912), lost (Fuller 1952), RMNH (Wharton & Fuller 1952).

Distribution

Egypt (Helwan).

Host

Unknown (the species was described from free larvae).

Acomatacarus lacertae Lawrence, 1949

Acomatacarus lacertae Lawrence, 1949: 457, fig. 42.

Acomatacarus (Acomatacarus) lacertae – Wharton & Fuller 1952: 99. — Zumpt 1961: 177.

Syntypes

SAMC 7805.

Distribution

South Africa (Cold Bokkeveld).

Hosts

Pedioplanis lineoocellata pulchella (original data), *P. lineoocellata* (Zumpt 1961).

Acomatacarus mabuyana Lawrence, 1949

Acomatacarus mabuyana Lawrence, 1949: 456, fig. 41.

Acomatacarus (Acomatacarus) mabuyana – Wharton & Fuller 1952: 99. — Zumpt 1961: 177.

Syntypes

NMSA 4807.

Material revised

Two paratypes from BMNH (1957.8.12.26 and 1957.8.12.27).

Distribution

Zimbabwe (Bulawayo).

Host

Trachylepis varia.

Acomatacarus maroccanus Taufflieb, 1958

Acomatacarus maroccanus Taufflieb, 1958a: 630, pl. 5.

Holotype

No data.

Distribution

Morocco (Oued Cherrat).

Hosts

Agama impalearis, *Lemniscomys barbarus*, *Oryctolagus cuniculus.*

Acomatacarus mutabilis Vercammen-Grandjean & Brennan, 1957

Acomatacarus (Acomatacarus) mutabilis Vercammen-Grandjean & Brennan, 1957: 487, fig. 8.

Acomatacarus (Acomatacarus) mutabilis – Zumpt 1961: 177, fig. 98a–e.

Holotype

Private collection of Vercammen-Grandjean.

Distribution

Uganda (Kaabong).

Host

Procaviidae gen. sp.

Acomatacarus namaquensis Lawrence, 1949

Acomatacarus namaquensis Lawrence, 1949: 457, fig. 43.

Acomatacarus (Acomatacarus) namaquensis – Wharton & Fuller 1952: 99. — Zumpt 1961: 177.

Syntypes

NMSA 4875.

Distribution

South Africa (Soebatsfontein).

Host

Gerrhosaurus typicus.

Acomatacarus nicollei Vercammen-Grandjean, 1956

Acomatacarus nicollei Vercammen-Grandjean, 1956d: 84, pl. 4.

Holotype

No data.

Distribution

Morocco (Oued Cherrat).

Host

Rattus rattus.

Acomatacarus tenuitarsus Lawrence, 1949

Acomatacarus tenuitarsus Lawrence, 1949: 458, fig. 44.

Acomatacarus (Acomatacarus) tenuitarsus – Wharton & Fuller 1952: 100.

Syntypes

NMSA 4813.

Distribution

Zimbabwe (Beitbridge).

Host

Trachylepis varia.

Acomatacarus thallomyia Radford, 1947

Acomatacarus thallomyia Radford, 1947: 581, figs 3–4.

Acomatacarus (Acomatacarus) thallomyia – Wharton & Fuller 1952: 100. — Zumpt 1961: 177.

Holotype

BMNH 1948.2.3.27.

Material revised

Holotype. One paratype from RMCA (No. 80611).

Distribution

South Africa (Glen Craig).

Host

Micaelamys namaquensis.

Acomatacarus theileri Radford, 1947

Acomatacarus theileri Radford, 1947: 580, figs 1–2.

Acomatacarus (Acomatacarus) theileri – Wharton & Fuller 1952: 100. — Zumpt 1961: 177.

Holotype

BMNH 1948.2.3.26.

Material revised

Holotype.

Distribution

South Africa (Grahamstown).

Host

Saccostomus campestris.

Austracarus Lawrence, 1949

Diagnosis

SIF = 7B-N(B)-2(3)-2111.0(1)000; fsp = 6.6.6; fSt = 0.2; fCx = 2.1.1; Ip = 734–953. Cheliceral blade with large apical cap bearing numerous lateral teeth; galeal setae nude or branched; palpal claw divided by 2 or 3 prongs; palpal tarsus with 7 branched setae. Scutum much wider than long, in shape of crescent, with nasus, 2 AM, 2 AL, and 2 PL setae, sensilla flagelliform, nude or ciliated. Dorsal idiosomal setae sometimes expanded. Eyes 2 + 2; tracheae and stigmae absent. Legs 6-segmented; onychotriches absent; parasubterminala I present or absent; 2 genualae I; genuala II and III present; tibiala III present; mastitarsala III sometimes present.

Austracarus campestris Goff, 1990

Austracarus campestris Goff, 1990: 201, fig. 1.

Holotype

USNM.

Distribution

South Africa (Boegoeberg Dam).

Host

Raphicerus campestris.

Remarks

Described from a single specimen.

Austracarus dendrohyracis (Vercammen-Grandjean, 1957)

Acomatacarus (Austracarus) dendrohyracis Vercammen-Grandjean, 1957: 17, pl. 2.

Acomatacarus (Austracarus) dendrohyracis – Zumpt 1961: 178, fig. 99f–g.
Austracarus dendrohyracis – Vercammen-Grandjean & Watkins 1965b: 487, pls 1–2.

Holotype

RMCA 82787.

Material revised

Holotype and 41 paratypes from RMCA, including one nymph, labeled as "*Acomatacarus (Austracarus) dendrohyrax*" [sic].

Distribution

Rwanda (Gisenyi), DR Congo (Lemera, Rugari).

Hosts

Dendrohyrax sp. (original data), *D. arboreus* (Zumpt 1961; Vercammen-Grandjean & Watkins 1965b), *Sciurus* sp.

Remarks

The deutonymph was described (Vercammen-Grandjean & Watkins 1965b).

Austracarus lukoschusi Goff, 1983

Austracarus lukoschusi Goff, 1983g: 335, fig. 1.

Holotype

SAIMR.

Distribution

South Africa (Diepwalle).

Host

Myosorex varius.

Austracarus masonae Goff, 1983

Austracarus masonae Goff, 1983g: 337, fig. 2.

Holotype

SAIMR.

Distribution

South Africa (Diepwalle).

Host

Myosorex varius.

Austracarus polydiscum (Oudemans, 1910)

Heterothrombidium polydiscum Oudemans, 1910b: 105.

Leeuwenhoekia polydiscum – Oudemans 1912: 77, fig. S. — Radford 1942: 68, fig. 66. — Thor & Willmann 1947: 322, fig. 384.
Austracarus polydiscum – Lawrence 1951a: 117.
Acomatacarus polydiscum – Fuller 1952: 232.
Acomatacarus (Austracarus) polydiscum – Wharton & Fuller 1952: 100. — Zumpt 1961: 178.

Holotype

Private collection of Trägårdh, Stockholm (Oudemans 1912), lost (Fuller 1952), RMNH (Wharton & Fuller 1952).

Distribution

South Africa (Durban, Pietermaritzburg).

Hosts

Cryptomys hottentotus, *Hipposideros caffer* (type host).

Austracarus procaviae Lawrence, 1949

Austracarus procaviae Lawrence, 1949: 417, fig. 7

Austracarus procaviae – Lawrence 1951a: 117.
Acomatacarus (Austracarus) procaviae – Wharton & Fuller 1952: 100. — Zumpt 1961: 178.

Syntypes

NMSA 3795.

Distribution

South Africa (Howick, Champagne Castle).

Hosts

Crocidura flavescens, *Procavia capensis* (type host).

Austracarus wittebolsi (Vercammen-Grandjean, 1959) comb. nov.

Acomatacarus (Austracarus) wittebolsi Vercammen-Grandjean, 1959: 253, figs A–G.

Holotype

RMCA 113925.

Material revised

Holotype.

Distribution

DR Congo (Lemera).

Host

Chrysochloris stuhlmanni.

Austrombicula Lawrence, 1949

Diagnosis

Description of this monotypic genus is very incomplete. It resembles generally *Austracarus*, but is distinguished in expanded PL and dorsal idiosomal setae bearing giant branches.

Austrombicula womersleyi (Lawrence, 1948)

Leeuwenhoekia womersleyi Lawrence, 1948: 41, figs 7–8.

Austrombicula womersleyi – Lawrence 1949: 420, fig. 8.
Acomatacarus (Austrombicula) womersleyi – Wharton & Fuller 1952: 101. — Zumpt 1961: 178.

Holotype

NMSA (Wharton & Fuller 1952).

Distribution

South Africa (Curry's Post).

Host

Amblysomus hottentotus longiceps.

Hyracarus Lawrence, 1949

Diagnosis

Similar to *Acomatacarus*, but differs in the absence of tracheae and stigma, the absence of dorsal teeth on cheliceral blade and in having nude (vs usually ciliated) sensilla.

Hyracarus claviglis (Vercammen-Grandjean, 1955) comb. nov.

Acomatacarus (Hyracarus) claviglis Vercammen-Grandjean, 1955: 183, fig. 1.

Acomatacarus (Hyracarus) claviglis – Zumpt 1961: 177.

Holotype

No data.

Distribution

DR Congo (Kabunga).

Host

Graphiurus murinus.

Hyracarus lawrencei (Radford, 1948) comb. nov.

Acomatacarus lawrencei Radford, 1948: 215, figs 5–6.

Acomatacarus (Hyracarus) lawrencei – Wharton & Fuller 1952: 101. — Zumpt 1961: 177.

Holotype

BMNH 1948.2.3.36.

Material revised

Holotype.

Distribution

South Africa (Glen Craig).

Host

Micaelamys namaquensis.

Hyracarus lemniscomyia (Vercammen-Grandjean, 1957) comb. nov.

Acomatacarus (Hyracarus) lemniscomyia Vercammen-Grandjean, 1957: 15, pl. 1.

Acomatacarus (Hyracarus) lemniscomyia – Zumpt 1961: 177, fig. 99h.
Odontacarus (Hyracarus) lemniscomyia – Taufflieb 1965a: 34.

Holotype

RMCA (not found).

Distribution

Angola (Alto Chicapa).

Host

Lemniscomys striatus.

Hyracarus longipilosus Lawrence, 1949

Hyracarus longipilosus Lawrence, 1949: 422, fig. 10.

Acomatacarus (Hyracarus) longipilosus – Wharton & Fuller 1952: 101. — Zumpt 1961: 177.

Holotype

NMSA 4906.

Distribution

South Africa (Cedara).

Host

Procavia capensis.

Hyracarus natalensis Lawrence, 1949

Hyracarus natalensis Lawrence, 1949: 459, fig. 45.

Acomatacarus (Hyracarus) natalensis – Wharton & Fuller 1952: 101. — Zumpt 1961: 178.

Syntypes

NMSA 4824.

Material revised

Two paratypes from BMNH (1957.8.12.44 and 1957.8.12.45).

Distribution

South Africa (Giants Castle, Dargle).

Host

Trachylepis striata.

Hyracarus typicus Lawrence, 1949

Hyracarus typicus Lawrence, 1949: 420, fig. 9.

Acomatacarus (Hyracarus) typicus – Wharton & Fuller 1952: 101. — Zumpt 1961: 178.

Syntypes

NMSA 4905.

Material revised

One paratype from BMNH (1957.8.12.47).

Distribution

South Africa (Cedara).

Host

Procavia capensis.

Mastalacarus Goff & Lukoschus, 1983

Diagnosis

SIF = 5B-B-2-1011.5322; fPp = B/B/BBB; fsp = 6.6.6; fSt = 0.2; fCx = 2.1.1; Ip = 715–743. Cheliceral blade with dorsal subapical tooth and ventral teeth; galeal setae branched; palpal claw 2-pronged, axial prong internal; palpal tarsus with 5 branched setae. Scutum pentagonal, with nasus, 2 AM, 2 AL and 2 PL setae; sensilla flagelliform, with barbs in proximal ⅔. Eyes 2 + 2; tracheae and stigmae absent; 2 pairs of ventrohumeral setae between coxae II and III. Legs 6-segmented, onychotriches absent, parasubterminala I present, 1 genuala I, genuala II absent, genuala and tibiala III present, multiple mastisetae on leg III.

Mastalacarus namibiensis Goff & Lukoschus, 1983

Mastalacarus namibiensis Goff & Lukoshus, 1983: 2, fig. 1.

Mastalacarus namibiensis – Goff 1989: 119.

Holotype

USNM.

Distribution

Namibia (Aroab).

Host

Elephantulus intufi.

Matacarus Vercammen-Grandjean, 1956

Diagnosis

SIF = 7B-B-(2-8)-2(1)111.0(1)0(2)00; fsp = 6.6.6; fSt = 0.2; fCx = 2.1.1. Cheliceral blade with dorsal and ventral rows of teeth; galeal setae branched; palpal claw divided by 2–8 prongs; palpal tarsus with 7 branched setae. Scutum subpentagonal, with rounded posterior margin, with nasus, 2 AM, 2 AL and 2 PL setae; sensilla flagelliform, branched in distal half. Eyes 2 + 2; tracheae and stigmae present. Legs 6-segmented, onychotriches present, subterminala and parasubterminala I present or absent, 1–2 genualae I, genualae II and III present, tibiala III present, mastitarsala present or absent, mastitibialae sometimes present. Parasites of reptiles.

Matacarus agamae (Taufflieb, 1960)

Odontacarus agamae Taufflieb, 1960a: 38, pl. 5.

Matacarus agamae – Kudryashova 1998: 54.

Holotype

No data.

Distribution

Morocco (Assa).

Host

Agama impalearis.

Matacarus buretti (Vercammen-Grandjean, 1956)

Acomatacarus (Matacarus) buretti Vercammen-Grandjean, 1956f: 625, figs 1–3.

Acomatacarus (Matacarus) buretti – Zumpt 1961: 176, fig. 99a–e.
Matacarus buretti – Kudryashova 1998: 54.

Holotype

RMCA 82778.

Material revised

Holotype (not suitable for examination) and 8 paratypes from RMCA.

Distribution

DR Congo (Kindu).

Host

Lepidothyris fernandi.

Matacarus ediosi (Taufflieb & Mouchet, 1962)

Odontacarus (Matacarus) ediosi Taufflieb & Mouchet, 1962: 354, fig. 5.

Matacarus idiosi [sic] – Kudryashova 1998: 54.

Holotype

Private collection of Taufflieb.

Distribution

Cameroon (Maroua).

Host

Psammophis sibilans.

Tateracarus Goff, 1983

Diagnosis

SIF = 4B-B-3-2111.0000; fPp = B/B/BfB; fsp = 6.6.6; fSt = 0.2; fCx = 2.1.1; Ip = 695–706. Cheliceral blade with dorsal subapical tooth and ventral row of teeth; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 4 branched setae. Scutum with rounded posterior margin, with nasus, 2 AM, 2 AL and 2 PL setae; AM setae with an accessory branch; sensilla flagelliform, nude. Eyes 2 + 2; 2 pairs of humeral setae; tracheae and stigmae absent. Legs 6-segmented, onychotriches absent, parasubterminala I absent, 2 genualae I, genualae II and III present, tibiala III present, mastisetae absent.

Tateracarus quadrisetosus Goff, 1983

Tateracarus quadrisetosus Goff, 1983f: 2, fig. 1.

Tateracarus quadrasetosa [sic] – Goff 1989: 124.

Holotype

USNM.

Distribution

Namibia (Aminuis).

Host

Gerbilliscus leucogaster.

Whartonia Ewing, 1944

Diagnosis

SIF = 7B-B(N)-(2-8)-2111.0(1)1(0)00; fsp = 6.6.6; fSt = 0.2; fCx = 2.1.1; Ip = 1000–2550. Cheliceral blade long, with large, recurved ventral row of teeth and dorsal teeth or hooks; galeal setae branched or nude; palpal claw divided by 2–8 prongs; palpal tarsus with 7 branched setae. Scutum wide, sometimes striplike, without nasus, with 2 AM, 2 AL and 2 PL setae; sensilla flagelliform. Eyes 2 + 2; tracheae and

stigmae absent or present. Legs 6-segmented, onychotriches absent, subterminala and parasubterminala I present, 2 genualae I, genuala II, genuala and tibiala III present, mastitarsala or solenidion III sometimes present, mastitibiala rarely present. Parasites of bats.

Whartonia atracheata Taufflieb & Mouchet, 1959

Whartonia atracheata Taufflieb & Mouchet, 1959: 243, pl. 7.

Whartonia atracheata – Zumpt 1961: 178.

Holotype

No data.

Distribution

Cameroon (Yaoundé).

Host

Hipposideros caffer.

Whartonia lepidopteriscuta Vercammen-Grandjean, 1965

Whartonia lepidopteriscuta Vercammen-Grandjean, 1965d: 326, figs 1–6.

Whartonia lepidopteriscuta – Goff 1982: 379.

Holotype

RMCA 92995.

Material revised

Holotype (not suitable for examination) and 72 more specimens from RMCA not designated as paratypes.

Distribution

DR Congo (Irangi, colline Mabondo).

Host

Hipposideros ruber ruber.

Whartonia novemsetosa Goff, 1982

Whartonia novemsetosa Goff, 1982: 376, fig. 2.

Holotype

BPBM 12148.

Distribution

Tanzania (Ladder Cove Cave).

Host

Rousettus aegyptiacus.

Whartonia oweni Vercammen-Grandjean & Brennan, 1957

Whartonia oweni Vercammen-Grandjean & Brennan, 1957: 495, fig. 9.

Whartonia oweni – Taufflieb & Mouchet 1959: 243. — Zumpt 1961: 179, figs 98f, 100. — Taufflieb 1965a: 34. — Taufflieb *et al.* 1967: 121. — Goff 1982: 379.

Holotype

FMNH.

Distribution

South Sudan (Imatong Mountains, Torit, Juba), Cameroon (Yaoundé), Angola (Dundo), Central African Republic (Bangui), Tanzania (Kisarawe).

Hosts

Hipposideros caffer, *H. ruber*, *Nycteris thebaica*, *Rhinolophus eloquens*, *Rousettus* sp. (type host), *Triaenops persicus afer.*

Subfamily **Trombiculinae** Ewing, 1929

Diagnosis

Scutum with 1 AM seta, without nasus, sensilla flagelliform or expanded, two anterior sternal setae, tracheae and stigmae absent, all legs 7-segmented (fsp = 7.7.7; 7.6.6 or 6.6.6 in some rare cases), onychotriches absent, microgenuala II absent.

Tribe Schoengastiini Vercammen-Grandjean, 1960

Ascoschoengastia Ewing, 1946

Diagnosis

SIF = 6B-N-3(2)-3(2)111.1(0)000; fsp = 7.7.7; Ip = 460–900. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw divided by 2–3 prongs; palpal tarsus with 6 branched setae. Scutum subquadrate, subpentagonal or subrectangular, with anterolateral shoulders, with 1 AM, 2 AL and 2 PL setae; AM anterior to AL, sensillary bases far anterior to PL; sensilla clavate, covered with setules. Eyes 2 + 2, 1 + 1 or absent. Legs 7-segmented, 2–3 genualae I, mastitarsala usually present.

Ascoschoengastia aenigma (Lawrence, 1949)

Eutrombicula aenigma Lawrence, 1949: 447, fig. 34.

Trombicula (Trombicula) aenigma – Wharton & Fuller 1952: 62.
Trombicula aenigma – Audy & Vercammen-Grandjean 1961a: 131. — Zumpt 1961: 137.
Ascoschoengastia (Ascoschoengastia) oenigma [sic] – Vercammen-Grandjean 1965c: 92.

Syntypes

NMSA 4813.

Distribution

Zimbabwe (Beitbridge).

Host

Trachylepis varia.

Ascoschoengastia browni Taufflieb, Mouchet & Courtois, 1972

Ascoschoengastia browni Taufflieb, Mouchet & Courtois, 1972: 61, fig. 2.

Holotype

MNHN.

Distribution

Djibouti (Tadjoura).

Host

Procavia sp.

Ascoschoengastia lumsdeni Vercammen-Grandjean, 1960

Ascoschoengastia (Paralaurentella) lumsdeni Vercammen-Grandjean, 1960d: 62, fig. 6.

Ascoschoengastia (Ascoschoengastia) lumsdeni – Vercammen-Grandjean 1965c: 91.

Holotype

No data.

Distribution

Tanzania (Pemba Island).

Host

Rodentia gen. sp.

Ascoschoengastia serengetia Brown, 2004

Ascoschoengastia serengetia Brown, 2004: 41, fig. 1.

Holotype

USNM.

Distribution

Tanzania (Seronera).

Host

Heterohyrax brucei.

Brunehaldia Vercammen-Grandjean, 1960

Diagnosis

SIF = 7BS-B-3-211(0)1(0).0000; fsp = 7.7.7; fCx = 1.1.(1–5); Ip = 570–925. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala. Scutum wide, crescent-shaped, with rounded or concave posterior margin, with 1 AM, 2 AL and 2 PL setae; sensillary bases posterior to PL; AL and PL setae approximate to each other; sensilla clavate, fusiform or pyriform, covered with setules. Eyes absent, two or more pairs of humeral setae, scutal and idiosomal setae covered with long thin barbs. Legs 7-segmented, 2 genualae I, 1 genuala II, genuala or tibiala III sometimes absent, mastisetae absent, coxa III with 1–5 setae.

Brunehaldia brunehaldi (Vercammen-Grandjean, 1956)

Euschoengastia brunehaldi Vercammen-Grandjean, 1956d: 83, pl. 3.
Euschoengastia (Brunehaldia) aegypti Vercammen-Grandjean & Kolebinova, 1966: 434, figs 7–12.

Euschoengastia (Brunehaldia) brunehaldi – Vercammen-Grandjean & Kolebinova 1966: 432, figs 1–6.
Brunehaldia brunehaldi – Kudryashova 1998: 291. — Stekolnikov & Daniel 2012: 75.
Euschoengastia (Brunehaldia) aegypti – Vercammen-Grandjean 1965c: 95 (nom. nud.). — Goff 1989: 95.

Holotype

Euschoengastia brunehaldi: RMCA (not found); *Euschoengastia (Brunehaldia) aegypti*: USNM.

Material revised

One specimen from RMCA (No. 180.005) labeled as "*Euschoengastia brunehaldi*", not designated as type, not suitable for examination. One paratype from BMNH (1956.9.15.1).

Distribution

Morocco (Oued Cherrat), Egypt (Saint Catherine's Monastery). This species was also recorded in Turkey from four species of mice and voles (Stekolnikov & Daniel 2012).

Hosts

Acomys dimidiatus, *Apodemus sylvaticus*, *Eliomys munbyanus*.

Remarks

Euschoengastia (Brunehaldia) aegypti was synonymized with *B. brunehaldi* by Stekolnikov & Daniel (2012) as a result of morphometric studies.

Cheladonta Lipovsky, Crossley & Loomis, 1955

Diagnosis

SIF = 4B-N(B)-(3-12)-2110.0000; fsp = 7.7.7; fCx = 1.1.1; Ip = 595–806. Cheliceral blade with tricuspid cap and sometimes with ventral row of small teeth; galeal setae nude or branched; palpal claw divided by 3–12 prongs; palpal tarsus with 4 branched setae. Scutum trapezoidal, with straight, concave or slightly

convex posterior margin, with 1 AM, 2 AL and 2 PL setae; sensilla clavate to globose, covered with setules. Eyes 2 + 2, 1 + 1 or absent, always two pairs of humeral setae. Legs 7-segmented, 2 genualae I, 1 genuala II, 1 genuala III, tibiala III and mastisetae always absent, all leg coxae unisetose.

Cheladonta brevipalpis (André, 1946)

Neoschoengastia brevipalpis André, 1946b: 162, figs 1–3.

Euschoengastia brevipalpis – Wharton & Fuller 1952: 74.
Cheladonta brevipalpis – Vercammen-Grandjean & André 1967: 411, figs 1–6.

Holotype

MNHN.

Distribution

Tunisia (Carthage).

Host

Meriones shawi.

Elianella Vercammen-Grandjean, 1956

Diagnosis

SIF = 6B-N-3-3111.0(1)000; fsp = 7.7.7; fSt = 2.2; fCx = 1.1.1; Ip = 530–710. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 6 branched setae. Scutum very long, with anterolateral shoulders and posterior margin extending far beyond level of PLs (to level of 2nd row of dorsal setae), with 1 AM, 2 AL and 2 PL setae; sensillary bases situated far anterior to PL and close to lateral scutal margins; sensilla clavate, covered with setules. Eyes 2 + 2. Legs 7-segmented, 3 genualae I, 1 genuala II, 1 genuala III, tibiala III present, mastitarsala absent or present.

Elianella anomaluri Vercammen-Grandjean, 1956

Elianella anomaluri Vercammen-Grandjean, 1956e: 418, figs A–E.

Elianella anomaluri – Taufflieb & Abonnenc 1957: 83, figs 3–4.
Ascoschoengastia (Elianella) anomaluri – Zumpt 1961: 161, fig. 93c–e. — Taufflieb 1965a: 28. — Vercammen-Grandjean 1965c: 93.

Holotype

No data.

Distribution

DR Congo (Mawambi), Congo (Brazzaville), Angola (Nhefo).

Hosts

Anomalurus derbianus (type host), *Cricetomys gambianus*, *Nandinia binotata*.

Elianella livadasi Taufflieb & Mouchet, 1959

Elianella livadasi Taufflieb & Mouchet, 1959: 237, pl. 5.

Ascoschoengastia (Elianella) livadasi – Zumpt 1961: 161. — Vercammen-Grandjean 1965c: 93.

Holotype

No data.

Distribution

Cameroon (Yaoundé).

Host

Atilax paludinosus.

Endotrombicula Ewing, 1931

Diagnosis

SIF = 7BS-N-3-(4-5)111.0(1)000; fsp = 7.7.7; Ip = 600–800. Cheliceral blade with tricuspid cap, 2 large dorsal hooks and 1 lateral hook; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala. Scutum roughly subpentagonal, with 1 AM, 2 AL and 2 PL setae; sensilla globose, with few inconspicuous spikelets. Eyes 2 + 2. Legs 7-segmented, 4–5 genualae I, 1 genuala II, 1 genuala III, tibiala III present, mastitarsala absent or present. Parasites of batrachians; one species was described from molluscs.

Endotrombicula barrosi (Vercammen-Grandjean, 1958)

Schoengastia (Endotrombicula) barrosi Vercammen-Grandjean, 1958b: 666, pls 12–13.

Schoengastia (Endotrombicula) barrosi – Zumpt 1961: 159, fig. 92g–j. — Taufflieb 1965a: 30. — Vercammen-Grandjean 1965c: 83.
Endotrombicula barrosi – Wohltmann *et al.* 2007: 232.

Holotype

RMCA 113869.

Material revised

Holotype and three paratypes from RMCA (Nos 113870–113872), not suitable for examination.

Distribution

Angola (Alto Chicapa).

Hosts

Amietia angolensis (original data), *A. fuscigula* (Zumpt 1961).

Endotrombicula penetrans Ewing, 1931

Endotrombicula penetrans Ewing, 1931: 16, pl. 3 (figs 1–2).

Endotrombicula penetrans – Radford 1942: 78, fig. 104. — Thor & Willmann 1947: 320, fig. 381. — Lawrence 1949: 463. — Goff 1989: 122. — Spieler & Linsenmair 1999: 154. — Wohltmann *et al.* 2007: 232.
Endotrombicula (Endotrombicula) penetrans – Wharton & Fuller 1952: 72.
Schoengastia (Endotrombicula) penetrans – Zumpt 1961: 159. — Vercammen-Grandjean 1965c: 83.

Holotype

USNM.

Distribution

Kenya (Sagalla).

Host

Phrynobatrachus minutus.

Endotrombicula pillersi (Sambon, 1928)

Schoengastia pillersi Sambon, 1928: 122, fig. 9.

Schoengastia pillersi – Radford 1942: 67, fig. 51. — Thor & Willmann 1947: 306, fig. 365. — Lawrence 1949: 463.
Endotrombicula (Endotrombicula) pillersi – Wharton & Fuller 1952: 72.
Schoengastia (Endotrombicula) pillersi – Taufflieb 1960b: 224. — Zumpt 1961: 159. — Vercammen-Grandjean 1965c: 83.
Endotrombicula pillersi – Spieler & Linsenmair 1999: 152, fig. 1. — Wohltmann *et al.* 2007: 226, fig. 1.

Holotype

BMNH (Wharton & Fuller 1952).

Material revised

One specimen (obviously holotype) from BMNH, without accession number, ex *Phrynobatrachus natalensis*, White Volta valley, Ashanti, labeled "*Schoengastia pillersi* Sambon, 1923, larva", slide marked by red ink.

Distribution

Ghana (Kumasi, Black Volta), Ivory Coast (Comoé National Park Research Station, Lamto, Taï National Park), Benin, Guinea (Pic de Fon, Diécké Classified Forest).

Hosts

Amietophrynus maculatus, *Petropedetes natator*, *Phrynobatrachus natalensis* (type host), *P. acridoides*, *P. alleni*, *P. calcaratus*, *P. francisci*, *P. latifrons*, *P. phyllophilus*, *P. plicatus*, *P. tokba*, *P. villiersi.*

Endotrombicula rana (Vercammen-Grandjean, 1958)

Schoengastia (Endotrombicula) rana Vercammen-Grandjean, 1958b: 667, pls 12–13.

Schoengastia (Endotrombicula) rana – Zumpt 1961: 159. — Vercammen-Grandjean 1965c: 83.
Endotrombicula rana – Wohltmann *et al.* 2007: 232.

Holotype

No data.

Material revised

Fourteen specimens (No. 127.051) from RMCA, collected by A. Canaris from *Amietia angolensis* in Egerton University, Njoro, Kenya, 20 Jul. 1964, identified by O. Kepka.

Distribution

DR Congo (Blukwa), Kenya (Njoro). The last record is added on the basis of material revised.

Hosts

Amietia angolensis, *A. fuscigula*. The former record is added on the basis of material revised.

Endotrombicula vanmoli (Vercammen-Grandjean & Benoit, 1971) comb. nov.

Schoengastia (Endotrombicula) vanmoli Vercammen-Grandjean & Benoit, 1971: 181, figs 1–6.

Schoengastia (Endotrombicula) sp. – Vercammen-Grandjean *et al.* 1970: 177.

Holotype

RMCA (not found).

Distribution

Sierra Leone (Mt Bintumani).

Host

Granularion lomaensis.

Gerbillicula Kolebinova, 1984

Diagnosis

SIF = 5B-B-3-1000.3301; fsp = 7.7.7; Ip = 484–500. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 5 branched setae. Scutum trapezoidal, with concave posterior margin, with 1 AM, 2 AL and 2 PL setae; sensillary bases far anterior to PL; sensilla pyriform, covered with setules. Eyes 2 + 2. Legs 7-segmented, 1 genuala I, genualae II and III absent, tibiala III absent, 3 mastitarsalae, 3 mastitibialae and 1 mastifemorala.

Gerbillicula deserta Kolebinova, 1984

Gerbillicula deserta Kolebinova, 1984a: 73, fig. 1.

Holotype

SMF pA.1.1982.1.

Distribution

Tunisia (Gabès).

Host

Gerbillus nanus.

Helenicula Audy, 1954

Diagnosis

SIF = 5B, 4B-B(N)-3-2(1)111.0000; fsp = 7.7.7. Cheliceral blade with tricuspid cap; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 5 or 4 branched setae. Scutum trapezoidal, with rounded posterior margin, with 1 AM, 2 AL and 2 PL setae; sensilla globose, covered with setules, sensillary bases situated close to each other. Eyes 2 + 2 or 1 + 1. Legs 7-segmented, tarsala I terminal (situated at level of subterminala), 2 or 1 genuala I, genualae II and III present, tibiala III present, mastisetae absent.

Helenicula dipodilli Taufflieb, 1958

Helenicula dipodilli Taufflieb, 1958a: 622, pl. 2.

Helenicula (Helenicula) dipodilli – Vercammen-Grandjean 1965c: 112.

Holotype

No data.

Distribution

Morocco (Oued Cherrat).

Host

Dipodillus campestris.

Helenicula pilosa (Abonnenc & Taufflieb, 1957)

Euschoengastia (Helenicula) pilosa Abonnenc & Taufflieb, 1957a: 556, figs 2–3.

Helenicula pilosa – Zumpt 1961: 153. — Nadchatram & Traub 1971: 591.
Helenicula (Helenicula) pilosa – Vercammen-Grandjean 1965c: 112.

Holotype

MNHN.

Material examined

One paratype from RMCA (No. 86176, in same box as *Schoutedenichia pilosa* Vercammen-Grandjean, 1958).

Distribution

Chad (Léré). This species was also recorded in Nepal from *Rattus tanezumi* Temminck, 1844 (Nadchatram & Traub 1971) and in Thailand from *Bandicota indica* (Bechstein, 1800) (Chaisiri *et al.* 2016).

Host

Numida meleagris.

Helenicula thomasi (Jadin & Vercammen-Grandjean, 1954)

Euschoengastia thomasi Jadin & Vercammen-Grandjean, 1954a: 200, figs A–E.

Helenicula thomasi – Zumpt 1961: 153.
Helenicula (Helenicula) thomasi – Vercammen-Grandjean 1965c: 112.

Holotype

RMCA 76227.

Material revised

Holotype (not suitable for examination) and 31 more specimens from RMCA, partly designated as paratypes.

Distribution

Rwanda (Butare, Musha).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Dasymys incomtus*, *Graphiurus* sp, *Lemniscomys striatus*.

Helenicula vercammengrandjeani (Abonnenc & Taufflieb, 1957)

Euschoengastia (Helenicula) vercammengrandjeani Abonnenc & Taufflieb, 1957b: 86, figs 1–2.

Helenicula vercammengrandjeani – Zumpt 1961: 154, fig. 91a–b.
Helenicula (Helenicula) vercammengrandjeani – Vercammen-Grandjean 1965c: 112.

Holotype

MNHN.

Material revised

One paratype from RMCA (No. 89421), not suitable for examination.

Distribution

Chad (Léré).

Host

Numida meleagris.

Herpetacarus Vercammen-Grandjean, 1960

Diagnosis

SIF = 6BS, 7B, 7BS-N(B)-3-(2-8)111.0(1)0(1)00; fsp = 7.7.7; Ip = 620–1050. Cheliceral blade with tricuspid cap; galeal setae nude, rarely branched; palpal claw 3-pronged; palpal tarsus with 6 or 7 branched setae, nude subterminala present or absent. Scutum trapezoidal, wider than long, with convex or biconvex posterior margin, sometimes striated on its posterior half or margins, with 1 AM, 2 AL and 2 PL setae; sensilla globose to fusiform, covered with setules, sensillary bases often situated far apart. Eyes 2 + 2. Legs 7-segmented, 2–8 genualae I, genualae II and III present, tibiala III present, mastitarsala and mastitibiala sometimes present.

Herpetacarus (Abonnencia) Vercammen-Grandjean, 1960

Diagnosis

SIF = 7B-N-3-(2-8)111.0(1)0(1)00; fsp = 7.7.7; Ip = 650–1050. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae. Scutum trapezoidal, wider than long, with convex or biconvex posterior margin, with 1 AM, 2 AL and 2 PL setae; sensilla globose or claviform, covered with setules, sensillary bases situated far apart (telostigmal scutum). Eyes 2 + 2. Legs 7-segmented, 2–8 genualae I, genualae II and III present, tibiala III present, mastitarsala and mastitibiala sometimes present.

Herpetacarus (Abonnencia) aethomys (Radford, 1942)

Neoschoengastia aethomyia Radford, 1942: 78, fig. 102.

Neoschoengastia aethomyia – Radford 1947: 598, figs 25–26.
Euschoengastia aethomyia – Wharton & Fuller 1952: 73. — Zumpt 1961: 161.
Herpetacarus (Abonnencia) aethomys – Vercammen-Grandjean 1965c: 87. — Vercammen-Grandjean 1966: 641, pl. O1.

Holotype

BMNH 1946.12.18.3.

Material revised

Holotype (the slide includes two specimens, without any mark).

Distribution

South Africa (Bathurst).

Host

Micaelamys namaquensis.

Herpetacarus (Abonnencia) africanus (Radford, 1948)

Ascoschoengastia africana Radford, 1948: 220, figs 15–16.

Euschoengastia africana – Wharton & Fuller 1952: 73. — Zumpt 1961: 161.
Herpetacarus (Abonnencia) africanus – Vercammen-Grandjean 1965c: 87; 1966: 642, pl. G1–6.

Holotype

BMNH 1948.2.3.32.

Material revised

Holotype, labeled as "lectotype". One specimen from RMCA (No. 80617), labeled as "*Euschoengastia africana*" by the hand of Radford, but not designated as paratype.

Distribution

South Africa (Onderstepoort).

Hosts

Otomys angoniensis (original data), *O. irroratus* (Zumpt 1961).

Herpetacarus (Abonnencia) copravis Taufflieb & Mouchet, 1962

Herpetacarus (Abonnencia) copravis Taufflieb & Mouchet, 1962: 350, fig. 3.

Herpetacarus (Abonnencia) copravis – Vercammen-Grandjean 1965c: 87; 1966: 645, pl. O6.

Holotype

Private collection of Taufflieb (Taufflieb & Mouchet 1962), l'Institut de Recherches scientifiques au Congo, Brazzaville (Vercammen-Grandjean 1966).

Distribution

Cameroon (Maroua).

Hosts

Procavia capensis ruficeps, *Tockus erythrorhynchus*.

Herpetacarus (Abonnencia) dauyi Vercammen-Grandjean, 1966

Herpetacarus (Abonnencia) dauyi Vercammen-Grandjean, 1966: 646, pl. J1–6.

Herpetacarus (Abonnencia) dauyi – Vercammen-Grandjean 1965c: 87 (nom. nud.).

Holotype

RMCA (not found).

Distribution

DR Congo (Doruma).

Host

Elephantulus fuscipes.

Herpetacarus (Abonnencia) gerrhosauri (Lawrence, 1949)

Ascoschoengastia gerrhosauri Lawrence, 1949: 433, fig. 19.

Euschoengastia gerrhosauri – Wharton & Fuller 1952: 76. — Zumpt 1961: 163.
Herpetacarus (Abonnencia) gerrhosauri – Vercammen-Grandjean 1965c: 88; 1966: 646, pl. K1–5.

Syntypes

NMSA 4809.

Distribution

South Africa (Witzieshoek Naturellereserwe, Mullers Pass).

Hosts

Gerrhosaurus flavigularis, *Pseudocordylus subviridis*.

Herpetacarus (Abonnencia) kalaharicus (Lawrence, 1949)

Ascoschoengastia kalaharica Lawrence, 1949: 434, fig. 20.

Euschoengastia kalaharica – Wharton & Fuller 1952: 78. — Zumpt 1961: 163.
Herpetacarus (Abonnencia) kalaharicus – Vercammen-Grandjean 1965c: 88; 1966: 647, pls L1–2, M6, N3–5.

Syntypes

TMSA (Lawrence 1949), NMSA (Wharton & Fuller 1952; Vercammen-Grandjean 1966).

Distribution

Botswana (Kaotwe Pan).

Host

Meroles squamulosus.

Herpetacarus (Abonnencia) longispinus (Radford, 1948)

Ascoschoengastia longispina Radford, 1948: 219, figs 13–14.

Euschoengastia longispina – Wharton & Fuller 1952: 78. — Zumpt 1961: 162.
Herpetacarus (Abonnencia) longispina – Vercammen-Grandjean 1965c: 87; 1966: 643, pl. O3.

Holotype

BMNH 1948.2.3.31.

Material revised

Holotype. One paratype from RMCA (No. 180.006).

Distribution

South Africa (Glen Craig).

Host

Micaelamys namaquensis.

Herpetacarus (Abonnencia) otomyius (Radford, 1942)

Neoschoengastia otomyia Radford, 1942: 76, fig. 100.

Neoschoengastia otomyia – Radford 1947: 601, figs 29–30.
Euschoengastia otomyia – Wharton & Fuller 1952: 80. — Zumpt 1961: 162.
Herpetacarus (Abonnencia) otomys – Vercammen-Grandjean 1965c: 135.

Holotype

BMNH 1946.12.18.6.

Material revised

Holotype.

Distribution

South Africa (Onderstepoort).

Hosts

Otomys angoniensis (original data), *O. irroratus* (Zumpt 1961).

Herpetacarus (Abonnencia) partomi Vercammen-Grandjean, 1966

Herpetacarus (Abonnencia) partomi Vercammen-Grandjean, 1966: 644, pl. H1–6.

Herpetacarus (Abonnencia) partomi – Vercammen-Grandjean 1965c: 87 (nom. nud.).

Holotype

NMSA 5747.

Distribution

South Africa (Ngoya Forest).

Host

Cercopithecus mitis.

Herpetacarus (Abonnencia) rhodesiensis (Lawrence, 1949)

Ascoschoengastia rhodesiensis Lawrence, 1949: 437, fig. 23.

Euschoengastia rhodesiensis – Wharton & Fuller 1952: 81. — Zumpt 1961: 163.
Herpetacarus (Abonnencia) rhodesiensis – Vercammen-Grandjean 1965c: 88; 1966: 647, pls L13–14, M18, N15–17.

Syntypes

NMSA 4871.

Distribution

Zimbabwe (Bulawayo), South Africa (Kranzkop).

Hosts

Trachylepis margaritifera (original data), *T. quinquetaeniata* (Zumpt 1961), *T. striata*.

Herpetacarus (Abonnencia) transvaalensis (Lawrence, 1949)

Ascoschoengastia transvaalensis Lawrence, 1949: 435, fig. 21.

Euschoengastia transvaalensis – Wharton & Fuller 1952: 82. — Zumpt 1961: 164.
Herpetacarus (Abonnencia) transvaalensis – Vercammen-Grandjean 1965c: 88; 1966: 648, pls L7–8, M12, N9–11.

Syntypes

NMSA 4878.

Distribution

South Africa (Blaauwberg, Leydsdorp).

Host

Meroles squamulosus.

Herpetacarus (Cricacarus) Vercammen-Grandjean, 1966

Diagnosis

SIF = 6BS-N(B)-3-(2-3)111.0000; fsp = 7.7.7; Ip = 650–810. Cheliceral blade with tricuspid cap; galeal setae nude or branched; palpal claw 3-pronged; palpal tarsus with 6 branched setae and nude subterminala. Scutum trapezoidal, wider than long, with prominent convex or biconvex posterior margin, with 1 AM, 2 AL and 2 PL setae; sensilla fusiform, covered with setules, sensillary bases situated not too far apart. Eyes 2 + 2. Legs 7-segmented, 2 or 3 genualae I, genualae II and III present, tibiala III present, mastisetae absent.

Herpetacarus (Cricacarus) loveridgei (Lawrence, 1951)

Ascoschoengastia loveridgei Lawrence, 1951b: 458, fig. 8B.

Euschoengastia loveridgei – Wharton & Fuller 1952: 78. — Zumpt 1961: 163.
Herpetacarus (Cricacarus) loveridgei – Vercammen-Grandjean 1965c: 88; 1966: 649, pl. Q7.

Holotype

NMSA (Wharton & Fuller 1952).

Distribution

Zambia (Zambesi River).

Host

Mochlus sundevalli.

Herpetacarus (Cricacarus) ophicolus (Lawrence, 1949)

Ascoschoengastia ophicola Lawrence, 1949: 461, fig. 46.

Euschoengastia ophicola – Wharton & Fuller 1952: 79. — Zumpt 1961: 163.
Herpetacarus (Cricacarus) ophicola – Vercammen-Grandjean 1965c: 88; 1966: 649, pls L19–20, M24, N21–23.

Syntypes

NMSA 2769.

Distribution

South Africa (Durban).

Host

Boaedon lineatus.

Herpetacarus (Cricacarus) pervini Vercammen-Grandjean, 1966

Herpetacarus (Cricacarus) pervina Vercammen-Grandjean, 1966: 650, pl. P1–6.

Herpetacarus (Cricacarus) pervini – Vercammen-Grandjean 1965c: 88 (nom. nud.).

Holotype

NMSA.

Distribution

South Africa (Johannesburg).

Host

Vipera sp.

Herpetacarus (Cricacarus) tropidosauri (Lawrence, 1949)

Ascoschoengastia tropidosauri Lawrence, 1949: 432, fig. 18.

Euschoengastia tropidosauri – Wharton & Fuller 1952: 82. — Zumpt 1961: 164.
Herpetacarus (Cricacarus) tropidosauri – Vercammen-Grandjean 1965c: 88; 1966: 651, pl. Q1–6.

Syntypes

TMSA 21284 (original data), NMSA (Wharton & Fuller 1952; Vercammen-Grandjean 1966).

Material revised

One paratype from BMNH (1957.8.12.8).

Distribution

South Africa (Champagne Castle, Mont-aux-Sources).

Host

Tropidosaura essexi.

Herpetacarus (Cricacarus) viperini (Lawrence, 1949)

Ascoschoengastia viperina Lawrence, 1949: 462, fig. 47.

Euschoengastia viperina – Wharton & Fuller 1952: 82. — Zumpt 1961: 164.
Herpetacarus (Cricacarus) viperini – Vercammen-Grandjean 1965c: 88.
Herpetacarus (Cricacarus) viperina – Vercammen-Grandjean 1966: 652, pl. R1–6.

Syntypes

NMSA 3772.

Distribution

South Africa (Pietermaritzburg, Creighton, Sevenoaks).

Hosts

Causus rhombeatus, *Crotaphopeltis hotamboeia*, *Elapsoidea sundevallii*, *Pseudaspis cana*.

Herpetacarus (Herpetacarus) Vercammen-Grandjean, 1960

Herpetacarus (Lukoschuskaaia) Kolebinova & Vercammen-Grandjean, 1980a: 56, figs 1–5 **syn. nov.**

Diagnosis

SIF = 7BS-N-3-(2-3)111.0(1)000; fsp = 7.7.7; Ip = 620–880. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala. Scutum trapezoidal, wider than long, with convex or biconvex posterior margin, with 1 AM, 2 AL and 2 PL setae; PL always longest scutal setae; sensilla fusiform, covered with setules. Eyes 2 + 2. Legs 7-segmented, 2 or 3 genualae I, genualae II and III present, tibiala III present, mastitarsala sometimes present.

Remarks

The presence of extra setae on the lateral scutal margins in *Herpetacarus makokoui* is obviously a unique character of this species, which does not constitute a separate subgenus. Therefore I regard the subgenus *Lukoschuskaaia* created on the base of this species as a synonym of *Herpetacarus (Herpetacarus)*.

Herpetacarus (Herpetacarus) alticolus (Lawrence, 1951)

Ascoschoengastia alticola Lawrence, 1951: 114, fig. 16a.

Euschoengastia alticola – Wharton & Fuller 1952: 73. — Zumpt 1961: 161.
Herpetacarus (Herpetacarus) alticola – Vercammen-Grandjean 1965c: 86; 1966: 635, pl. F1.

Syntypes

NMSA 4947.

Distribution

South Africa (Champagne Castle).

Hosts

Crocidura flavescens, *Rhabdomys pumilio*.

Herpetacarus (Herpetacarus) aspidelaps Vercammen-Grandjean, 1966

Herpetacarus (Herpetacarus) aspidelaps Vercammen-Grandjean, 1966: 635, pl. A1–6.

Herpetacarus (Herpetacarus) aspidelaps – Vercammen-Grandjean 1965c: 85 (nom. nud.).

Holotype

NMSA 5765.

Distribution

South Africa (Pietermaritzburg).

Host

Aspidelaps scutatus.

Herpetacarus (Herpetacarus) causicolus (Jadin & Vercammen-Grandjean, 1952)

Ascoschoengastia causicola Jadin & Vercammen-Grandjean, 1952: 633, pl. 12.

Euschoengastia causicola – Zumpt 1961: 163.
Herpetacarus (Herpetacarus) causicola – Vercammen-Grandjean 1965c: 86; 1966: 637, pl. F2.

Holotype

RMCA 76143.

Material revised

Holotype and five paratypes from RMCA. One specimen from BMNH (1996.259), labeled by Vercammen-Grandjean as "*Euschoengastia causicola*".

Distribution

Rwanda (Butare), DR Congo (Bukavu).

Hosts

Boaedon lineatus, *Causus resimus*, *C. rhombeatus*, *Naja melanoleuca*.

Herpetacarus (Herpetacarus) hyracis Vercammen-Grandjean, 1966

Herpetacarus (Herpetacarus) hyracis Vercammen-Grandjean, 1966: 638, pl. B1–6.

Herpetacarus hyracis – Goff 1989: 111.

Holotype

USNM.

Distribution

Kenya (Koma Rock).

Host

Procavia capensis syriacus.

Herpetacarus (Herpetacarus) madanae Taufflieb & Mouchet, 1962

Herpetacarus (Herpetacarus) madanae Taufflieb & Mouchet, 1962: 352, fig. 4.

Herpetacarus (Herpetacarus) madanae – Vercammen-Grandjean 1965c: 86; 1966: 638, pl. V1–6.

Holotype

Private collection of Taufflieb.

Distribution

Cameroon (Maroua).

Host

Procavia capensis ruficeps.

Herpetacarus (Herpetacarus) makokoui Kolebinova & Vercammen-Grandjean, 1980

Herpetacarus (Lukoschuskaaia) makokoui Kolebinova & Vercammen-Grandjean, 1980a: 256, figs 1–5.

Holotype

SMF pA.l.1978.1.

Distribution

Gabon (Makokou).

Host

Atherurus africanus.

Herpetacarus (Herpetacarus) matoppoanus (Lawrence, 1949)

Ascoschoengastia matoppoanus Lawrence, 1949: 435, fig. 22.

Euschoengastia matoppoanus – Wharton & Fuller 1952: 79. — Zumpt 1961: 163.
Herpetacarus (Herpetacarus) matoppoanus – Vercammen-Grandjean 1965c: 86; 1966: 639, pl. C1–6.

Syntypes

NMSA 4869.

Material revised

One paratype from BMNH (1957.8.12.3).

Distribution

Zimbabwe (Bulawayo).

Hosts

Platysaurus intermedius rhodesianus (original data), *P. guttatus* (Zumpt 1961), *Trachylepis margaritifera* (original data), *T. quinquetaeniata* (Zumpt 1961).

Herpetacarus (Herpetacarus) origensis (Lawrence, 1949)

Ascoschoengastia origensis Lawrence, 1949: 431, fig. 17.

Euschoengastia origensis – Wharton & Fuller 1952: 80. — Zumpt 1961: 163.
Herpetacarus (Herpetacarus) origensis – Vercammen-Grandjean 1965c: 86; 1966: 640, pl. E1–6.

Holotype

NMSA 4816.

Distribution

South Africa (Mont-aux-Sources).

Hosts

Tropidosaura cottrelli, *T. essexi*.

Herpetacarus (Herpetacarus) rhabdomys (Lawrence, 1951)

Ascoschoengastia rhabdomyia Lawrence, 1951: 116, fig. 16c.

Euschoengastia rhabdomyia – Wharton & Fuller 1952: 81. — Zumpt 1961: 162.
Herpetacarus (Herpetacarus) rhabdomys – Vercammen-Grandjean 1965c: 86.
Herpetacarus (Herpetacarus) rhabdomiya – Vercammen-Grandjean 1966: 640, pl. F5.

Syntypes

NMSA 5391.

Distribution

South Africa (Champagne Castle).

Hosts

Procavia capensis, *Rhabdomys pumilio*.

Herpetacarus (Herpetacarus) striatus (Vercammen-Grandjean & Brennan, 1957)

Euschoengastia striata Vercammen-Grandjean & Brennan, 1957: 486, fig. 4.

Euschoengastia striata – Zumpt 1961: 164, fig. 95a–c.
Herpetacarus (Herpetacarus) striatus – Vercammen-Grandjean 1965c: 86.
Herpetacarus (Herpetacarus) striata – Vercammen-Grandjean 1966: 641, pl. F6.

Holotype

RMCA (not found).

Material revised

One specimen from RMCA (No. 87517), labeled as "*Euschoengastia (Reptastia) striata*", not designated as type.

Distribution

Uganda (Kaabong).

Host

Unknown.

Holubicula Daniel & Vercammen-Grandjean, 1985

Diagnosis

SIF = 5B-N-2-3111.0000; fPp = B/N/NNN; fsp = 7.7.7; fSt = 2.2; fCx = 1.1.1; Ip = 592. Cheliceral blade with one large dorsal hook; galeal setae nude; palpal claw 2-pronged (axial prong internal); palpal tarsus with 5 branched setae. Scutum small, trapezoidal, elongated, longer than wide, with anterior margin convex and posterior margin concave in middle, with 1 AM, 2 AL and 2 PL setae; sensillary bases continguous (omorostigmal scutum); sensilla pyriform, covered with setules. Eyes 1 + 1. Legs 7-segmented, 3 genualae I, genualae II and III present, tibiala III present, mastisetae absent, all leg coxae unisetose.

Holubicula toroensis Daniel & Vercammen-Grandjean, 1985

Holubicula toroensis Daniel & Vercammen-Grandjean, 1985: 93, fig. 1.

Holotype

Institute of Parasitology (České Budějovice), No. 1932.

Distribution

Uganda (Toro-Semliki Wildlife Reserve).

Host

Mops condylurus.

Remarks

Described from a single specimen.

Neoschoengastia Ewing, 1929

Diagnosis

SIF = 7B, 7BS-B-3-(2-3)111.0(1)000; fsp = 7.7.7; Ip = 600–1700. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae and sometimes nude subterminala. Scutum trapezoidal, covered by puncta and cuticular striations around sensillary bases, with almost straight, concave or bilobate posterior margin, with 1 AM, 2 AL and 2 PL setae; sensillary bases far anterior to PL; sensilla pyriform or globose, covered with setules. Eyes 2 + 2. Legs 7-segmented, 2–3 genualae I, genualae II and III present, tibiala III present, mastitarsala sometimes present. Parasites of birds.

Neoschoengastia blanci Taufflieb, 1960

Neoschoengastia blanci Taufflieb, 1960a: 34, pl. 4.

Neoschoengastia (Hypogastia) blanci – Vercammen-Grandjean 1965c: 126.

Holotype

No data.

Distribution

Morocco (Assa).

Host

Agama impalearis.

Neoschoengastia brennani Crossley & Loomis, 1955

Neoschoengastia brennani Crossley & Loomis, 1955: 114, figs 1–5.

Neoschoengastia brennani – Brennan 1956: 650. — Taufflieb & Mouchet 1959: 241. — Zumpt 1961: 154.
Neoschoengastia (Neoschoengastia) brennani – Vercammen-Grandjean 1965c: 125.
Neoschoengastia (Hyponeoschoengastia) brennani – Taufflieb *et al.* 1967: 119.

Holotype

SEMC 7201.

Material revised

One paratype from BMNH (1956.8.24.5).

Distribution

Chad (Léré), Cameroon (Maroua), Central African Republic (Soulemaka). The species was described from USA, Kansas, with additional material from Colorado.

Hosts

Numida meleagris, *Pternistis clappertoni*.

Neoschoengastia mirafra Radford, 1942

Neoschoengastia mirafra Radford, 1942: 78, fig. 103.

Neoschoengastia mirafra – Radford 1947: 593, figs 21–22. — Wharton & Fuller 1952: 85. — Brennan 1956: 650. — Zumpt 1961: 154.
Neoschoengastia (Neoschoengastia) mirafra – Vercammen-Grandjean 1965c: 125.

Holotype

BMNH 1946.12.18.5.

Material revised

Holotype. Three specimens (Nos 92854, 92856 and 92857) from RMCA, identified by Vercammen-Grandjean, not suitable for examination.

Distribution

Uganda (Katwe).

Host

Mirafra africana tropicalis.

Neoschoengastia moucheti Brennan, 1956

Neoschoengastia moucheti Brennan, 1956: 650, fig. 1.

Neoschoengastia moucheti – Taufflieb & Mouchet 1959: 241. — Taufflieb 1960b: 235. — Zumpt 1961: 154, fig. 91c–d. — Goff 1989: 119.
Neoschoengastia (Hypogastia) moucheti – Vercammen-Grandjean 1965c: 125.
Neoschoengastia (Neoschoengastia) moucheti – Taufflieb *et al.* 1967: 119.

Holotype

RML (original data), USNM (Goff 1989).

Distribution

Cameroon (Yaoundé), Ivory Coast (Bouaké), Central African Republic (Soulemaka).

Hosts

Numida meleagris, *Pternistis squamatus* (type host), *P. bicalcaratus*.

Ornithogastia Vercammen-Grandjean, 1960

Diagnosis

SIF = 5B-N-3-2111.(0-4)(0-3)00; fPp = B/B/NNB; fsp = 7.7.7; Ip = 710–1080. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 5 branched setae. Scutum trapezoidal, covered by puncta and cuticular striations around sensillary bases, with rounded or bilobate posterior margin, with 1 AM, 2 AL and 2 PL setae; sensilla clavate to globose, covered with setules. Eyes large, 2 + 2. Legs 7-segmented, 2 genualae I, genualae II and III present, tibiala III present, mastitarsalae and mastitibialae ciliated in basal part sometimes present.

Ornithogastia pastoriana (Taufflieb, 1958)

Neoschoengastia pastoriana Taufflieb, 1958a: 625, pl. 3.

Guntherana (Guntherana) pastoriana – Vercammen-Grandjean 1965c: 115.
Guntherana (Ornithogastia) pastoriana – Vercammen-Grandjean & Langston 1971: 138, pl. 62.
Ornithogastia pastoriana – Kudryashova 1998: 279.

Holotype

IPM (Vercammen-Grandjean & Langston 1971).

Distribution

Morocco (Oued Cherrat).

Host

Tarentola mauritanica.

Riedlinia Oudemans, 1914

Diagnosis

SIF = 7B-N-3-(2-3)111.0000; fsp = 7.7.7; Ip = 510–640. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae. Scutum trapezoidal, wider than long, with 1 AM, 2 AL and 2 PL setae; sensilla fusiform, covered with setules. Eyes absent. Strong neosomy. Legs 7-segmented, with expanded (lanceolate) claws and empodia, tarsi with supplementary bars or semi-bars, 2–3 genualae I, genualae II and III present, tibiala III present, mastisetae absent. Parasites of bats.

Riedlinia willmanni Vercammen-Grandjean & Minter, 1964

Riedlinia (Riedlinia) willmanni Vercammen-Grandjean & Minter, 1964: 484, figs 1–5.

Riedlinia (Riedlinia) willmanni – Vercammen-Grandjean 1964c: 318. — Vercammen-Grandjean 1965c: 129. — Goff 1989: 133.

Holotype

USNM.

Distribution

Kenya (Langata).

Host

Hipposideros ruber ruber.

Schoengastia Oudemans, 1910

Diagnosis

SIF = 7BS-N-3(2)-3(2)111.(0-2)000; fsp = 7.7.7; Ip = 600–1440. Cheliceral blade usually serrate on their dorsal edge, with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala. Scutum subpentagonal, with convex posterior margin, with 1 AM, 2 AL and 2 PL setae; AL > PL > AM, sensillary bases situated not far apart and close to level of PLs; sensilla globose, covered with setules. Eyes 2 + 2. Legs 7-segmented, 3 (sometimes 2) genualae I, genualae II and III present, tibiala III present, mastitarsalae sometimes present.

Schoengastia aefinsis Taufflieb, 1958

Schoengastia radfordi aefinsis Taufflieb, 1958b: 413.

Holotype

MNHN.

Distribution

Cameroon (Yaoundé), Chad (Léré), Central African Republic (Bangui), Congo (Brazzaville).

Hosts

Dasymys incomtus, *Herpestes ichneumon cafra*, *Lophuromys sikapusi*, *Numida meleagris*, *Oenomys hypoxanthus.*

Schoengastia andrei Radford, 1948

Schoengastia andrei Radford, 1948: 217, figs 9–10.

Schoengastia andrei – Wharton & Fuller 1952: 88. — Vercammen-Grandjean 1958b: 636, pl. 9.
Schoengastia (Schoengastia) andrei – Zumpt 1961: 155. — Vercammen-Grandjean 1965c: 81.

Holotype

BMNH 1948.2.3.34.

Material revised

Holotype.

Distribution

Uganda (Kazinga Channel).

Hosts

Lophuromys ansorgei (original data), *L. sikapusi* (Zumpt 1961).

Schoengastia archaea (Taufflieb, 1960)

Neoschoengastia archaea Taufflieb, 1960b: 233, pl. 5.

Schoengastia (Schoengastia) archaea – Vercammen-Grandjean 1965c: 83.

Holotype

No data.

Distribution

Senegal (Rufisque).

Host

Sterna hirundo.

Schoengastia avis Vercammen-Grandjean, 1958

Schoengastia rubi avis Vercammen-Grandjean, 1958b: 645.

Schoengastia (Schoengastia) rubi avis – Zumpt 1961: 158.

Holotype

No data.

Material revised

One paratype (No. 113917) from RMCA.

Distribution

DR Congo (Bukavu, Kamaniola).

Hosts

Centropus superciliosus, *Turdoides leucopygia*.

Schoengastia basilewskyi Vercammen-Grandjean, 1958

Schoengastia basilewskyi Vercammen-Grandjean, 1958b: 632, pls 1, 8.

Schoengastia (Schoengastia) basilewskyi – Zumpt 1961: 155. — Vercammen-Grandjean 1965c: 81.

Holotype

RMCA 113923.

Material revised

Holotype.

Distribution

Rwanda (Kamembe).

Host

Lissotis melanogaster.

Schoengastia bicalcar Vercammen-Grandjean, 1958

Schoengastia oubanguiana bicalcar Vercammen-Grandjean, 1958b: 653.

Schoengastia (Schoengastia) oubanguiana bicalcar – Zumpt 1961: 157.

Holotype

RMCA 113899.

Material revised

Holotype and seven paratypes from RMCA.

Distribution

DR Congo (Bukavu, Luvungi, Lwiro, Shabunda).

Hosts

Centropus grillii, *C. toulou*, *Crocidura* sp. *Dasymys incomtus*, *Graphiurus* sp., *Heliosciurus* sp., *Lemniscomys* sp., *Lophuromys flavopunctatus*, *Oenomys hypoxanthus*, *Otomys irroratus*, *Pelomys fallax*.

Remarks

The deutonymph was described (Vercammen-Grandjean 1958b).

Schoengastia capensis (Lawrence, 1949)

Ascoschoengastia capensis Lawrence, 1949: 438, fig. 24.

Euschoengastia capensis – Wharton & Fuller 1952: 74.
Schoengastia (Schoengastia) capensis – Zumpt 1961: 155. — Vercammen-Grandjean 1965c: 85.

Syntypes

SAMC 7805.

Distribution

South Africa (Cold Bokkeveld).

Host

Pedioplanis lineoocellata pulchella.

Schoengastia cercopitheci (Trägårdh, 1905)

Trombidium cercopitheci Trägårdh, 1905: 82, figs 15–19.

Schoengastia cercopitheci – Oudemans 1910a: 87; 1912: 62, fig. N. — Radford 1942: 67, fig. 52. — Thor & Willmann 1947: 301, fig. 356. — Fuller 1952: 174. — Wharton & Fuller 1952: 88. — Vercammen-Grandjean 1958b: 655, pl. 9.
Schoengastia (Schoengastia) cercopitheci – Vercammen-Grandjean 1965c: 81; 1973: 117.

Holotype

Private collection of Trägårdh, Stockholm (Oudemans 1912), lost (Fuller 1952).

Distribution

Sudan (White Nile).

Host

Chlorocebus aethiops.

Schoengastia cryptoblepharsia Easton & Brown, 2008

Schoengastia cryptoblepharsia Easton & Brown, 2008: 147, fig. 2.

Holotype

USNM.

Distribution

Tanzania (Ladder Cove Cave).

Host

Cryptoblepharus africanus.

Schoengastia dartevellei Vercammen-Grandjean, 1958

Schoengastia dartevellei Vercammen-Grandjean, 1958b: 642, pls 3, 8.

Schoengastia (Schoengastia) dartevellei – Zumpt 1961: 155. — Vercammen-Grandjean 1965c: 81.

Holotype

RMCA 113889.

Material revised

Holotype and paratype (No. 113890) from RMCA.

Distribution

DR Congo (Kamaniola).

Host

Turdoides leucopygia.

Schoengastia eburnensis Taufflieb, 1960

Schoengastia (Schoengastia) eburnensis Taufflieb, 1960b: 231, pl. 4.

Schoengastia (Schoengastia) eburnensis – Vercammen-Grandjean 1965c: 81.
Schoengastia eburnensis – Whitaker *et al.* 1983: 31.

Holotype

No data.

Distribution

Ivory Coast (Adiopodoume), Nigeria (Ibadan).

Hosts

Dasymys incomtus, *Neotragus pygmaeus*.

Schoengastia equina Vercammen-Grandjean, 1971

Schoengastia (Schoengastia) equina Vercammen-Grandjean, 1971a: 173, figs 1–6.

Holotype

SAIMR.

Distribution

South Africa (Kruger National Park).

Host

Equus burchellii.

Remarks

Described from a single specimen.

Schoengastia erinacei Kolebinova, 1984

Schoengastia (Schoengastia) erinacei Kolebinova, 1984b: 110, figs 11–16.

Holotype

SMF pA.66.1983.1.

Distribution

Nigeria (Sakka).

Host

Atelerix albiventris.

Schoengastia fitzsimonsi (Lawrence, 1949)

Phrynacarus fitzsimonsi Lawrence, 1949: 463, fig. 48.

Endotrombicula (Phrynacarus) fitzsimonsi – Wharton & Fuller 1952: 73.
Schoengastia (Phrynacarus) fitzsimonsi – Vercammen-Grandjean 1958b: 665, pl. 7. — Zumpt 1961: 159, fig. 92 (e–f).
Schoengastia (Schoengastia) fitzsimmonsi [sic] – Vercammen-Grandjean 1965c: 83.

Syntypes

NMSA 4873.

Material revised

One specimen from RMCA (No. 113924) identified by Lawrence.

Distribution

South Africa (Jonkersberg, Knysna).

Host

Heleophryne regis.

Schoengastia galachrysia Taufflieb & Mouchet, 1959

Schoengastia galachrysia Taufflieb & Mouchet, 1959: 239, pl. 6.

Schoengastia (Schoengastia) galachrysia – Zumpt 1961: 155. — Vercammen-Grandjean 1965c: 81.

Holotype

No data.

Distribution

Cameroon (Mbalmayo).

Host

Glareola nuchalis.

Schoengastia gerrhosauri Lawrence, 1949

Schoengastia gerrhosauri Lawrence, 1949: 426, fig. 13.

Schoengastia gerrhosauri – Wharton & Fuller 1952: 88. — Vercammen-Grandjean 1958b: 659, pl. 9.
Schoengastia (Schoengastia) gerrhosauri – Zumpt 1961: 155. — Vercammen-Grandjean 1965c: 81.

Syntypes

NMSA 4833.

Material revised

One paratype from BMNH (1957.8.12.36).

Distribution

South Africa (Kranzkop, Mullers Pass, Pietermaritzburg, Weenen).

Hosts

Gerrhosaurus flavigularis, *Pseudocordylus subviridis*, *Trachylepis striata*.

Schoengastia gigantica Vercammen-Grandjean, 1958

Schoengastia gigantica Vercammen-Grandjean, 1958b: 640, pls 4, 8.

Schoengastia (Schoengastia) gigantica – Zumpt 1961: 155. — Vercammen-Grandjean 1965c: 81. — Goff 1989: 109.

Holotype

USNM (Goff 1989) (? see below).

Material revised

One specimen (No. 113888, not suitable for examination) designated as "typus" and one specimen (No. 113887) designated as "type" and ringed by red lacquer, from RMCA.

Distribution

DR Congo (Lubero).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Lemniscomys striatus*, *Otomys tropicalis* (original data), *O. irroratus* (Zumpt 1961).

Schoengastia haddowi Radford, 1953

Schoengastia haddowi Radford, 1953: 210, figs 1–4.

Schoengastia haddowi haddowi – Vercammen-Grandjean 1958b: 650, pl. 6. — Zumpt 1961: 155, fig. 92a–d.
Schoengastia (Schoengastia) haddowi – Vercammen-Grandjean 1965c: 81. — Taufflieb *et al.* 1972: 63.

Holotype

No data.

Material revised

One specimen from BMNH (1996.259), collected in Kaabong, Uganda, labeled by Radford.

Distribution

Uganda (Kaabong), Djibouti (Tadjoura).

Host

Procavia capensis habessinicus.

Schoengastia howdadi Vercammen-Grandjean, 1958

Schoengastia howdadi howdadi Vercammen-Grandjean, 1958b: 647, pl. 6.

Schoengastia (Schoengastia) howdadi – Vercammen-Grandjean 1965c: 81.
Schoengastia (Schoengastia) howdadi howdadi – Zumpt 1961: 157.

Holotype

No data.

Material revised

Two paratypes (Nos 113895 and 113896) from RMCA, not suitable for examination.

Distribution

Tanzania (Zanzibar, Pemba Island).

Hosts

Cercopithecus mitis, *Chlorocebus aethiops*, Rodentia gen. sp.

Schoengastia huberti Taufflieb, 1972

Schoengastia (Schoengastia) huberti Taufflieb, 1972: 194, fig. 3.

Holotype

MNHN 5774-4.

Distribution

Senegal (Bandafassi, Etiess, Kédougou).

Hosts

Chlorocebus sabaeus, *Erythrocebus patas.*

Schoengastia hyracis Vercammen-Grandjean & Brennan, 1957

Schoengastia hyracis Vercammen-Grandjean & Brennan, 1957: 486, fig. 3.

Schoengastia (Schoengastia) hyracis – Vercammen-Grandjean 1965c: 81.
Schoengastia haddowi hyracis – Vercammen-Grandjean 1958b: 652.
Schoengastia (Schoengastia) haddowi hyracis – Zumpt 1961: 155, fig. 92a–d.

Holotype

RMCA (not found).

Material revised

One paratype (No. 113906) and 21 more specimens from RMCA; 2 paratypes from BMNH (1956.9.15.21 and 1956.9.15.22).

Distribution

Uganda (Kaabong), Zanzibar.

Hosts

Cercopithecus mitis, *Petrodromus tetradactylus sultani*, Procaviidae gen. sp.

Schoengastia katangae Vercammen-Grandjean, 1958

Schoengastia katangae Vercammen-Grandjean, 1958b: 638, pls 3, 8.

Schoengastia (Schoengastia) katangae – Zumpt 1961: 157. — Vercammen-Grandjean 1965c: 82.

Holotype

RMCA 113873.

Material revised

Holotype and three paratypes from RMCA.

Distribution

DR Congo (Lubumbashi).

Hosts

Elephantulus brachyrhynchus, *Paraxerus cepapi quotus*.

Schoengastia lavoipierrei Jadin & Vercammen-Grandjean, 1952

Schoengastia lavoipierrei Jadin & Vercammen-Grandjean, 1952: 621, pl. 7.

Schoengastia lavoipierrei – Wolfs & Vercammen-Grandjean 1953: 207. — Vercammen-Grandjean 1958b: 636, pls 2, 8.
Schoengastia (Schoengastia) lavoipierrei – Zumpt 1961: 157. — Vercammen-Grandjean 1965c: 82.

Holotype

RMCA 76056.

Material revised

Holotype (not suitable for examination) and eight paratypes from RMCA, including four nymphs.

Distribution

Rwanda (Butare, Kamembe), DR Congo (Bukavu, Kamaniola).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Centropus superciliosus*, *C. monachus*, *Crocidura* sp., *Oenomys hypoxanthus*, *Otomys tropicalis* (original data), *O. irroratus* (Zumpt 1961), *Rattus rattus*.

Remarks

The deutonymph was described (Vercammen-Grandjean 1958b).

Schoengastia lucassei Vercammen-Grandjean, 1958

Schoengastia lucassei lucassei Vercammen-Grandjean, 1958b: 646, pls 5, 8.

Schoengastia (Schoengastia) lucassei – Vercammen-Grandjean 1965c: 82.
Schoengastia (Schoengastia) lucassei lucassei – Zumpt 1961: 157.

Holotype

RMCA 113891.

Material revised

Holotype and two paratypes from RMCA.

Distribution

DR Congo (Mbandaka, Luvungi).

Hosts

Ceratogymna atrata, *Rattus rattus.*

Schoengastia mabuyana Lawrence, 1949

Schoengastia mabuyana Lawrence, 1949: 423, fig. 11.

Schoengastia mabuyana – Wharton & Fuller 1952: 88. — Vercammen-Grandjean 1958b: 658, pl. 9.
Schoengastia (Schoengastia) mabuyana – Zumpt 1961: 157. — Vercammen-Grandjean 1965c: 82.

Syntypes

SAMC 8713.

Distribution

Zimbabwe (Chishawasha mission, Bulawayo), South Africa (Ubombo).

Hosts

Trachylepis margaritifera, *T. striata*, *T. varia.*

Schoengastia monticola Lawrence, 1949

Schoengastia monticola Lawrence, 1949: 425, fig. 12.

Schoengastia monticola – Wharton & Fuller 1952: 88. — Vercammen-Grandjean 1958b: 658, pl. 9.
Schoengastia (Schoengastia) monticola – Zumpt 1961: 157. — Vercammen-Grandjean 1965c: 82.

Syntypes

NMSA 4827.

Material revised

One paratype from BMNH (1957.8.12.39).

Distribution

South Africa (Champagne Castle).

Host

Pseudocordylus subviridis.

Schoengastia moreli Taufflieb, 1960

Schoengastia (Schoengastia) moreli Taufflieb, 1960b: 229, pl. 3.

Schoengastia (Schoengastia) moreli – Vercammen-Grandjean 1965c: 82.

Holotype

No data.

Distribution

Benin (Parakou).

Host

Centropus senegalensis.

Schoengastia mozambica Kolebinova, 1984

Schoengastia (Schoengastia) mozambica Kolebinova, 1984b: 107, figs 6–10.

Holotype

SMF pA.65.1983.1.

Distribution

Mozambique (Inhaminga).

Host

Cryptomys darlingi.

Schoengastia nottei Vercammen-Grandjean, 1958

Schoengastia radfordi nottei Vercammen-Grandjean, 1958b: 635, pls 1, 8.

Schoengastia (Schoengastia) radfordi nottei – Zumpt 1961: 158.

Holotype

RMCA 113921.

Material revised

Holotype (the slide includes one larva, one nymph and one larval exuvium) and six paratypes from RMCA, including one nymph.

Distribution

DR Congo (Luvungi), Rwanda (Kamembe).

Hosts

Centropus grillii, *C. monachus*, *C. toulou*, *Leptailurus serval.*

Remarks

The deutonymph was described (Vercammen-Grandjean 1958b).

Schoengastia olbrechtsi Vercammen-Grandjean, 1958

Schoengastia olbrechtsi Vercammen-Grandjean, 1958b: 637, pls 2, 8.

Schoengastia (Schoengastia) olbrechtsi – Zumpt 1961: 157. — Vercammen-Grandjean 1965c: 82.

Holotype

RMCA 113884.

Material revised

Holotype.

Distribution

DR Congo (Bukavu).

Host

Centropus superciliosus.

Schoengastia oubanguiana André, 1951

Schoengastia oubanguiana André, 1951c: 372, figs 1–6.

Schoengastia oubangiana [sic] – Le Gac 1952a: 748.
Schoengastia oubanguiana oubanguiana – Vercammen-Grandjean 1958b: 653, pl. 7.
Schoengastia (Schoengastia) oubanguiana – Zumpt 1961: 157. — Vercammen-Grandjean 1965c: 82. — Taufflieb *et al.* 1967: 120.

Holotype

No data.

Distribution

Central African Republic (Bangui, Boali, Bossangoa, Bouar, Dekoa, M'Baiki, Possel, Sibut), Congo (Brazzaville), Chad (Léré).

Hosts

Dasymys incomtus, *Dendromus melanotis*, *Funisciurus isabella*, *Mylomys dybowskii*, *Numida meleagris*, *Lemniscomys striatus* (original data), *L. barbarus* (Zumpt 1961), *Lophuromys sikapusi*, *Oenomys hypoxanthus*, *Xerus erythropus.*

Schoengastia pitheciagambiae Brown, 2006

Schoengastia pitheciagambiae Brown, 2006a: 283, figs 1–2.

Holotype

USNM.

Distribution

Gambia (Kudang).

Hosts

Chlorocebus sabaeus, *Papio papio*.

Schoengastia platysauri Lawrence, 1949

Schoengastia platysauri Lawrence, 1949: 428, fig. 15.

Schoengastia platysauri – Wharton & Fuller 1952: 89. — Vercammen-Grandjean 1958b: 659, pl. 9.
Schoengastia (Schoengastia) platysauri – Zumpt 1961: 158. — Vercammen-Grandjean 1965c: 82.

Syntypes

NMSA 4869.

Distribution

Zimbabwe (Bulawayo).

Hosts

Platysaurus intermedius rhodesianus (original data), *P. guttatus* (Zumpt 1961).

Schoengastia potamogale Vercammen-Grandjean, 1958

Schoengastia potamogale – Vercammen-Grandjean 1958b: 635, pls 2, 8.

Schoengastia (Schoengastia) potamogale – Zumpt 1961: 158. — Vercammen-Grandjean 1965c: 82.

Holotype

RMCA 113885.

Material revised

Holotype and paratype (No. 113886) from RMCA, not suitable for examination.

Distribution

DR Congo (Bokuma).

Host

Potamogale velox.

Schoengastia pseudocordyli Lawrence, 1949

Schoengastia pseudocordyli Lawrence, 1949: 429, fig. 16.

Schoengastia pseudocordyli – Wharton & Fuller 1952: 89. — Vercammen-Grandjean 1958b: 659, pl. 9.
Schoengastia (Schoengastia) pseudocordyli – Zumpt 1961: 158. — Vercammen-Grandjean 1965c: 82.

Syntypes

NMSA 4831.

Distribution

South Africa (Champagne Castle, Pietermaritzburg).

Hosts

Pseudocordylus spinosus, *Trachylepis striata*.

Schoengastia radfordi Jadin & Vercammen-Grandjean, 1954

Schoengastia radfordi Jadin & Vercammen-Grandjean, 1954a: 198, fig.

Schoengastia radfordi – Abonnenc & Taufflieb 1957a: 564, figs 5–6.
Schoengastia radfordi radfordi – Vercammen-Grandjean 1958b: 634, pls 1, 8. — Taufflieb & Mouchet 1959: 239.
Schoengastia (Schoengastia) radfordi – Zumpt 1961: 158. — Vercammen-Grandjean 1965c: 82.

Holotype

RMCA 76221.

Material revised

Holotype and 14 paratypes from RMCA, including five nymphs.

Distribution

Rwanda (Butare, Musha), DR Congo (Beni, Bukavu, Matadi, Mushweshwe), Chad (Léré), Cameroon (Yaoundé).

Hosts

Aethomys bocagei (Taufflieb & Mouchet 1959), *A. chrysophilus* (Zumpt 1961), *Arvicanthis abyssinicus* (original data), *A. niloticus* (Zumpt 1961), *Cricetomys emini* (Vercammen-Grandjean 1958b), *C. gambianus* (Zumpt 1961), *Crocidura* sp., *Dasymys incomtus*, *Lophuromys aquilus* (Vercammen-Grandjean 1958b), *L. flavopunctatus* (Zumpt 1961), *Mastomys coucha* (Taufflieb & Mouchet 1959), *M. natalensis* (Zumpt 1961), *Numida meleagris*, *Oenomys hypoxanthus*, *Otomys irroratus*, *Pelomys fallax*, *Pternistis bicalcaratus*.

Schoengastia rara Vercammen-Grandjean, 1958

Schoengastia rara Vercammen-Grandjean, 1958b: 638, pls 3, 8.

Schoengastia (Schoengastia) rara – Zumpt 1961: 158. — Vercammen-Grandjean 1965c: 82.

Holotype

RMCA 113894.

Material revised

Holotype, not suitable for examination.

Distribution

Tanzania (Pemba Island).

Hosts

Otolemur garnettii, *O. crassicaudatus*.

Schoengastia rodentis Vercammen-Grandjean, 1958

Schoengastia rubi rodentis Vercammen-Grandjean, 1958b: 645.

Schoengastia (Schoengastia) rubi rodentis – Zumpt 1961: 158.

Holotype

No data.

Material revised

Two paratypes (Nos 113912 and 113913) from RMCA.

Distribution

DR Congo (Beni).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Oenomys hypoxanthus*, *Pelomys fallax*.

Schoengastia rubi Vercammen-Grandjean, 1958

Schoengastia rubi rubi Vercammen-Grandjean, 1958b: 643, pls 5, 8.

Schoengastia (Schoengastia) rubi rubi – Zumpt 1961: 158.
Schoengastia (Schoengastia) rubi – Vercammen-Grandjean 1965c: 82.

Holotype

RMCA 113907.

Material revised

Holotype (not suitable for examination) and five paratypes from RMCA.

Distribution

DR Congo (Bukavu, Mushweshwe), Central African Republic (Soulemaka).

Hosts

Acanthocercus atricollis, *Naja melanoleuca*, *Numida meleagris*, *Trachylepis maculilabris*, *Passeriformes* gen. sp.

Schoengastia schoengastoides Vercammen-Grandjean, 1960

Schoengastia (Anoploschoengastia) schoengastoides Vercammen-Grandjean, 1960d: 57, fig. 4.

Schoengastia (Schoengastia) schoengastoides – Vercammen-Grandjean 1965c: 83.

Holotype

No data.

Distribution

Tanzania (Zanzibar).

Host

Otolemur garnettii.

Schoengastia scincicola Lawrence, 1949

Schoengastia scincicola Lawrence, 1949: 427, fig. 14.

Schoengastia scincicola – Wharton & Fuller 1952: 89. — Vercammen-Grandjean 1958b: 659, pl. 9.
Schoengastia (Schoengastia) scincicola – Zumpt 1961: 159. — Vercammen-Grandjean 1965c: 82.

Syntypes

NMSA 4870.

Material revised

One paratype from BMNH (1957.8.12.35).

Distribution

Zimbabwe (Vumba Mountains, Chishawasha mission).

Host

Trachylepis varia.

Schoengastia sciuri Vercammen-Grandjean, 1958

Schoengastia lucassei sciuri Vercammen-Grandjean, 1958b: 647.

Schoengastia (Schoengastia) lucassei sciuri – Zumpt 1961: 157.

Holotype

No data.

Distribution

DR Congo (Shabunda, Mbandaka).

Host

Heliosciurus rufobrachium.

Schoengastia willmanni Radford, 1948

Schoengastia willmanni Radford, 1948: 216, figs 7–8.

Schoengastia willmanni – Wharton & Fuller 1952: 90. — Vercammen-Grandjean 1958b: 658, pl. 9.
Schoengastia (Schoengastia) willmanni – Zumpt 1961: 159. — Vercammen-Grandjean 1965c: 82.

Holotype

BMNH 1948.2.3.35.

Material revised

Holotype.

Distribution

Uganda (Katwe).

Host

Arvicanthis niloticus.

Schoengastia zanzi Vercammen-Grandjean, 1958

Schoengastia howdadi zanzi Vercammen-Grandjean, 1958b: 649.

Schoengastia (Schoengastia) howdadi zanzi – Zumpt 1961: 157.

Holotype

RMCA 113897.

Material revised

Holotype and paratype (No. 113898) from RMCA.

Distribution

Tanzania (Zanzibar).

Hosts

Otolemur crassicaudatus (Zumpt 1961), *O. garnettii* (original data), *Petrodromus tetradactylus sultani*.

Schoutedenichia Jadin & Vercammen-Grandjean, 1954

Diagnosis

SIF = 3B, 4B, 4BS, 5B-B(N)-3-2(1)1(0)1(0)0.0000; fsp = 7.7.7, sometimes 7.6.6; Ip = 470–1400. Cheliceral blade with tricuspid cap; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 3–5 branched setae and sometimes nude subterminala. Scutum trapezoidal, with posterior margin almost straight or concave in middle, with 1 AM, 2 AL and 2 PL setae, scutal puncta usually scarce or absent; sensilla clavate to globose, covered with setules, sensillary bases situated far apart, closer to lateral scutal margin than to each other. Eyes 2 + 2 or 1 + 1. Legs 7-segmented, 2 or 1 genualae I, genualae II and III present or absent, tibiala III always absent, mastisetae absent.

Schoutedenichia (Brennanichia) Vercammen-Grandjean, 1960

Diagnosis

SIF = 4B-B(N)-3-2110.0000; fsp = 7.7.7; Ip = 610–900. Cheliceral blade with tricuspid cap; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 4 branched setae. Scutum trapezoidal, with posterior margin usually concave in middle, with 1 AM, 2 AL and 2 PL setae, AL > PL > AM; sensilla usually globose, covered with setules, sensillary bases situated far anterior to level of PLs. Eyes usually 2 + 2. Legs 7-segmented, 2 genualae I, genualae II and III present, tibiala III and mastisetae absent.

Schoutedenichia (Brennanichia) annulata (Lawrence, 1949)

Ascoschoengastia annulata Lawrence, 1949: 414, figs 4–5.

Euschoengastia annulata – Wharton & Fuller 1952: 73. — Zumpt 1961: 164.
Schoutedenichia (Schoutedenichia) annulata – Vercammen-Grandjean 1964a: 111, figs A–D.
Schoutedenichia (Brennanichia) annulata – Vercammen-Grandjean 1965c: 99.

Syntypes

NMSA 4805.

Distribution

South Africa (Bronkhorstspruit, Johannesburg).

Host

Elephantulus myurus (original data), *E. rupestris* (Zumpt 1961).

Schoutedenichia (Brennanichia) berghei Vercammen-Grandjean, 1958

Schoutedenichia (Brennanichia) berghei Vercammen-Grandjean, 1958a: 32, figs 9, 10, 10a.

Schoutedenichia (Brennanichia) berghei – Zumpt 1961: 167. — Vercammen-Grandjean 1965c: 99.

Holotype

RMCA 82528.

Material revised

Holotype and 40 paratypes from RMCA, including two nymphs.

Distribution

DR Congo (Bukavu, Lwiro).

Hosts

Crocidura sp., *Grammomys dolichurus*.

Remarks

The deutonymph was described (Vercammen-Grandjean 1958a).

Schoutedenichia (Brennanichia) breviscuta Taufflieb, 1960

Schoutedenichia (Brennanichia) breviscuta Taufflieb, 1960b: 235, pl. 6.

Schoutedenichia (Brennanichia) breviscuta – Vercammen-Grandjean 1965c: 99.

Holotype

No data.

Distribution

Ivory Coast (Minankro).

Host

Arvicanthis rufinus.

Schoutedenichia (Brennanichia) buxtoni Vercammen-Grandjean, 1958

Schoutedenichia (Brennanichia) buxtoni Vercammen-Grandjean, 1958a: 38, fig. 13.

Schoutedenichia (Brennanichia) buxtoni – Zumpt 1961: 167. — Vercammen-Grandjean 1965c: 99.

Holotype

RMCA 87538.

Material revised

Holotype (not suitable for examination) and 18 paratypes from RMCA.

Distribution

DR Congo (Kabambare, Kisangani).

Host

Paraxerus boehmi emini.

Schoutedenichia (Brennanichia) dureni Vercammen-Grandjean, 1958

Schoutedenichia (Brennanichia) dureni Vercammen-Grandjean, 1958a: 39, fig. 14.

Schoutedenichia (Brennanichia) dureni – Zumpt 1961: 167. — Vercammen-Grandjean 1965c: 100.

Holotype

RMCA (not found).

Material revised

One specimen from RMCA (No. 113930) not designated as type.

Distribution

DR Congo (Doruma, Kikondja).

Hosts

Elephantulus brachyrhynchus, *E. fuscipes.*

Schoutedenichia (Brennanichia) evansi Vercammen-Grandjean, 1958

Schoutedenichia (Brennanichia) evansi Vercammen-Grandjean, 1958a: 30, fig. 8.

Schoutedenichia (Brennanichia) evansi – Zumpt 1961: 167. — Vercammen-Grandjean 1965c: 100.

Holotype

Private collection of Vercammen-Grandjean.

Distribution

Tanzania (Nambunga).

Host

Galago senegalensis.

Schoutedenichia (Brennanichia) haddowi Vercammen-Grandjean, 1958

Schoutedenichia (Brennanichia) haddowi Vercammen-Grandjean, 1958a: 24, figs 3–4.

Schoutedenichia (Brennanichia) haddowi – Zumpt 1961: 167. — Vercammen-Grandjean 1965c: 100.

Holotype

Private collection of Vercammen-Grandjean.

Distribution

Uganda (Kaabong).

Host

Rodentia gen. sp.

Schoutedenichia (Brennanichia) penetrans (Jadin & Vercammen-Grandjean, 1954)

Euschoengastia penetrans Jadin & Vercammen-Grandjean, 1954b: 284, fig. 1.

Schoutedenichia (Brennanichia) penetrans – Vercammen-Grandjean 1958a: 26, figs 5, 7; 1965c: 100 — Zumpt 1961: 168, fig. 96a–d. — Taufflieb 1965a: 29.

Holotype

RMCA 80565.

Material revised

Holotype (not suitable for examination) and 42 paratypes from RMCA, including 21 nymphs.

Distribution

DR Congo (Bukavu, Luvungi), Angola (Dundo).

Hosts

Centropus grillii (original data), *C. toulou* (Zumpt 1961), *Cricetomys emini* (original data), *C. gambianus* (Zumpt 1961), *Dasymys incomtus*, *Graphiurus murinus*, *Lophuromys aquilus* (original data), *L. flavopunctatus* (Zumpt 1961), *Oenomys hypoxanthus*, *Otomys irroratus*, *Pelomys fallax*, *Tachyoryctes ruandae* (original data), *T. splendens* (Zumpt 1961).

Remarks

The deutonymph was described (Jadin & Vercammen-Grandjean 1954b; Vercammen-Grandjean 1958a).

Schoutedenichia (Brennanichia) pirloti (Jadin & Vercammen-Grandjean, 1954)

Euschoengastia pirloti Jadin & Vercammen-Grandjean, 1954b: 287, fig. 3.

Schoutedenichia (Brennanichia) pirloti – Vercammen-Grandjean 1958a: 28, figs 6–7; 1965c: 100. — Zumpt 1961: 169.

Holotype

RMCA (not found).

Distribution

DR Congo (Lwiro, Bukavu).

Hosts

Lophuromys aquilus (original data), *L. flavopunctatus* (Zumpt 1961), *Mastomys coucha* (original data), *M. natalensis* (Zumpt 1961), *Tachyoryctes ruandae* (original data), *T. splendens* (Zumpt 1961).

Remarks

The deutonymph was described (Jadin & Vercammen-Grandjean 1954b; Vercammen-Grandjean 1958a).

Schoutedenichia (Brennanichia) potto Vercammen-Grandjean & Yang, 1964

Schoutedenichia (Brennanichia) potto Vercammen-Grandjean & Yang, 1964: 123, figs A–E.

Schoutedenichia (Brennanichia) potto – Vercammen-Grandjean 1965c: 100.

Holotype

RMCA (not found).

Distribution

DR Congo (Bukavu).

Host

Perodicticus potto ibeanus.

Schoutedenichia (Brennanichia) zanzibarica Vercammen-Grandjean, 1958

Schoutedenichia (Brennanichia) zanzibarica Vercammen-Grandjean, 1958a: 36, fig. 11.

Schoutedenichia (Brennanichia) zanzibarica – Zumpt 1961: 169. — Vercammen-Grandjean 1965c: 100.

Holotype

RMCA 87524.

Material revised

Holotype and 11 paratypes from RMCA.

Distribution

Tanzania (Zanzibar).

Hosts

Galago senegalensis (Zumpt 1961), *G. zanzibaricus* (original data).

Schoutedenichia (Nasichia) Vercammen-Grandjean, 1958

Diagnosis

SIF = 4BS-N-3-2110.0000; fPp usually N/N/NNN; fsp = 7.7.7 or 7.6.6; fCx = 1.1.(2–7). Cheliceral blade with tricuspid cap; galeal setae always nude; palpal claw 3-pronged; palpal tarsus with 4 branched setae and nude subterminala. Scutum small, trapezoidal, as wide as long, SD > AW, with posterior margin concave in middle, with 1 AM, 2 AL and 2 PL setae; sensilla clavate to globose, covered with setules. Eyes usually 1 + 1. Legs I 7-segmented, legs II and III 6 or 7-segmented, 2 genualae I, genualae II and III present, tibiala III and mastisetae absent, coxae III multisetose. Intranasal parasites of mammals.

Schoutedenichia (Nasichia) aethomyia Vercammen-Grandjean, 1975

Schoutedenichia (Nasichia) aethomyia Vercammen-Grandjean, 1975: 406, fig. C.

Holotype

RMCA 144.730.

Material revised

Holotype and two paratypes from RMCA, not suitable for examination.

Distribution

DR Congo (Baya).

Host

Aethomys kaiseri.

Schoutedenichia (Nasichia) doxa Vercammen-Grandjean, 1975

Schoutedenichia (Nasichia) doxa Vercammen-Grandjean, 1975: 429, fig. H.

Holotype

BMNH 1973.554.

Material revised

Holotype, labeled by Vercammen-Grandjean as *Schoutedenichia (Nasichia) dochea* [sic].

Distribution

Kenya (Lanet).

Hosts

Arvicanthis abyssinicus, *Otomys angoniensis*.

Schoutedenichia (Nasichia) lipsi Vercammen-Grandjean, 1975

Schoutedenichia (Nasichia) lipsi Vercammen-Grandjean, 1975: 419, fig. F.

Holotype

RMCA 144.732.

Material revised

Holotype and 216 paratypes from RMCA.

Distribution

DR Congo (Baya, Fulubwe, Futuka, Kafubu, Kanienga, Kasapa, Kasenga, Kikuswe, Kisanga, Kiswishi, Lubumbashi, Makulo, Mukwen, Mususwa, Mwera, Tshamalale, Walyanshiku).

Hosts

Aethomys kaiseri (type host), *Cricetomys ansorgei*, *Gerbilliscus validus*, *Grammomys dolichurus*, *Mastomys natalensis*, *Pelomys fallax*, *Praomys jacksoni*, *Saccostomus campestris*, *Steatomys pratensis*.

Schoutedenichia (Nasichia) microdoxa Vercammen-Grandjean, 1975

Schoutedenichia (Nasichia) microdoxa Vercammen-Grandjean, 1975: 433, fig. I.

Holotype

BMNH 1973.562.

Material revised

Holotype, labeled by Vercammen-Grandjean as *Schoutedenichia (Nasichia) macrodochea* [sic].

Distribution

Kenya (Kahawa).

Host

Otomys angoniensis.

Schoutedenichia (Pentachia) Vercammen-Grandjean, 1958

Diagnosis

SIF = 5B-B-3-2110.0000; fPp = B/B/BBB; fsp = 7.7.7; fCx = 1.1.1. Cheliceral blade with tricuspid cap and dorsal serration; galeal setae always branched; palpal claw 3-pronged; palpal tarsus with 5 branched setae. Scutum trapezoidal, with posterior margin concave in middle, with 1 AM, 2 AL and 2 PL setae; sensilla clavate, covered with setules. Eyes 2 + 2. Legs 7-segmented, 2 genualae I, genualae II and III present, tibiala III and mastisetae absent, all coxae unisetose.

Schoutedenichia (Pentachia) xeri Taufflieb, 1966

Schoutedenichia (Pentachia) xeri Taufflieb, 1966b: 287, fig. 1.

Schoutedenichia (Pentachia) xeri – Taufflieb *et al.* 1967: 119. — Kolebinova & Vercammen-Grandjean 1980b: 70.

Holotype

MNHN.

Material revised

Two paratypes from RMCA (No. 128393).

Distribution

Central African Republic (Soulemaka), South Africa (Cape of Good Hope).

Hosts

Procavia capensis, *Xerus erythropus*.

Schoutedenichia (Platytrichia) Vercammen-Grandjean, 1960

Diagnosis

SIF = 4B-B-3-1110.0000; fsp = 7.7.7; Ip = 670–760. Cheliceral blade with tricuspid cap; galeal setae always branched; palpal claw 3-pronged; palpal tarsus with 4 branched setae. Scutum trapezoidal, considerably wider than long, with biconvex posterior margin, with 1 AM, 2 AL and 2 PL setae; PLs sometimes foliate; sensillary bases situated far apart; sensilla claviform or pyriform, covered with setules. Eyes 2 + 2. Legs 7-segmented, 1 genuala I, genualae II and III present, tibiala III and mastisetae absent.

Schoutedenichia (Platytrichia) algeriensis Vercammen-Grandjean, 1960

Schoutedenichia (Platytrichia) algeriensis Vercammen-Grandjean, 1960d: 66, figs 8–9.

Schoutedenichia (Platytrichia) algeriensis – Vercammen-Grandjean 1965c: 103.

Holotype

No data.

Distribution

Algeria (Hydra).

Host

Crocidura ichnusae.

Schoutedenichia (Platytrichia) balozeti Vercammen-Grandjean, 1960

Schoutedenichia (Platytrichia) balozeti Vercammen-Grandjean, 1960d: 64, fig. 7.

Schoutedenichia (Platytrichia) balozeti – Vercammen-Grandjean 1965c: 103.

Holotype

No data.

Distribution

Algeria (Hydra).

Host

Crocidura ichnusae.

Schoutedenichia (Platytrichia) dipodilli Vercammen-Grandjean, 1958

Schoutedenichia (Brennanichia) dipodilli Vercammen-Grandjean, 1958a: 36, fig. 12.

Schoutedenichia (Brennanichia) dipodilli – Vercammen-Grandjean 1965c: 103.

Holotype

RMCA (not found).

Material revised

One specimen from RMCA (No. 87536) not designated as type, not suitable for examination.

Distribution

Morocco (Casablanca). This species was also recorded from murid rodents in Spain (Pereira-Lorenzo 1993).

Host

Dipodillus campestris.

Schoutedenichia (Platytrichia) geckobia Taufflieb, 1958

Schoutedenichia geckobia Taufflieb, 1958a: 628, pl. 4.

Schoutedenichia (Platytrichia) geckobia – Vercammen-Grandjean 1960d: 64; 1965c: 103.

Holotype

No data.

Distribution

Morocco (Oued Cherrat).

Host

Tarentola mauritanica.

Schoutedenichia (Schoutedenichia) Jadin & Vercammen-Grandjean, 1954

Diagnosis

SIF = 4B-B(N)-3-21(0)1(0)0.0000; fsp = 7.7.7; Ip = 470–1400. Cheliceral blade with tricuspid cap; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 4 branched setae. Scutum trapezoidal, with posterior margin concave at least in middle, with 1 AM, 2 AL and 2 PL setae; PL > AL; sensillary bases situated far apart and far anterior to level of PLs; sensilla fusiform to pyriform, covered with setules. Eyes 2 + 2 or 1 + 1. Legs 7-segmented, 2 genuala I, genualae II and III sometimes absent, tibiala III and mastisetae absent.

Schoutedenichia (Schoutedenichia) andrei (Jadin & Vercammen-Grandjean, 1952)

Ascoschoengastia andrei Jadin & Vercammen-Grandjean, 1952: 622, pl. 8.

Schoutedenichia (Schoutedenichia) andrei – Vercammen-Grandjean 1958a: 52, fig. 23; 1965c: 101 — Zumpt 1961: 169. — Kolebinova & Vercammen-Grandjean 1980b: 70.

Holotype

RMCA 76057.

Material revised

Holotype and 28 paratypes from RMCA, not suitable for examination.

Distribution

Rwanda (Butare, Musha), DR Congo (Bukavu), Uganda (Buhugu).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Crocidura olivieri occidentalis*, *Dasymys incomtus*, *Graphiurus murinus*, *Lemniscomys striatus*, *Lophuromys aquilus* (original data), *L. flavopunctatus* (Zumpt 1961), *Otomys tropicalis* (original data), *O. irroratus* (Vercammen-Grandjean 1958a).

Schoutedenichia (Schoutedenichia) audyi Vercammen-Grandjean, 1953

Schoutedenichia audyi Vercammen-Grandjean, 1953: 25, figs A–F.

Schoutedenichia (Nasichia) audyi – Vercammen-Grandjean 1958a: 69, fig. 35. — Zumpt 1961: 165.
Schoutedenichia (Schoutedenichia) audyi – Vercammen-Grandjean 1965c: 101.

Holotype

RMCA 76216.

Material revised

Holotype and four paratypes from RMCA.

Distribution

Rwanda (Butare).

Hosts

Cricetomys emini (original data), *C. gambianus* (Zumpt 1961), *Dasymys incomtus*.

Schoutedenichia (Schoutedenichia) avis Vercammen-Grandjean, 1964

Schoutedenichia (Schoutedenichia) avis Vercammen-Grandjean, 1964b: 121, figs A–C.

Schoutedenichia (Schoutedenichia) avis – Vercammen-Grandjean 1965c: 101.

Holotype

No data.

Distribution

DR Congo (Luvungi).

Host

Vanellus lugubris.

Schoutedenichia (Schoutedenichia) bangiensis Taufflieb, 1966

Schoutedenichia (Schoutedenichia) bangiensis Taufflieb, 1966b: 291, fig. 3.

Schoutedenichia (Schoutedenichia) bangiensis – Taufflieb *et al.* 1967: 119.

Holotype

MNHN.

Distribution

Central African Republic (Bangui).

Host

Mastomys sp.

Schoutedenichia (Schoutedenichia) benuensis (Taufflieb & Mouchet, 1959)

Ascoschoengastia benuensis Taufflieb & Mouchet, 1959: 235, pl. 4.

Ascoschoengastia (Ascoschoengastia) benuensis – Zumpt 1961: 161.

Schoutedenichia benuensis – Zumpt 1961: 171.
Schoutedenichia (Schoutedenichia) benuensis – Vercammen-Grandjean 1965c: 102.

Holotype

No data.

Distribution

Cameroon (Garoua).

Hosts

Mastomys coucha (original data), *M. natalensis* (Zumpt 1961).

Schoutedenichia (Schoutedenichia) brachiospissi Vercammen-Grandjean, 1958

Schoutedenichia (Nasichia) brachiospissi Vercammen-Grandjean, 1958a: 75, fig. 38.

Schoutedenichia (Nasichia) brachiospissi – Zumpt 1961: 166.
Schoutedenichia (Schoutedenichia) brachiospissi – Vercammen-Grandjean 1965c: 101.

Holotype

RMCA 82388.

Material revised

Holotype and 17 paratypes from RMCA.

Distribution

DR Congo (Beni, Irumu, Mutwanga).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Mastomys coucha* (original data), *M. natalensis* (Zumpt 1961).

Schoutedenichia (Schoutedenichia) bukavuensis Vercammen-Grandjean, 1958

Schoutedenichia (Nasichia) panai bukavuensis Vercammen-Grandjean, 1958a: 74, fig. 37C, F–G.

Schoutedenichia (Nasichia) panai bukavuensis – Zumpt 1961: 166.

Holotype

Private collection of Vercammen-Grandjean.

Distribution

DR Congo (Bukavu).

Host

Otomys irroratus.

Schoutedenichia (Schoutedenichia) congolensis Vercammen-Grandjean, 1958

Schoutedenichia (Nasichia) congolensis Vercammen-Grandjean, 1958a: 70, fig. 36.

Schoutedenichia (Nasichia) congolensis – Zumpt 1961: 166.
Schoutedenichia (Schoutedenichia) congolensis – Vercammen-Grandjean 1965c: 101.

Holotype

RMCA 82515.

Material revised

Holotype.

Distribution

DR Congo (Mbandaka).

Host

Rattus rattus.

Schoutedenichia (Schoutedenichia) cordiformis Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) cordiformis Vercammen-Grandjean, 1958a: 48, figs 20–21.

Schoutedenichia (Schoutedenichia) cordiformis – Zumpt 1961: 169. — Taufflieb 1965a: 29. — Vercammen-Grandjean 1965c: 101. — Taufflieb *et al.* 1967: 119.

Holotype

RMCA 82488.

Material revised

Holotype and 45 paratypes from RMCA. One paratype from BMNH, labeled as "*Euschoengastia cordiformis*".

Distribution

DR Congo (Bukavu, Lwiro, Mbandaka), Angola (Dundo, Nhefo), Central African Republic (Bangui).

Hosts

Chiroptera gen. sp., *Crocidura* sp., *Epomophorus wahlbergi*, *Grammomys dolichurus*, *Lemniscomys striatus*, *Mastomys coucha* (original data), *M. natalensis* (Zumpt 1961), *Praomys jacksoni*, *Rattus rattus*.

Remarks

The deutonymph was described (Vercammen-Grandjean 1958a).

Schoutedenichia (Schoutedenichia) crocidurae (Lawrence, 1949)

Ascoschoengastia crocidurae Lawrence, 1949: 416, fig. 6.

Ascoschoengastia crocidurae – Lawrence 1951a: 116.

Euschoengastia crocidurae – Wharton & Fuller 1952: 75.
Schoutedenichia (Schoutedenichia) crocidurae – Vercammen-Grandjean 1958a: 43, fig. 17; 1965c: 101. — Zumpt 1961: 169.

Syntypes

NMSA 4902.

Material revised

One paratype from BMNH (1957.8.12.1). One specimen from RMCA (No. 113928) originally from NMSA, not suitable for examination.

Distribution

South Africa (Pietermaritzburg).

Hosts

Crocidura flavescens, *Cryptomys hottentotus*.

Schoutedenichia (Schoutedenichia) discalis Goff, 1983

Schoutedenichia discalis Goff, 1983a: 76, fig. 2.

Holotype

BPBM 12771.

Distribution

Tanzania (University of Dar es Salaam Research Flats).

Host

Crocidura sp.

Schoutedenichia (Schoutedenichia) dutoiti (Radford, 1948)

Ascoschoengastia dutoiti Radford, 1948: 218, figs 11–12.

Euschoengastia dutoiti – Wharton & Fuller 1952: 75.
Schoutedenichia (Schoutedenichia) dutoiti – Vercammen-Grandjean 1958a: 62, fig. 30; 1965c: 102. — Zumpt 1961: 169.

Holotype

BMNH 1948.2.3.30.

Material revised

Holotype (labeled as “lectotype”).

Distribution

South Africa (Grahamstown).

Host

Saccostomus campestris.

Schoutedenichia (Schoutedenichia) frici Kolebinova & Vercammen-Grandjean, 1980

Schoutedenichia (Schoutedenichia) frici Kolebinova & Vercammen-Grandjean, 1980b: 67, pl. 2.

Holotype

NHMW 12111887/1.

Distribution

"Northwest or West Africa" (Kolebinova & Vercammen-Grandjean 1980b), the exact locality is unknown.

Host

Crocidura sp.

Schoutedenichia (Schoutedenichia) fulleri Jadin & Vercammen-Grandjean, 1954

Schoutedenichia fulleri Jadin & Vercammen-Grandjean, 1954a: 203, fig.

Schoutedenichia (Schoutedenichia) fulleri – Vercammen-Grandjean 1958a: 41, figs 15–16; 1965c: 101. — Zumpt 1961: 169.

Holotype

RMCA 76223.

Material revised

Holotype and three paratypes (Nos 76224–76226, not suitable for examination) from RMCA.

Distribution

Rwanda (Musha), DR Congo (Bukavu).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Crocidura* sp.

Remarks

The deutonymph was described (Vercammen-Grandjean 1958a).

Schoutedenichia (Schoutedenichia) gilleti Jadin, Vercammen-Grandjean & Herman, 1954

Euschoengastia paradoxa var. *gilleti* Jadin *et al.*, 1954a: 273.

Schoutedenichia (Nasichia) paradoxa gilleti – Vercammen-Grandjean 1958a: 83, fig. 42. — Zumpt 1961: 166, fig. 96e–f.
Schoutedenichia (Schoutedenichia) gilleti – Vercammen-Grandjean 1965c: 101.

Holotype

RMCA 80558.

Material revised

Holotype and five paratypes from RMCA.

Distribution

DR Congo (Luberizi).

Hosts

Oenomys hypoxanthus, *Pelomys fallax*.

Schoutedenichia (Schoutedenichia) gordoni Vercammen-Grandjean, 1958

Schoutedenichia (Nasichia) nana gordoni Vercammen-Grandjean, 1958a: 79, fig. 39.

Schoutedenichia (Nasichia) nana gordoni – Zumpt 1961: 166.
Schoutedenichia (Schoutedenichia) gordoni – Vercammen-Grandjean 1965c: 101.

Holotype

RMCA 82477.

Material revised

Holotype and 10 paratypes from RMCA.

Distribution

DR Congo (Shabunda).

Hosts

Oenomys hypoxanthus.

Schoutedenichia (Schoutedenichia) kivuensis Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) kivuensis Vercammen-Grandjean, 1958a: 53, fig. 24.

Schoutedenichia (Schoutedenichia) kivuensis – Zumpt 1961: 169. — Vercammen-Grandjean 1965c: 101.

Holotype

RMCA 82409.

Material revised

Holotype (not suitable for examination) and five paratypes from RMCA.

Distribution

DR Congo (Bukavu).

Host

Crocidura sp.

Schoutedenichia (Schoutedenichia) lavoipierrei Taufflieb, 1961

Schoutedenichia (Schoutedenichia) lavoipierrei Taufflieb, 1961: 580, fig. 2.

Schoutedenichia (Schoutedenichia) lavoipierrei – Taufflieb 1965a: 29. — Vercammen-Grandjean 1965c: 101.

Holotype

Private collection of Taufflieb.

Distribution

Congo (Brazzaville), Angola (Dundo, Nhefo).

Hosts

Funisciurus bayonii, *Mastomys coucha*, *M. natalensis*, *Potamogale velox*, *Praomys jacksoni*, *P. tullbergi.*

Schoutedenichia (Schoutedenichia) leporis Vercammen-Grandjean, 1963

Schoutedenichia (Nasichia) paradoxa leporis Vercammen-Grandjean, 1963: 249, figs A–B.

Schoutedenichia (Schoutedenichia) leporis – Vercammen-Grandjean 1965c: 101.
Schoutedenichia (Nasichia) leporis – Vercammen-Grandjean 1975: 414, fig. E

Holotype

RMCA (not found).

Material revised

41 specimens from RMCA not designated as types.

Distribution

Rwanda (Akanyaru vallei), DR Congo (Baya, Kafubu, Kasapa, Kikuswe, Kiswishi, Lubumbashi, Mukwen, Tshamalale, Walyanshiku), Kenya (Dandora, Kahawa).

Hosts

Aethomys kaiseri, *Grammomys dolichurus*, *Lepus microtis* (type host), *Mastomys natalensis*, *Otomys angoniensis*, *Pelomys fallax*, *Praomys jacksoni*, *Rhabdomys pumilio*, *Saccostomus campestris.*

Schoutedenichia (Schoutedenichia) lorgei Vercammen-Grandjean, 1958

Schoutedenichia (Pentachia) lorgei Vercammen-Grandjean, 1958a: 22, fig. 2.

Schoutedenichia (Pentachia) lorgei – Vercammen-Grandjean & Yang 1963a: 252.
Schoutedenichia (Nasichia) lorgei – Zumpt 1961: 167.
Schoutedenichia (Schoutedenichia) lorgei – Vercammen-Grandjean 1965c: 102.

Holotype

RMCA 82476.

Material revised

Holotype.

Distribution

Rwanda (Gisenyi), DR Congo (Rugari).

Host

Dendrohyrax arboreus.

Remarks

The deutonymph was described (Vercammen-Grandjean & Yang 1963a).

Schoutedenichia (Schoutedenichia) luberoensis Vercammen-Grandjean, 1958

Schoutedenichia (Nasichia) panai luberoensis Vercammen-Grandjean, 1958a: 73, fig. 37B, E, H.

Schoutedenichia (Nasichia) panai luberoensis – Zumpt 1961: 166.

Holotype

RMCA 82518.

Material revised

Holotype and nine paratypes from RMCA, all labeled as "*Schoutedenichia panai* v. *lubero*".

Distribution

DR Congo (Lubero).

Host

Mastomys coucha (original data), *M. natalensis* (Zumpt 1961).

Schoutedenichia (Schoutedenichia) lumsdeni Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) lumsdeni Vercammen-Grandjean, 1958a: 56, fig. 26.

Schoutedenichia (Schoutedenichia) lumsdeni – Zumpt 1961: 170. — Vercammen-Grandjean 1965c: 102.

Holotype

Private collection of Vercammen-Grandjean.

Distribution

South Africa (Kruger National Park).

Host

Paraxerus sp.

Schoutedenichia (Schoutedenichia) major Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) paulus major Vercammen-Grandjean, 1958a: 47.

Schoutedenichia (Schoutedenichia) paulus major – Zumpt 1961: 170.

Holotype

Private collection of Vercammen-Grandjean.

Distribution

DR Congo (Bukavu, Luvungi).

Hosts

Centropus grillii (original data), *C. toulou* (Zumpt 1961), *Cricetomys emini* (original data), *C. gambianus* (Zumpt 1961).

Schoutedenichia (Schoutedenichia) morosi Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) morosi Vercammen-Grandjean, 1958a: 44, fig. 18.

Schoutedenichia (Schoutedenichia) morosi – Zumpt 1961: 170. — Vercammen-Grandjean 1965c: 101.

Holotype

Private collection of Vercammen-Grandjean.

Distribution

South Africa (Mt Moorosi), Botswana (Kubung).

Hosts

Gerbilliscus afra, *Otomys* sp.

Schoutedenichia (Schoutedenichia) musaranei Taufflieb, 1966

Schoutedenichia (Schoutedenichia) musaranei Taufflieb, 1966b: 293, fig. 4.

Schoutedenichia (Schoutedenichia) musaranei – Taufflieb *et al.* 1967: 120.

Holotype

MNHN.

Material revised

Two paratypes from RMCA (Nos 128390 and 128391).

Distribution

Central African Republic (Bangui, Boukoko).

Hosts

Crocidura olivieri occidentalis, *Mastomys* sp., *Mus (Nannomys)* sp. (original data), *M. minutoides* (Taufflieb *et al.* 1967).

Schoutedenichia (Schoutedenichia) mytosi Taufflieb, 1966

Schoutedenichia (Schoutedenichia) mytosi Taufflieb, 1966b: 289, fig. 2.

Schoutedenichia (Schoutedenichia) mytosi – Taufflieb *et al.* 1967: 120.

Holotype

MNHN.

Material revised

Two paratypes from RMCA (No. 128392).

Distribution

Central African Republic (Bangui, Soulemaka).

Hosts

Aethomys medicates, *Oenomys hypoxanthus.*

Schoutedenichia (Schoutedenichia) nana (Jadin, Vercammen-Grandjean & Herman, 1954)

Euschoengastia paradoxa nana Jadin *et al.*, 1954a: 273.

Schoutedenichia (Nasichia) nana nana – Vercammen-Grandjean 1958a: 77, fig. 39.
Schoutedenichia (Nasichia) nana – Zumpt 1961: 166.
Schoutedenichia (Schoutedenichia) nana – Vercammen-Grandjean 1965c: 102.

Holotype

RMCA 80539.

Material revised

Holotype (not suitable for examination) and 18 paratypes from RMCA.

Distribution

DR Congo (Kabunga, Kindu, Mbandaka, Shabunda).

Hosts

Lemniscomys striatus, *Oenomys hypoxanthus*, *Rattus rattus.*

Schoutedenichia (Schoutedenichia) oyei Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) oyei Vercammen-Grandjean, 1958a: 66, fig. 33.

Schoutedenichia (Schoutedenichia) oyei – Zumpt 1961: 170. — Vercammen-Grandjean 1965c: 102.

Holotype

RMCA 113931.

Material revised

Holotype, not suitable for examination.

Distribution

DR Congo (Bikoro).

Host

Petrodromus tetradactylus tordayi.

Schoutedenichia (Schoutedenichia) panai Vercammen-Grandjean, 1958

Schoutedenichia (Nasichia) panai panai Vercammen-Grandjean, 1958a: 72, figs 37A, D, G.

Schoutedenichia (Nasichia) panai panai – Zumpt 1961: 166.
Schoutedenichia (Schoutedenichia) panai – Vercammen-Grandjean 1965c: 102.

Holotype

RMCA 82516.

Material revised

Holotype and paratype (No. 82517) from RMCA.

Distribution

DR Congo (Luberizi), Rwanda (Butare).

Host

Mastomys coucha (original data), *M. natalensis* (Zumpt 1961).

Schoutedenichia (Schoutedenichia) paradoxa (Jadin, Vercammen-Grandjean & Herman, 1954)

Euschoengastia paradoxa Jadin *et al.*, 1954a: 273.

Schoutedenichia (Nasichia) paradoxa paradoxa – Vercammen-Grandjean 1958a: 79, figs 40–42.
Schoutedenichia (Nasichia) paradoxa – Zumpt 1961: 166, fig. 96e–f. — Vercammen-Grandjean 1975: 410, fig. D.
Schoutedenichia (Schoutedenichia) paradoxa – Vercammen-Grandjean 1965c: 102.

Holotype

RMCA 80509.

Material revised

Holotype and 30 paratypes from RMCA, including 11 nymphs.

Distribution

DR Congo (Bukavu, Kabunga, Kindu, Lwiro, Mbandaka).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Crocidura* sp., *Dasymys incomtus*, *Dendromus mesomelas*, *Felis catus*, *Grammomys dryas* (original data), *G. dolichurus* (Zumpt 1961), *Graphiurus* sp., *Lemniscomys striatus*, *L. griselda*, *Lophuromys aquilus* (original data), *L. flavopunctatus* (Zumpt 1961), *Mastomys coucha*, *Mus triton*, *Oenomys hypoxanthus*, *Otomys irroratus*, *Pelomys fallax*, *Rattus rattus.*

Remarks

The deutonymph was described (Jadin *et al.* 1954a; Vercammen-Grandjean 1958a).

Schoutedenichia (Schoutedenichia) paraxeri Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) paraxeri Vercammen-Grandjean, 1958a: 55, fig. 25.

Schoutedenichia (Schoutedenichia) paraxeri – Zumpt 1961: 170. — Vercammen-Grandjean 1965c: 102.

Holotype

RMCA 87556.

Material revised

Holotype, not suitable for examination.

Distribution

DR Congo (Lubumbashi).

Host

Paraxerus cepapi quotus.

Schoutedenichia (Schoutedenichia) paulus Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) paulus paulus Vercammen-Grandjean, 1958a: 46, fig. 19.

Schoutedenichia (Schoutedenichia) paulus paulus – Zumpt 1961: 170. — Taufflieb 1965a: 29.
Schoutedenichia (Schoutedenichia) paulus – Vercammen-Grandjean 1965c: 101. — Kolebinova & Vercammen-Grandjean 1980b: 70.

Holotype

RMCA 82404.

Material revised

Holotype (not suitable for examination) and six paratypes from RMCA.

Distribution

Uganda (Buhugu), DR Congo (Bukavu), Angola (Dundo).

Hosts

Aethomys nyikae, *Crocidura fuscomurina* (original data), *C. suaveolens* (Zumpt 1961), *C. olivieri occidentalis.*

Schoutedenichia (Schoutedenichia) pazolis Taufflieb, 1961

Schoutedenichia (Schoutedenichia) pazolis Taufflieb, 1961: 578, fig. 1.

Schoutedenichia (Schoutedenichia) pazolis – Vercammen-Grandjean 1965c: 102.

Holotype

Private collection of Taufflieb.

Distribution

Congo (Brazzaville).

Hosts

Cricetomys gambianus (Zumpt 1961), *Praomys tullbergi*.

Schoutedenichia (Schoutedenichia) pilosa Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) pilosa Vercammen-Grandjean, 1958a: 50, fig. 22.

Schoutedenichia (Schoutedenichia) pilosa – Zumpt 1961: 170. — Vercammen-Grandjean 1965c: 101.

Holotype

RMCA 82568.

Material revised

Holotype and 17 paratypes from RMCA, including 11 nymphs.

Distribution

DR Congo (Bukavu, Lwiro).

Hosts

Crocidura fuscomurina (original data), *C. suaveolens* (Zumpt 1961), *Dasymys incomtus*, *Grammomys dolichurus*, *Lophuromys aquilus* (original data), *L. flavopunctatus* (Zumpt 1961), *Mastomys coucha* (original data), *M. natalensis* (Zumpt 1961), *Oenomys hypoxanthus.*

Remarks

The deutonymph was described (Vercammen-Grandjean 1958a).

Schoutedenichia (Schoutedenichia) praomyia (Radford, 1942)

Trombicula praomyia Radford, 1942: 64, fig. 31.

Trombicula praomyia – Radford 1947: 592, figs 19–20.
Trombicula (Trombicula) praomyia – Wharton & Fuller 1952: 69.

Schoutedenichia (Schoutedenichia) praomyia – Vercammen-Grandjean 1958a: 65, fig. 32; 1965c: 102. — Taufflieb 1960b: 224. — Zumpt 1961: 170.

Holotype

BMNH 1946.12.18.12.

Material revised

Holotype.

Distribution

Sierra Leone (George Water Brook).

Hosts

Praomys morio (Zumpt 1961), *Praomys tullbergi* (original data).

Schoutedenichia (Schoutedenichia) rosalia Vercammen-Grandjean & Yang, 1963

Schoutedenichia (Schoutedenichia) rosalia Vercammen-Grandjean & Yang, 1963b: 256, figs A–D.

Schoutedenichia (Schoutedenichia) rosalia – Vercammen-Grandjean 1965c: 101.

Holotype

RMCA (not found).

Distribution

DR Congo (Lemera).

Host

Crocidura fuscomurina.

Schoutedenichia (Schoutedenichia) rouchoni Abonnenc, 1955

Euschoengastia rouchoni Abonnenc, 1955: 220, figs 1–2.

Schoutedenichia (Pentachia) rouchoni – Vercammen-Grandjean 1958a: 21, fig. 1.
Schoutedenichia (Nasichia) rouchoni – Zumpt 1961: 167.
Schoutedenichia (Schoutedenichia) rouchoni – Vercammen-Grandjean 1965c: 102.

Holotype

MNHN.

Material revised

One paratype from RMCA (No. 82475), not suitable for examination.

Distribution

Benin.

Host

Phacochoerus aethiopicus.

Schoutedenichia (Schoutedenichia) sadini Vercammen-Grandjean, 1960

Schoutedenichia sadini Vercammen-Grandjean, 1960c: 210, figs 1–5.

Schoutedenichia (Schoutedenichia) sadini – Vercammen-Grandjean 1965c: 102.

Holotype

RMCA (not found).

Distribution

DR Congo (Lemera).

Host

Chrysochloris stuhlmanni.

Schoutedenichia (Schoutedenichia) schoutedeni Vercammen-Grandjean, 1953

Ascoschoengastia schoutedeni Vercammen-Grandjean, 1953: 23, figs A–F.
Euschoengastia duboisi Jadin, Vercammen-Grandjean, Herman, Thienpont & Fain, 1954 (in Jadin *et al.* 1954b): 9 (nom. nud.).

Ascoschoengastia schoutedeni – Lavoipierre & Taufflieb 1954: 286.
Schoutedenichia (Nasichia) schoutedeni – Vercammen-Grandjean 1958a: 67, fig. 34; 1975: 424, fig. G. — Zumpt 1961: 166.
Schoutedenichia (Schoutedenichia) schoutedeni – Vercammen-Grandjean 1965c: 102.

Holotype

RMCA 76183.

Material revised

Holotype and 31 paratypes from RMCA.

Distribution

Rwanda (Butare, Musha, Akanyaru River), Congo (Brazzaville).

Hosts

Aethomys kaiseri, *Arvicanthis abyssinicus* (original data), *A. niloticus* (Zumpt 1961), *Cricetomys emini* (original data), *C. gambianus* (Zumpt 1961), *Crocidura olivieri kivu*, *Dasymys incomtus*, *Dendrohyrax arboreus*, *Gerbilliscus boehmi*, *Otomys irroratus*, *O. tropicalis*, *Praomys tullbergi.*

Schoutedenichia (Schoutedenichia) tanzaniaensis Goff, 1983

Schoutedenichia tanzaniaensis Goff, 1983a: 74, fig. 1.

Holotype

BPBM 12770.

Distribution

Tanzania (University of Dar es Salaam Research Flats).

Host

Crocidura sp.

Schoutedenichia (Schoutedenichia) trombiculoides Vercammen-Grandjean, 1958

Schoutedenichia (Schoutedenichia) trombiculoides Vercammen-Grandjean, 1958a: 59, fig. 27.

Schoutedenichia (Schoutedenichia) trombiculoides – Zumpt 1961: 171. — Vercammen-Grandjean 1965c: 102.

Holotype

Private collection of Vercammen-Grandjean.

Distribution

South Sudan (Torit).

Host

Scotophilus leucogaster leucogaster.

Schoutedenichia (Trisetichia) Vercammen-Grandjean, 1958

Diagnosis

SIF = 3B-B-3-2110.0000; fPp = B/B/BBB; fsp = 7.7.7; fCx = 1.1.9; Ip = 485. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 3 branched setae. Scutum small, with 1 AM, 2 AL and 2 PL setae; AM situated posterior to level of ALs; PL > AL > AM. Eyes 2 + 2. Legs 7-segmented, 2 genuala I, genualae II and III present, tibiala III and mastisetae absent, coxae III multisetose.

Schoutedenichia (Trisetichia) nasilionis Vercammen-Grandjean, 1958

Schoutedenichia (Trisetichia) nasilionis Vercammen-Grandjean, 1958a: 84, figs 43–44.

Schoutedenichia (Trisetichia) nasilionis – Zumpt 1961: 165. — Vercammen-Grandjean 1965c: 103.

Holotype

RMCA 87558.

Material revised

Holotype and 23 paratypes from RMCA.

Distribution

DR Congo (Lubumbashi).

Host

Elephantulus brachyrhynchus.

Susa Audy & Nadchatram, 1960

Diagnosis

SIF = 5B-B(N)-3-2111.0000; fsp = 7.7.7; Ip = 470–850. Cheliceral blade with tricuspid cap; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 5 branched setae. Scutum trapezoidal, with slightly concave posterior margin, with 1 AM, 2 AL and 2 PL setae; sensillary bases anterior to PL; sensilla clavate or globose, covered with setules. Eyes 2 + 2, 1 + 1 or absent, 2 or more pairs of humeral setae. Legs 7-segmented, 2 genualae I, genualae II and III present, tibiala III present, mastisetae absent.

Susa hexasternalaea (Vercammen-Grandjean, 1960) comb. nov.

Guntherana (Hexasternalaea) hexasternalaea Vercammen-Grandjean, 1960d: 59, fig. 5.

Guntherana (Susa) hexasternalaea – Vercammen-Grandjean 1965c: 116.

Holotype

RMCA 87581.

Material revised

Holotype (labeled as "*Euschoengastia hexasternalis*").

Distribution

DR Congo (Kikondja).

Host

Elephantulus brachyrhynchus.

Tauffliebiella Vercammen-Grandjean, 1960

Diagnosis

SIF = 5BS-N-3-2110.0000; fsp = 7.7.7; fSt = 2.2; fCx = 1.1.1; Ip = 510. Cheliceral blade with one dorsal tooth and large hook; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 5 branched setae and nude subterminala. Scutum nearly trapezoidal, with prominent bilobate posterior margin, with 1 AM, 2 AL and 2 PL setae; AM anterior to AL, sensillary bases posterior to PL; sensilla clavate, covered with setules. Eyes absent. Legs 7-segmented, 2 genualae I, 1 genuala II, 1 genuala III, tibiala III and mastisetae absent, all leg coxae unisetose.

Tauffliebiella mailloti (Taufflieb & Abonnenc, 1957) comb. nov.

Euschoengastia mailloti Taufflieb & Abonnenc, 1957: 80, figs 1–2.

Euschoengastia mailloti – Zumpt 1961: 165.
Doloisia (Tauffliebiella) mailloti – Vercammen-Grandjean 1965c: 104.

Holotype

MNHN.

Distribution

Congo (Brazzaville).

Host

Cricetomys gambianus.

Trisetica Traub & Evans, 1950

Diagnosis

SIF = 4B, 5B-N-3-(2-3)111.0000; fsp = 7.7.7; fSt = 2.2; fCx = 1.1.1; Ip = 730–750. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 4–5 branched setae. Scutum with reduced posterior angles (peniscutum), with 1 AM, 2 AL setae and clavate or fusiform sensilla covered with setules; 2 PL setae extrascutal. Eyes 2 + 2. Legs 7-segmented, 2–3 genualae I, 1 genuala II, tibiala and genuala III present, mastisetae absent, all leg coxae unisetose.

Trisetica aethiopica (Hirst, 1926)

Schoengastia aethiopica Hirst, 1926: 827, fig. 2.

Schoengastia aethiopica – Radford 1942: 68, fig. 60; 1952: 103. — André 1946a: 54, figs 1–3. — Thor & Willmann 1947: 305, fig. 363.
Ascoschoengastia aethiopica – Wharton & Fuller 1952: 71. — Taufflieb 1960b: 224.
Ascoschoengastia (Ascoschoengastia) aethiopica – Zumpt 1961: 160, fig. 93a.
Trisetica aethiopica – Vercammen-Grandjean 1965c: 132.

Holotype

BMNH 1927.1.5.17.

Material revised

Holotype. One specimen from RMCA (No. 74224) labeled by the hand of Radford.

Distribution

Ghana (Accra), Uganda (Mulago), South Sudan (Torit). This species was also recorded on Madagascar (André 1946a).

Hosts

Chiroptera gen. sp. (original data), *Homo sapiens* (Radford 1952), *Myotis goudoti* (Wharton & Fuller 1952), *Rhinolophus hildebrandtii*.

Trombigastia Vercammen-Grandjean & Brennan, 1957

Diagnosis

SIF = 7B-N-3-3111.0(1)000; fsp = 7.7.7; Ip = 550–850. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae. Scutum trapezoidal, with concave lateral margins, with 1 AM, 2 AL, 2 PL setae, and fusiform sensilla covered with setules. Eyes 2 + 2. Legs 7-segmented, tarsala I long and slender, twice as long as tarsala II, 3 genualae I, 1 genuala II, tibiala and genuala III present, mastitarsala (nude or with few basal cilia) usually present. Parasites of bats.

Trombigastia ascoschoengastoides Vercammen-Grandjean & Fain, 1958

Trombigastia (Ascoschoengastoides) ascoschoengastoides Vercammen-Grandjean & Fain, 1958: 10, pls 3, 4Ta.

Trombigastia (Ascoschoengastoides) ascoschoengastoides – Zumpt 1961: 143, fig. 85.
Riedlinia (Ascoschoengastoides) ascoschoengastoides – Vercammen-Grandjean 1964c: 316. — Taufflieb 1965a: 28.
Riedlinia (Trombigastia) ascoschoengastoides – Vercammen-Grandjean 1965c: 130.

Holotype

RMCA 92900.

Material revised

Holotype and one more specimen from RMCA (No. 92901), not suitable for examination.

Distribution

DR Congo (Irangi, colline Mabondo), Angola (Dundo).

Hosts

Hipposideros caffer (Zumpt 1961), *H. ruber ruber* (original data).

Trombigastia berghei Vercammen-Grandjean & Fain, 1958

Trombigastia (Ascoschoengastoides) berghei Vercammen-Grandjean & Fain, 1958: 12, pls 3, 4Tb.

Trombigastia (Ascoschoengastoides) berghei – Zumpt 1961: 143.
Riedlinia (Ascoschoengastoides) berghei – Vercammen-Grandjean 1964c: 316.
Riedlinia (Trombigastia) berghei – Vercammen-Grandjean 1965c: 130.

Holotype

RMCA 92899.

Material revised

Holotype (not suitable for examination) and 23 more specimens from RMCA not designated as paratypes.

Distribution

DR Congo (Irangi, colline Mabondo).

Hosts

Hipposideros caffer (Zumpt 1961), *H. ruber ruber* (original data).

Trombigastia cadei Vercammen-Grandjean & Brennan, 1957

Trombigastia cadei Vercammen-Grandjean & Brennan, 1957: 487, figs 5–6.

Trombigastia (Trombigastia) cadei – Vercammen-Grandjean & Fain 1958: 26, pls 1–2. — Zumpt 1961: 143.
Riedlinia (Trombigastia) cadei – Vercammen-Grandjean 1964c: 314; 1965c: 130.

Holotype

FMNH.

Distribution

Kenya (Ngong).

Host

Miniopterus sp.

Trombigastia hirsuta Vercammen-Grandjean & Fain, 1958

Trombigastia (Trombigastia) hirsuta Vercammen-Grandjean & Fain, 1958: 18, pls 5, 6Th.

Trombigastia (Trombigastia) hirsuta – Zumpt 1961: 143.
Riedlinia (Trombigastia) hirsuta – Vercammen-Grandjean 1964c: 315; 1965c: 130.

Holotype

Private collection of Vercammen-Grandjean.

Distribution

DR Congo (Katana).

Host

Lissonycteris angolensis.

Trombigastia laarmani Vercammen-Grandjean & Fain, 1958

Trombigastia (Trombigastia) laarmani Vercammen-Grandjean & Fain, 1958: 20, pls 5, 6Tl.

Trombigastia (Trombigastia) laarmani – Zumpt 1961: 143.
Riedlinia (Trombigastia) laarmani – Vercammen-Grandjean 1964c: 315; 1965c: 130.

Holotype

RMCA 93035.

Material revised

Holotype and three more specimens (Nos 93036–93038) from RMCA.

Distribution

DR Congo (Irangi, colline Mabondo).

Hosts

Hipposideros ruber ruber (original data), *H. caffer* (Zumpt 1961).

Trombigastia minor Vercammen-Grandjean & Fain, 1958

Trombigastia (Trombigastia) minor Vercammen-Grandjean & Fain, 1958: 30, pls 3, 4Tm.

Trombigastia (Trombigastia) minor – Zumpt 1961: 144.
Riedlinia (Trombigastia) minor – Vercammen-Grandjean 1964c: 315; 1965c: 131.

Holotype

RMCA 93033.

Material revised

Holotype (not suitable for examination) and nine more specimens from RMCA.

Distribution

DR Congo (Irangi, colline Mabondo).

Hosts

Hipposideros caffer (Zumpt 1961), *H. ruber ruber* (original data).

Trombigastia mounti (Radford, 1954)

Trombicula mounti Radford, 1954a: 315, figs 58–61.

Trombigastia (Trombigastia) mounti – Vercammen-Grandjean & Fain 1958: 24, pl. 7. — Zumpt 1961: 144.
Riedlinia (Trombigastia) mounti – Vercammen-Grandjean 1964c: 315; 1965c: 131.

Holotype

USNM (original data).

Material revised

One paratype (No. 74218) from RMCA.

Distribution

Eritrea (Asmara).

Host

Nycteris thebaica damarensis.

Remarks

Holotype is not listed in the catalogue of USNM (Goff 1989).

Trombigastia nycteris Vercammen-Grandjean & Fain, 1958

Trombigastia (Trombigastia) nycteris Vercammen-Grandjean & Fain, 1958: 30, pls 5, 6Tn.

Trombigastia (Trombigastia) nycteris – Zumpt 1961: 144.
Riedlinia (Trombigastia) nycteris – Vercammen-Grandjean 1964c: 315; 1965c: 131.

Holotype

RMCA 92887.

Material revised

Holotype and two more specimens from RMCA (Nos 92888 and 92889), not suitable for examination.

Distribution

Rwanda (Butare).

Host

Nycteris hispida.

Trombigastia rousetti Vercammen-Grandjean & Fain, 1958

Trombigastia (Trombigastia) rousetti Vercammen-Grandjean & Fain, 1958: 16, pls 5, 6Tr.

Trombigastia (Trombigastia) rousetti – Zumpt 1961: 144.
Riedlinia (Trombigastia) rousetti – Vercammen-Grandjean 1964c: 315; 1965c: 131.

Holotype

RMCA 92886.

Material revised

Holotype.

Distribution

Rwanda (Nyakibanda).

Host

Lissonycteris angolensis.

Trombigastia scapularia Vercammen-Grandjean & Fain, 1958

Trombigastia (Scapularia) scapularia Vercammen-Grandjean & Fain, 1958: 14, pls 8–9.

Trombigastia (Scapularia) scapularia – Zumpt 1961: 143.
Riedlinia (Riedlinia) scapularia – Vercammen-Grandjean 1964c: 318; 1965c: 129.

Holotype

RMCA 92902.

Material revised

Holotype and 65 more specimens from RMCA labeled as "*Euschoengastia scapularia*", of which only one is designated as paratype.

Distribution

DR Congo (Irangi, colline Mabondo).

Hosts

Hipposideros caffer (Zumpt 1961), *H. ruber ruber* (original data).

Trombigastia vinckei Vercammen-Grandjean & Fain, 1958

Trombigastia (Trombigastia) vinckei Vercammen-Grandjean & Fain, 1958: 22, pls 3, 4Tv.

Trombigastia (Trombigastia) vinckei – Zumpt 1961: 144.
Riedlinia (Trombigastia) vinckei – Vercammen-Grandjean 1964c: 315; 1965c: 131.

Holotype

RMCA 93024.

Material revised

Holotype (not suitable for examination) and five more specimens from RMCA.

Distribution

DR Congo (Irangi, colline Mabondo).

Hosts

Hipposideros caffer (Zumpt 1961), *H. ruber ruber* (original data).

Tribe Trombiculini Vercammen-Grandjean, 1960

Afrotrombicula Kolebinova & Vercammen-Grandjean, 1978

Diagnosis

SIF = 7BS-B-3-3111.1(0)000; fsp = 7.7.7; fPp = B/B/NN(B)B; Ip = 750–1066; NDV = 44–110. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala; setae of palpal femur and genu branched, dorsal and lateral palpal tibial setae nude (lateral seta branched in *A. gabonica*), ventral palpal tibial seta branched. Scutum subpentagonal, subquadrate, subhexagonal or subtrapezoidal, with rounded posterior margin, with 1 AM (absent in *A. quadriscutala*), 2 AL and 2 PL setae; sensillary bases far anterior to PL; sensilla flagelliform, branched. Eyes 2 + 2. Legs 7-segmented, 3 genualae I, mastitarsala III present or absent.

Afrotrombicula gabonica Kolebinova & Vercammen-Grandjean, 1981

Afrotrombicula (Afrotrombicula) gabonica Kolebinova & Vercammen-Grandjean, 1981: 415, figs 1–7.

Holotype

SMF pA.1.1980.1.

Distribution

Gabon (Makokou).

Host

Atherurus africanus.

Afrotrombicula liberia Kolebinova & Vercammen-Grandjean, 1978

Afrotrombicula (Tauffliebicula) liberia Kolebinova & Vercammen-Grandjean, 1978: 106, pl. 2.

Holotype

ZMUH.

Distribution

Liberia (Njebele).

Host

Lophuromys sikapusi.

Afrotrombicula lophuromyia Kolebinova & Vercammen-Grandjean, 1978

Afrotrombicula (Tauffliebicula) lophuromyia Kolebinova & Vercammen-Grandjean, 1978: 104, pl. 1.

Neotrombicula (Neotrombicula) lophuromyia – Vercammen-Grandjean 1965c: 71 (nom. nud.).

Holotype

RMCA 88030.

Material revised

Holotype and 36 paratypes from RMCA.

Distribution

DR Congo (Kindu).

Host

Lophuromys aquilus.

Afrotrombicula machadoi (Taufflieb, 1962)

Neotrombicula (Neotrombicula) machadoi Taufflieb, 1962: 137, fig. 1.

Neotrombicula (Neotrombicula) machadoi – Taufflieb 1965a: 21. — Vercammen-Grandjean 1965c: 71.
Afrotrombicula (Tauffliebicula) machadoi – Kolebinova & Vercammen-Grandjean 1978: 129.

Holotype

MNHN.

Distribution

Angola (Dundo, Nhefo).

Hosts

Colomys gosling, *Gerbilliscus leucogaster*, *Grammomys dolichurus*, *Hipposideros ruber ruber*, *Lophuromys aquilus*, *Mastomys natalensis*, *Potamogale velox*, *Praomys jacksoni.*

Afrotrombicula nigeriensis (Ewing, 1928)

Trombicula nigeriensis Ewing, 1928: 78.

Trombicula nigeriensis – Radford 1942: 60. — Taufflieb 1960b: 224. — Audy & Vercammen-Grandjean 1961a: 132. — Zumpt 1961: 138. — Goff 1989: 120.
Trombicula (Trombicula) nigeriensis – Thor & Willmann 1947: 269. — Wharton & Fuller 1952: 68.
Afrotrombicula (Afrotrombicula) nigeriensis – Kolebinova & Vercammen-Grandjean 1978: 103; 1981: 417.
Neotrombicula nigeriensis – Whitaker *et al.* 1983: 31.

Holotype

USNM (Wharton & Fuller 1952; Goff 1989).

Distribution

Nigeria (Ibadan).

Hosts

Funisciurus anerythrus, *F. leucogenys oliviae* (original data), *F. leucogenys auriculatus* (Zumpt 1961), *Lemniscomys striatus*, *Lophuromys sikapusi*, *Rattus rattus.*

Afrotrombicula nyongae (Taufflieb & Mouchet, 1959)

Trombicula nyongae Taufflieb & Mouchet, 1959: 231, pl. 2.

Trombicula nyongae – Zumpt 1961: 138.
Neotrombicula (Neotrombicula) nyongae – Vercammen-Grandjean 1965c: 71.
Afrotrombicula (Tauffliebicula) nyongae – Kolebinova & Vercammen-Grandjean 1978: 108, pl. 3.

Holotype

MNHN (Kolebinova & Vercammen-Grandjean 1978).

Distribution

Cameroon (Yaoundé), Angola (Dundo).

Hosts

Grammomys sp., *Lophuromys* sp., *Praomys morio* (Zumpt 1961), *P. tullbergi* (original data).

Afrotrombicula quadriscutala (Taufflieb, 1965)

Machadella quadriscutala Taufflieb, 1965a: 23, fig. 1.

Afrotrombicula (Machadella) quadriscutala – Vercammen-Grandjean & Kolebinova 1985: 76.

Holotype

Museu do Dundo 17594-5.

Distribution

Angola (Dundo), Congo (Brazzaville, Djoue River).

Hosts

Crocidura sp., *Grammomys poensis*, *Potamogale velox*, *Praomys jacksoni.*

Afrotrombicula sciuri (Taufflieb, 1966)

Neotrombicula (Neotrombicula) sciuri Taufflieb, 1966a: 299, fig. 2.

Afrotrombicula (Tauffliebicula) sciuri – Kolebinova & Vercammen-Grandjean 1978: 129.

Holotype

MNHN.

Material revised

Two paratypes (No. 128389) from RMCA.

Distribution

Cameroon (Yaoundé).

Host

Funisciurus isabella.

Afrotrombicula vanbreei Kolebinova & Vercammen-Grandjean, 1981

Afrotrombicula (Afrotrombicula) vanbreei Kolebinova & Vercammen-Grandjean, 1981: 418, figs 8–13.

Holotype

SMF pA.10.1980.1.

Distribution

Gabon (Makokou).

Host

Atherurus africanus.

Blanciella Vercammen-Grandjean, 1960

Diagnosis

SIF = 7BS-N-2-1001.1100; fsp = 7.7.7; Ip = 680. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 2-pronged; palpal tarsus with 7 branched setae and nude subterminala. Scutum wider than long, with convex posterior margin, with 1 AM, 2 AL and 2 PL setae; sensillary bases not far apart; sensilla flagelliform, branched in distal half. Eyes 2 + 2. Legs 7-segmented, 1 genuala I, genualae II and III absent, mastitarsala and mastitibiala III present.

Blanciella deschiensi (Vercammen-Grandjean, 1956) comb. nov.

Trombicula (Eutrombicula) deschiensi Vercammen-Grandjean, 1956d: 81, pls 1E–F, 2E–F.

Eutrombicula (Eutrombicula) deschiensi – Audy & Vercammen-Grandjean 1961b: 136.
Eutrombicula (Blanciella) deschiensi – Vercammen-Grandjean 1965c: 35. — Vercammen-Grandjean & Audy 1965: 292.

Holotype

No data.

Material revised

Two paratypes from BMNH (1956.9.15.3 and 1956.9.15.5). Four specimens from RMCA (Nos. 87506 -87509) were collected in the type locality and labeled by Vercammen-Grandjean, but not designated as types.

Distribution

Morocco (Oued Cherrat, Tit Mellil).

Hosts

Apodemus sylvaticus, *Eliomys munbyanus*, *Lemniscomys barbarus*, *Mus spicilegus.*

Blankaartia Oudemans, 1911

Diagnosis

SIF = 7BS-N(B)-3-3111.1000; fsp = 7.7.7; Ip = 800–1520. Cheliceral blade with tricuspid cap and one dorso-apical tooth; galeal setae nude or branched; palpal claw divided by 3 prongs; palpal tarsus with 7 branched setae and nude subterminala. Scutum pentagonal, with prominent pointed posterior margin and anterolateral shoulders, with 1 AM, 2 AL and 2 PL setae; sensillary bases situated far apart and clearly anterior to PL; sensilla flagelliform, branched in distal half. Eyes 2 + 2. Legs 7-segmented, 3 genualae I, mastitarsala III present, sometimes with few basal cilia, puncta on leg coxae arranged in longitudinal lines.

Blankaartia (Blankaartia) Oudemans, 1911

Diagnosis

SIF = 7BS-N(B)-3-3111.1000; fsp = 7.7.7; Ip = 800–1100. Galeal setae nude, rarely branched. Posterior scutal margin rounded, AW nearly as large as PW. PL never as long as PW. Leg tarsala I only slightly longer than leg tarsala II.

Blankaartia (Blankaartia) acuscutellaris (Walch, 1922)

Trombicula acuscutellaris Walch, 1922: 564, figs 22–25.

Trombicula acuscutellaris – Fuller 1952: 80.
Trombicula (Blankaartia) acuscutellaris – Wharton & Fuller 1952: 43.
Blankaartia acuscutellaris – Taufflieb & Mouchet 1959: 233. — Zumpt 1961: 151. — Taufflieb 1969: 284. — Kudryashova 1998: 162, fig. 124.
Blankaartia (Blankaartia) acuscutellaris – Vercammen-Grandjean 1965c: 22.

Holotype

No data (Fuller 1952).

Distribution

Cameroon (Yaoundé, Ngaoundéré), Central African Republic (Soulemaka), Congo (Djoue River, Méya, Pointe-Noire). This species was described from Sumatra and later recorded from many Asian and European countries (Fuller 1952; Kudryashova 1983; Ripka & Stekolnikov 2006).

Hosts

Centropus senegalensis, *Ixobrychus minutus*, *Laniarius* sp., *Philomachus pugnax*, *Potamogale velox.*

Blankaartia (Blankaartia) ardeae (Trägårdh, 1905)

Trombidium ardeae Trägårdh, 1905: 83, figs 28–29, 32.

Microthrombidium ardeae – Oudemans 1910a: 86; 1912: 40, fig. L.
Trombicula ardeae – Radford 1942: 60, fig. 15. — Fuller 1952: 78.
Pentagonella ardeae – Thor & Willmann 1947: 294, fig. 350.
Trombicula (Blankaartia) ardeae – Wharton & Fuller 1952: 42.
Blankaartia ardeae – Vercammen-Grandjean 1973: 118.
Blankaartia (Blankaartia) ardeae – Vercammen-Grandjean 1965c: 22.

Holotype

Private collection of Trägårdh, Stockholm (Oudemans 1912).

Material revised

One specimen from BMNH (1973.540) collected 27 March 1966 from *Ardeola ralloides* in Usenge, Kenya, identified by Vercammen-Grandjean.

Distribution

Sudan (White Nile), Kenya (Usenge).

Hosts

Ardea cinerea, *Ardeola ralloides.*

Blankaartia (Blankaartia) centropodis (Ewing, 1928)

Trombicula centropodis Ewing, 1928: 78.

Trombicula centropodis – Taufflieb 1960b: 224. — Audy & Vercammen-Grandjean 1961a: 132. — Zumpt 1961: 138. — Goff 1989: 101.
Trombicula centropodia [sic] – Radford 1942: 60.
Pentagonella centropodis – Thor & Willmann 1947: 296.
Trombicula (Trombicula) centropodis – Wharton & Fuller 1952: 63.
Blankaartia (Blankaartia) centropodis – Vercammen-Grandjean 1965c: 22.

Holotype

USNM (Wharton & Fuller 1952; Goff 1989).

Distribution

Liberia (Gbarnga).

Host

Centropus sp.

Blankaartia (Blankaartia) corneti Taufflieb, 1972

Blankaartia (Blankaartia) corneti Taufflieb, 1972: 192, fig. 2.

Holotype

MNHN 5773-1.

Distribution

Senegal (Bandafassi).

Host

Chlorocebus sabaeus.

Blankaartia (Blankaartia) laniarius Radford, 1957

Blankaartia laniarius Radford, 1957: 144, figs 17–22.

Blankaartia laniarius – Zumpt 1961: 151.
Blankaartia (Blankaartia) laniarius – Vercammen-Grandjean 1965c: 22.

Holotype

Private collection of Radford.

Distribution

Uganda (Gulu).

Host

Laniarius erythrogaster.

Blankaartia (Blankaartia) nilotica Trägårdh, 1905

Trombidium niloticum Trägårdh, 1905: 78, figs 26–27, 30–31, 33–34, 36–38.

Thrombicula (Trägårdhula) nilotica – André 1945: 474.
Trägårdhula nilotica – Thor & Willmann 1947: 353.
Blankaartia nilotica – Cooreman 1948: 18. — Vercammen-Grandjean 1973: 117.
Trombicula (Blankaartia) nilotica – Wharton & Fuller 1952: 42.
Blankaartia (Blankaartia) nilotica – Vercammen-Grandjean 1965c: 22.

Holotype

No data.

Material revised

Six imago from RMCA collected in Kamande, DR Congo, 9 May 1935.

Distribution

Sudan (Jebel Ahmed Agha), DR Congo (Kamande).

Host

Unknown.

Remarks

Described on the base of active postlarval form with erroneously associated larvae of a different family (Vercammen-Grandjean 1973; Kudryashova 1983).

Blankaartia (Megaciella) Vercammen-Grandjean, 1960

Diagnosis

SIF = 7BS-B-3-3111.1000; fsp = 7.7.7; Ip = 1200–1520. Galealae branched. Scutum striated, posterior scutal margin acute, PW clearly larger than AW (by 14–18 µm). Idiosomal setae slender and very long (> 70 µm). PL much longer than PW. Leg tarsala I gigantic, at least twice as long as leg tarsala II.

Blankaartia (Megaciella) ardeolae Taufflieb & Mouchet, 1959

Blankaartia rageaui ardeolae Taufflieb & Mouchet, 1959: 235.

Blankaartia rageaui ardeolae – Zumpt 1961: 151.
Blankaartia (Megaciella) rageaui ardeolae – Vercammen-Grandjean 1960d: 51.

Holotype

No data.

Material revised

One specimen from BMNH (1973.547), collected 29 March 1966 from *Ardeola ralloides* in Usenge, Kenya, identified by Vercammen-Grandjean.

Distribution

Cameroon (Yaoundé), Kenya (Usenge).

Host

Ardeola ralloides.

Blankaartia (Megaciella) cristifera Vercammen-Grandjean, 1960

Blankaartia (Megaciella) cristifera Vercammen-Grandjean, 1960d: 53, fig. 2.

Blankaartia (Megaciella) cristifera – Vercammen-Grandjean 1965c: 23.

Holotype

No data.

Distribution

Mozambique (Limpopo River).

Host

Centropus superciliosus.

Blankaartia (Megaciella) gracilis Vercammen-Grandjean, 1960

Blankaartia (Megaciella) gracilis Vercammen-Grandjean, 1960d: 51, fig. 1.

Blankaartia (Megaciella) gracilis – Vercammen-Grandjean 1965c: 23.

Holotype

No data.

Distribution

Mozambique (Limpopo River).

Host

Ardeola ralloides.

Blankaartia (Megaciella) rageaui Taufflieb & Mouchet, 1959

Blankaartia rageaui rageaui Taufflieb & Mouchet, 1959: 233, pl. 3.

Blankaartia rageaui rageaui – Taufflieb 1960b: 229. — Zumpt 1961: 151.
Blankaartia (Megaciella) rageaui rageaui – Vercammen-Grandjean 1960d: 51.
Blankaartia (Megaciella) rageaui – Vercammen-Grandjean 1965c: 23.

Holotype

No data.

Distribution

Cameroon (Yaoundé), Senegal (Gorom).

Hosts

Actophilornis africanus (type host), *Centropus senegalensis*.

Chiroptella Vercammen-Grandjean, 1960

Diagnosis

SIF = 7BS-N-3-2111.0011; fsp = 7.7.7; fPp = N/N/NNN or B/N/NNN; Ip = 640–1000. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala; setae on palpal femur, genu and tibia nude, sometimes palpal femoral seta branched. Scutum trapezoidal, with anterolateral shoulders, with 1 AM, 2 AL and 2 PL setae; sensillary bases situated not far apart; sensilla flagelliform, branched in distal half. Eyes large, 2 + 2. Legs 7-segmented, 2 genualae I, extra genuala III or mastigenuala III present, mastifemorala III present. Parasites of bats.

Chiroptella adami Taufflieb, 1972

Chiroptella (Chiroptella) adami Taufflieb, 1972: 190, fig. 1.

Holotype

MNHN 5767-2.

Distribution

Senegal (Ebarak).

Host

Lissonycteris angolensis smithii.

Remarks

Described from a single specimen.

Ericotrombidium Vercammen-Grandjean, 1966

Diagnosis

SIF = 7BS-B-3-2111.0000; fsp = 7.7.7; fCx = 1.1.1; fSt = 2.2. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala; palpal femoral seta branched, palpal genual seta branched or nude, dorsal palpal tibial seta nude. Scutum rectangular, its posterior margin usually sinuous, with 1 AM, 2 AL and 2 PL setae; sensillary bases situated at level of PL or slightly anterior, rarely slightly posterior; sensilla flagelliform, branched in distal half. Eyes 2 + 2, two humeral setae, arrangement of dorsal idiosomal setae usually 8-6-6-… Legs 7-segmented, 2 genualae I, mastisetae absent.

Ericotrombidium accraense (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Ericotrombidium) accraense Vercammen-Grandjean & Langston, 1976: 761, pl. 230.

Holotype

BMNH (not found).

Distribution

Ghana (Accra).

Host

Arvicanthis niloticus.

Ericotrombidium chabaudi (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Ericotrombidium) chabaudi Vercammen-Grandjean & Langston, 1976: 758, pl. 228.

Holotype

MNHN.

Distribution

Morocco (Casablanca, Rabat).

Hosts

Luscinia megarhynchos, *Oryctolagus cuniculus.*

Ericotrombidium galliardi (Vercammen-Grandjean & Taufflieb, 1959) comb. nov.

Leptotrombidium galliardi Vercammen-Grandjean & Taufflieb, 1959: 248, pl. 1A, C, E, G, I.

Leptotrombidium (Ericotrombidium) galliardi – Vercammen-Grandjean & Langston 1976: 741, pl. 218.

Holotype

RMCA (not found).

Material revised

Four specimens (Nos 88703–88706) from RMCA were collected at the type locality and labeled by Vercammen-Grandjean, but not designated as types.

Distribution

Morocco (Casablanca).

Hosts

Oryctolagus cuniculus, *Psammodromus algirus*.

Ericotrombidium geloti (Taufflieb, Mouchet & Courtois, 1972)

Leptotrombidium (Ericotrombidium) geloti Taufflieb *et al.* 1972: 59, fig. 1.

Leptotrombidium (Ericotrombidium) geloti – Vercammen-Grandjean & Langston 1976: 755, pl. 226.
Ericotrombidium geloti – Stekolnikov *et al.* 2016: 62.

Holotype

MNHN.

Distribution

Djibouti (Tadjoura). This species was also recorded from dogs in Crimea (Stekolnikov *et al.* 2016).

Host

Procavia sp.

Ericotrombidium gerardi (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Ericotrombidium) gerardi Vercammen-Grandjean & Langston, 1976: 788, pl. 241.

Leptotrombidium (Ericotrombidium) gerardi – Vercammen-Grandjean 1965c: 51 (nom. nud.).

Holotype

RMCA (not found).

Material revised

Fifty-three specimens from RMCA not designated as types. Specimen No. 88856 ringed by red lacquer is probably the holotype, while other specimens are paratypes.

Distribution

DR Congo (Kikondja, Lubumbashi).

Host

Elephantulus brachyrhynchus.

Ericotrombidium marcandrei (Taufflieb, 1960) comb. nov.

Trombicula (Leptotrombidium) marcandrei Taufflieb, 1960c: 472, pl. 1.

Leptotrombidium (Ericotrombidium) marcandrei – Vercammen-Grandjean 1965c: 51. — Vercammen-Grandjean & Langston 1976: 748, pl. 222.

Holotype

MNHN (Vercammen-Grandjean & Langston 1976).

Distribution

Congo (Brazzaville).

Host

Canis lupus familiaris.

Ericotrombidium oguni (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Ericotrombidium) oguni Vercammen-Grandjean & Langston, 1976: 774, pl. 235.

Holotype

SAIMR.

Distribution

Nigeria (Upper Ogun Estate Plantation).

Host

Mastomys natalensis.

Ericotrombidium rheinwaldi (Kolebinova, 1979) comb. nov.

Leptotrombidium (Ericotrombidium) rheinwaldi Kolebinova, 1979: 487, fig. 1.

Holotype

ZFMK, Niedere Arthropoda 79/14.

Distribution

Morocco (Bouizakarne, 10 km south of Taroudant, 5 km from reservoir at River Massa, 20 km north of Oued Draa).

Hosts

Elephantulus rozeti, *Meriones libycus*.

Ericotrombidium rodhaini (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Ericotrombidium) rodhaini Vercammen-Grandjean & Langston, 1976: 745, pl. 220.

Holotype

RMCA (not found).

Distribution

DR Congo (Bukama).

Host

Heliosciurus gambianus rhodesiae.

Ericotrombidium scotophilum (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Ericotrombidium) scotophilum Vercammen-Grandjean & Langston, 1976: 760, pl. 229.

Leptotrombidium (Ericotrombidium) scotophili – Vercammen-Grandjean 1965c: 51 (nom. nud.).

Holotype

NMSA 4950-2.

Distribution

South Africa (Pietermaritzburg).

Host

Scotophilus nigrita.

Ericotrombidium spatzi (Kolebinova, 1980) comb. nov.

Leptotrombidium (Ericotrombidium) spatzi Kolebinova, 1980: 73, pl. 3.

Holotype

SMF 9660.

Distribution

Tunisia (Gabès).

Host

Dipodillus simoni.

Ericotrombidium tarentolae (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Ericotrombidium) tarentolae Vercammen-Grandjean & Langston, 1976: 743, pl. 219.

Holotype

RMCA (not found).

Material revised

Eleven specimens from RMCA were collected in the type locality and labeled by Vercammen-Grandjean, but not designated as types.

Distribution

Morocco (Casablanca).

Host

Tarentola mauritanica.

Ericotrombidium turdi (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Ericotrombidium) turdi Vercammen-Grandjean & Langston, 1976: 754, pl. 225.

Leptotrombidium (Ericotrombidium) turdi – Vercammen-Grandjean 1965c: 51 (nom. nud.).

Holotype

MNHN.

Distribution

Morocco (Beni-Mellal).

Host

Turdus merula.

Ericotrombidium ugandaense (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Ericotrombidium) ugandaense Vercammen-Grandjean & Langston, 1976: 790, pl. 242.

Leptotrombidium (Ericotrombidium) ugandae – Vercammen-Grandjean 1965c: 51 (nom. nud.).

Holotype

BMNH (not found).

Distribution

Uganda (Kaabong).

Host

Unknown.

Eutrombicula Ewing, 1938

Diagnosis

SIF = 7BS-N-2-3(2)111.(0–3)(0–2)00; fsp = 7.7.7. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 2-pronged; palpal tarsus with 7 branched setae and nude subterminala. Scutum subtrapezoidal, with broadly rounded posterior margin, with 1 AM, 2 AL and 2 PL setae; sensillary bases situated far apart; sensilla flagelliform, branched in distal half. Eyes 2 + 2. Legs 7-segmented, 2–3 genualae I, mastitarsala III usually present, nude or with few cilia, additional mastitarsalae and mastitibialae sometimes present.

Eutrombicula reptilis Vercammen-Grandjean & Audy, 1965

Eutrombicula (Eutrombicula) reptilis Vercammen-Grandjean & Audy, 1965: 286, pl. B7–14.

Holotype

RMCA (not found).

Material revised

Twenty-seven specimens from RMCA were collected in the type locality and labeled by Vercammen-Grandjean, but not designated as types.

Distribution

Morocco (Casablanca).

Hosts

Agama impalearis, *Podarcis muralis*, *Psammodromus algirus*, *Tarentola mauritanica*.

Grandjeana Koçak & Kemal, 2009

Diagnosis

SIF = 5B-B(N)-3-3111.0(1)000; fsp = 7.7.7; fCx = 1.1.1; Ip = 795–1164; NDV = 64–123. Cheliceral blade with tricuspid cap; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 5

branched setae, setae on palpal femur and genu usually branched. Scutum trapezoidal, with 1 AM, 2 AL and usually 2 PL setae; PL setae sometimes extrascutal (peniscutum); sensilla flagelliform, branched. Eyes large, 2 + 2 or 1 + 1. Legs 7-segmented, pretarsala I paired, subterminala and parasubterminala absent, tarsalae I and II long and slender, 3 genualae I, pretarsala II sometimes absent, genuala and tibiala III sometimes long, resembling mastisetae, mastitarsala III nude, with few cilia, or absent. Parasites of bats.

Grandjeana kanuchi Kalúz & Ševčík, 2015

Grandjeana kanuchi Kalúz & Ševčík, 2015: 381, figs 1–5.

Holotype

Slovak National Museum, Bratislava, SZ 7496.

Distribution

Ethiopia (Mago National Park).

Host

Cardioderma cor.

Grandjeana mauritanica Kalúz & Ševčík, 2014

Grandjeana mauritanica Kalúz & Ševčík, 2014: 32, figs 1–6.

Holotype

Slovak National Museum, Bratislava.

Distribution

Mauritania (Ouadane).

Host

Rhinopoma hardwickii cystops.

Grandjeana reticulata (Vercammen-Grandjean & Nadchatram, 1963)

Trombicula (Trombicula) reticulata Vercammen-Grandjean & Nadchatram, 1963: 387, figs A–H.

Trombicula (Diplectria) reticulata – Vercammen-Grandjean 1965c: 20.
Grandjeana reticulata – Kalúz & Ševčík 2015: 381.

Holotype

G.W. Hooper Foundation.

Distribution

South Africa (Noodsberg, Town Bush cave).

Host

Rhinolophus clivosus zuluensis.

Heaslipia Ewing, 1944

Diagnosis

SIF = 7BS-N-3-3111.1000; fsp = 7.7.7; Ip = 860–1090. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala. Scutum large, with prominent posterior margin, with 1 AM, 2 AL, 2 PL and 4–10 PPL setae; AL and PL situated close to each other; sensilla flagelliform, heavily branched in distal two-thirds. Eyes 2 + 2, idiosomal setae numerous. Legs 7-segmented, 3 genualae I, mastitarsala III present.

Heaslipia africana Vercammen-Grandjean & Audy, 1957

Heaslipia gateri africana Vercammen-Grandjean & Audy, 1957: 163, figs 1–2, 4.

Heaslipia gateri africana – Zumpt 1961: 152, fig. 90.
Heaslipia (Heaslipia) africana – Vercammen-Grandjean 1965c: 47.

Holotype

No data.

Material revised

One deutonymph from RMCA (No. 113929), designated as "type" (should probably be regarded as a paratype).

Distribution

DR Congo (Luvungi).

Hosts

Centropus grillii (original data), *C. toulou* (Zumpt 1961).

Remarks

The deutonymph was described (Vercammen-Grandjean & Audy 1957).

Heaslipia angolensis Vercammen-Grandjean & Audy, 1957

Heaslipia weberi angolensis Vercammen-Grandjean & Audy, 1957: 167, figs 2, 6.

Heaslipia weberi angolensis – Zumpt 1961: 152.
Heaslipia (Heaslipia) weberi angolensis – Taufflieb 1965a: 25.
Heaslipia (Heaslipia) angolensis – Vercammen-Grandjean 1965c: 47.

Holotype

No data.

Distribution

Angola (Alto Chicapa).

Host

Lemniscomys striatus.

Heaslipia weberi Vercammen-Grandjean & Audy, 1957

Heaslipia weberi weberi Vercammen-Grandjean & Audy, 1957: 166, figs 1–2, 5–6.

Heaslipia weberi weberi – Zumpt 1961: 152.
Heaslipia (Heaslipia) weberi – Vercammen-Grandjean 1965c: 47.

Holotype

RMCA 82336.

Material revised

Holotype and 40 paratypes from RMCA.

Distribution

Rwanda (Gisenyi).

Host

Gallinago media.

Remarks

The deutonymph was described (Vercammen-Grandjean & Audy 1957).

Hypotrombidium Vercammen-Grandjean, 1966

Diagnosis

SIF = 7B-B-3-2111.0000; fsp = 7.7.7; fCx = 1.1.1; fSt = 2.2. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae; palpal femoral seta branched, palpal genual seta branched or nude, dorsal palpal tibial seta nude. Scutum rectangular, its posterior margin usually sinuous, with 1 AM, 2 AL and 2 PL setae; sensillary bases situated at level of PL or slightly anterior, rarely slightly posterior; sensilla flagelliform, branched in distal half. Eyes 2 + 2, two humeral setae, arrangement of dorsal idiosomal setae usually 8-6-6-… Legs 7-segmented, 2 genualae I, mastisetae absent.

Hypotrombidium buttneri (Vercammen-Grandjean & Taufflieb, 1959) comb. nov.

Leptotrombidium buttneri Vercammen-Grandjean & Taufflieb, 1959: 249, pl. 1B, D, F, H, J.

Leptotrombidium (Hypotrombidium) buttneri – Vercammen-Grandjean & Langston 1976: 718, pl. 210.
Leptotrombidium (Leptotrombidium) buttneri – Vercammen-Grandjean 1965c: 52.

Holotype

Private collection of Vercammen-Grandjean (original data), MNHN (Vercammen-Grandjean & Langston 1976).

Distribution

Morocco (Casablanca).

Host

Oryctolagus cuniculus.

Hypotrombidium clamatori (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Hypotrombidium) clamatori Vercammen-Grandjean & Langston, 1976: 714, pl. 207.

Holotype

SAIMR.

Distribution

Zimbabwe (Kariba).

Host

Clamator jacobinus.

Hypotrombidium felinum (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Hypotrombidium) felinum Vercammen-Grandjean & Langston, 1976: 731, pl. 216.

Holotype

SAIMR.

Distribution

South Africa (Skukuza).

Host

Genetta genetta felina.

Hypotrombidium geli (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Hypotrombidium) geli Vercammen-Grandjean & Langston, 1976: 712, pl. 206.

Leptotrombidium (Ericotrombidium) geli – Vercammen-Grandjean 1965c: 51 (nom. nud.).

Holotype

SAIMR.

Distribution

South Africa (Limpopo Basin).

Host

Elephantulus brachyrhynchus.

Hypotrombidium legaci (André, 1950) comb. nov.

Thrombicula legaci André, 1950b: 578, figs 1–5.

Trombicula (Leptotrombidium) arvicanthis Taufflieb, 1960b: 225, pl. 1.
Leptotrombidium (Leptotrombidium) levicluni Vercammen-Grandjean, 1965c: 53 (nom. nud.).

Thrombicula legaci – André 1951a: 221; 1951c: 374; 1953: 67. — Le Gac 1951: 545; 1952a: 747; 1953: 46; 1954: 414.— Giroud *et al.* 1952: 450.
Trombicula (Leptotrombidium?) legaci – Wharton & Fuller 1952: 53.
Leptotrombidium (Leptotrombidium) arvicanthe – Vercammen-Grandjean 1965c: 52.
Leptotrombidium (Leptotrombidium) legaci – Zumpt 1961: 141. — Vercammen-Grandjean 1965c: 53. — Taufflieb *et al.* 1967: 118.
Leptotrombidium (Hypotrombidium) legaci – Vercammen-Grandjean & Langston 1976: 703, pl. 203. — Whitaker *et al.* 1983: 31.
Trombicula (Leptotrombidium) arvicanthis – Vercammen-Grandjean & Langston 1976: 703.

Holotype

Trombicula legaci: USNM (Wharton & Fuller 1952), MNHN (Vercammen-Grandjean & Langston 1976); *Trombicula arvicanthis*: MNHN (Vercammen-Grandjean & Langston 1976).

Material revised

404 specimens from RMCA labeled as "*Trombicula (Leptotrombidium) levicluni*".

Distribution

Central African Republic (Bangui, Batangafo, Boali, Bossangoa, Bouar, Damara, Dekoa, M'Baiki, Méré, Mobaye, Mongoumba, Possel, Sibut, Yaka), DR Congo (Doruma), Congo (Kellé), Cameroon (?), Ghana (Accra), Nigeria (Afon, Felele, Igbo-Ora, Panyam Fish Farm, University of Lagos, Ibadan), Ivory Coast (Minankro).

Hosts

Aethomys medicatus, *Arvicanthis niloticus* (Zumpt 1961), *A. rufinus* (Le Gac 1952a; Taufflieb 1960b), *Crocidura flavescens*, *Dasymys incomtus*, *Elephantulus fuscipes*, *Felis catus* (type host), *Funisciurus pyrrhopus*, *Gallus gallus* (original data), *G. gallus bankiva* (Wharton & Fuller 1952), *Gerbillus gerbillus*, *Graphiurus murinus*, *Heliosciurus gambianus*, *Lemniscomys barbarus* (Zumpt 1961), *L. striatus* (original data), *Lophuromys sikapusi*, *Mastomys coucha* (Le Gac 1952a), *M. natalensis* (Zumpt 1961), *Mus musculoides*, *Mylomys dybowskii*, *Oenomys hypoxanthus*, *Praomys daltoni*, *Rattus rattus*, *Taterillus emini.*

Hypotrombidium meleagride (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Hypotrombidium) meleagride Vercammen-Grandjean & Langston, 1976: 727, pl. 213.

Holotype

SAIMR.

Distribution

South Africa (Malmesbury).

Host

Meleagris gallopavo.

Hypotrombidium mouraae (Taufflieb & Mouchet, 1962) comb. nov.

Leptotrombidium (Leptotrombidium) mouraae Taufflieb & Mouchet, 1962: 348, fig. 2.

Leptotrombidium (Leptotrombidium) mouraae – Vercammen-Grandjean 1965c: 54.
Leptotrombidium (Hypotrombidium) mouraae – Vercammen-Grandjean & Langston 1976: 711, pl. 205.

Holotype

Private collection of Taufflieb (original data), MNHN (Vercammen-Grandjean & Langston 1976).

Distribution

Cameroon (Maroua).

Host

Vulpes pallida.

Hypotrombidium psammodromi (Taufflieb, 1959) comb. nov.

Leptotrombidium buttneri var. *psammodromi* Taufflieb, 1959: 251, pl. 2.

Leptotrombidium buttneri var. *psammodromi* – Vercammen-Grandjean & Langston 1976: 718.

Holotype

No data.

Distribution

Morocco (Casablanca).

Host

Psammodromus algirus.

Hypotrombidium ruziziense (Vercammen-Grandjean & Langston, 1976) comb. nov.

Leptotrombidium (Hypotrombidium) ruziziense Vercammen-Grandjean & Langston, 1976: 728, pl. 214.

Leptotrombidium (Leptotrombidium) ruziziense – Vercammen-Grandjean 1965c: 55 (nom. nud.).

Holotype

RMCA 88730.

Material revised

Holotype and paratype (No. 88731) from RMCA, labeled as "*Trombicula (Leptotrombidium) ruzizi*".

Distribution

DR Congo (Luvungi).

Host

Centropus superciliosus.

Hypotrombidium subquadratum (Lawrence, 1951) comb. nov.

Eutrombicula subquadrata Lawrence, 1951: 114, fig. 16b.

Trombicula (Trombicula) subquadrata – Wharton & Fuller 1952: 70.
Leptotrombidium subquadrata – Zumpt 1961: 141.
Leptotrombidium (Leptotrombidium) subquadratum – Vercammen-Grandjean 1965c: 55.
Leptotrombidium (Hypotrombidium) subquadratum – Vercammen-Grandjean & Langston 1976: 709, pl. 204. — Heyne *et al.* 2001: 105, fig. 1.

Syntypes

NMSA 4919.

Distribution

South Africa (Kruger National Park, Pietermaritzburg, Bayswater).

Hosts

Canis lupus familiaris, *Elephantulus brachyrhynchus*, *Homo sapiens*, *Lepus saxatilis* (type host).

Leptotrombidium Nagayo, Miyagawa, Mitamura & Imamura, 1916

Diagnosis

SIF = 7B-B-3(2)-2111.0000; fPp = N/N/BNN or N/N/BNB; fsp = 7.7.7. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae; palpal femoral and genual seta usually nude, dorsal palpal tibial seta usually branched. Scutum subrectangular, with posterior margin straight or slightly bilobate, with 1 AM, 2 AL and 2 PL setae; sensilla flagelliform, usually branched. Eyes 2 + 2. Legs 7-segmented, 2 genualae I, mastisetae absent.

Leptotrombidium afrobodense Vercammen-Grandjean & Langston, 1976

Leptotrombidium (Leptotrombidium) afrobodense Vercammen-Grandjean & Langston, 1976: 352, pl. 64.

Leptotrombidium afrobodense – Stekolnikov 2013: 44.

Holotype

SAIMR.

Distribution

South Africa (Mafikeng).

Host

Xerus inauris.

Leptotrombidium angolaense Vercammen-Grandjean & Langston, 1976

Leptotrombidium (Leptotrombidium) angolaense Vercammen-Grandjean & Langston, 1976: 604, pl. 16.

Leptotrombidium (Leptotrombidium) angolaense – Vercammen-Grandjean 1965c: 52 (nom. nud.).
Leptotrombidium angolaense – Stekolnikov 2013: 88.

Holotype

RMCA (not found).

Material revised

Fifteen paratypes and five more specimens from RMCA.

Distribution

Angola (Alto Chicapa).

Host

Lemniscomys striatus.

Leptotrombidium cosmetornisi Vercammen-Grandjean & Langston, 1976

Leptotrombidium (Leptotrombidium) cosmetornisi Vercammen-Grandjean & Langston, 1976: 272, pl. 22.

Leptotrombidium cosmetornisi – Stekolnikov 2013: 87.

Holotype

RMCA (not found).

Distribution

DR Congo (Bukavu).

Host

Caprimulgus vexillarius.

Leptotrombidium lawrencei Vercammen-Grandjean & Langston, 1976

Leptotrombidium (Leptotrombidium) lawrencei Vercammen-Grandjean & Langston, 1976: 294, pl. 35.

Leptotrombidium lawrencei – Stekolnikov 2013: 95.

Holotype

NMSA.

Distribution

South Africa (KwaZulu-Natal Province).

Host

Miniopterus fraterculus.

Leptotrombidium rhodesianum (Lawrence, 1949)

Trombicula rhodesiana Lawrence, 1949: 440, fig. 26.

Trombicula rhodesiana – Audy & Vercammen-Grandjean 1961a: 132. — Zumpt 1961: 139.
Trombicula (Trombicula) rhodesiana – Wharton & Fuller 1952: 69.
Leptotrombidium (Leptotrombidium) rhodesianum – Vercammen-Grandjean 1965c: 54.

Holotype

NMSA 4871.

Distribution

Zimbabwe (Bulawayo).

Hosts

Trachylepis margaritifera (original data), *T. quinquetaeniata* (Zumpt 1961).

Remarks

This species was not included in later revisions of the genus *Leptotrombidium* (Vercammen-Grandjean & Langston 1976; Stekolnikov 2013). Its original description is very incomplete; the generic placement must be confirmed after examination of type series.

Marcandrea Vercammen-Grandjean, 1960

Diagnosis

SIF = 6B-N-3-2(3)121.0000(1); fPp = B/B/BBB; fsp = 7.7.7; fCx = 1.1.1; fSt = 2.2; Ip = 620–720. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 6 branched setae; palpal femoral, genual, and tibial setae branched. Scutum trapezoidal, with anterolateral shoulders, with 1 AM, 2 AL and 2 PL setae; sensilla flagelliform, branched. Eyes absent. Legs 7-segmented, 2 or 3 genualae I, 2 genualae III, mastifemorala III sometimes present.

Marcandrea boaedonia (Jadin & Vercammen-Grandjean, 1952) comb. nov.

Trombicula boaedonia Jadin & Vercammen-Grandjean, 1952: 630, pl. 11.

Trombicula boaedonia – Audy & Vercammen-Grandjean 1961a: 131. — Zumpt 1961: 137.
Eltonella (Marcandrea) boaedonia – Vercammen-Grandjean 1965a: 57, pl. B.
Sasatrombicula (Marcandrea) boaedonia – Vercammen-Grandjean 1965c: 67.

Holotype

RMCA 76086.

Material revised

Holotype (not suitable for examination) and 18 paratypes from RMCA.

Distribution

Rwanda (Butare).

Host

Boaedon lineatus.

Marcandrea fromonti (Vercammen-Grandjean, 1960) comb. nov.

Microtrombicula (Marcandrea) fromonti Vercammen-Grandjean, 1960d: 55, fig. 3.

Eltonella (Marcandrea) fromonti – Vercammen-Grandjean 1965a: 57, pl. B.
Sasatrombicula (Marcandrea) fromonti – Vercammen-Grandjean 1965c: 67.

Holotype

RMCA (not found).

Distribution

DR Congo (Nya Ngezi).

Host

Buthus sp.

Microtrombicula Ewing, 1950

Diagnosis

SIF = 6B-N(B)-3(2)-3(2)111.1(0)000; fsp = 7.7.7; Ip = 400–900. Cheliceral blade with tricuspid cap; galeal setae nude or branched; palpal claw divided by 3 or 2 prongs; palpal tarsus with 6 branched setae. Scutum subtrapezoidal, subpentagonal or subquadrate, length and width subequal, with anterolateral shoulders, with 1 AM, 2 AL and 2 PL setae; sensillary bases anterior to PL; sensilla flagelliform, usually branched. Eyes usually 2 + 2. Legs 7-segmented, 2 or 3 genualae I, mastitarsala III usually present.

Microtrombicula abyssinica (Radford, 1947) comb. nov.

Trombicula abyssinica Radford, 1947: 590, figs 17–18.

Trombicula (Trombicula) abyssinica – Wharton & Fuller 1952: 61.
Trombicula abyssinica – Audy & Vercammen-Grandjean 1961a: 131. — Zumpt 1961: 137.
Eltonella (Eltonella) abyssinica – Vercammen-Grandjean 1965a: 66, pl. FF; 1965c: 41.

Holotype

BMNH 1948.2.3.28.

Material revised

Holotype.

Distribution

Ethiopia (Dire Dawa).

Host

Vidua fischeri.

Microtrombicula agamae (Lawrence, 1949) comb. nov.

Eutrombicula agamae Lawrence, 1949: 444, fig. 30.
Trombicula (Trombicula) lawrencei Wharton & Fuller, 1952: 67.

Trombicula (Trombicula) lawrencei – Audy & Vercammen-Grandjean 1961b: 137.
Eutrombicula (Squamicola) lawrencei – Audy & Vercammen-Grandjean 1961b: 137. — Zumpt 1961: 147.
Eltonella (Eltonella) agamae – Vercammen-Grandjean 1965a: 82, pl. HH; 1965c: 41.

Types

Syntypes of *Eutrombicula agamae*: NMSA 4832. Holotype of *Trombicula lawrencei*: USNM (Wharton & Fuller 1952).

Distribution

South Africa (Weenen).

Hosts

Agama armata (original data), *A. hispida* (Zumpt 1961).

Microtrombicula alexandrina Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) alexandrina Vercammen-Grandjean, 1965a: 109, pls AL, YY.

Microtrombicula (Microtrombicula) alexandrina – Taufflieb 1965a: 26.
Microtrombicula alexandrina – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA 82732.

Material revised

Holotype and two paratypes (Nos 82733–82734) from RMCA, not suitable for examination.

Distribution

DR Congo (Mushweshwe), Angola (Dundo).

Hosts

Praomys jacksoni, *Rattus rattus*.

Microtrombicula armata Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) armata Vercammen-Grandjean, 1965a: 100, pl. SS.

Microtrombicula armata – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

South Africa (Rooiberg).

Host

Miniopterus schreibersii.

Microtrombicula becquaerti Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) becquaerti Vercammen-Grandjean, 1965a: 110, pl. YY.

Microtrombicula becquaerti – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

DR Congo (Lubumbashi, Mawambi).

Hosts

Anomalurus derbianus, *Paraxerus cepapi quotus*.

Microtrombicula brutsaerti Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) brutsaerti Vercammen-Grandjean, 1965a: 91, pls AF, MM.

Microtrombicula brutsaerti – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA 82747.

Material revised

Holotype and paratype (82748) from RMCA, not suitable for examination.

Distribution

DR Congo (Kabunga).

Hosts

Graphiurus murinus, *Oenomys hypoxanthus*.

Microtrombicula bruynoghei (Jadin & Vercammen-Grandjean, 1952) comb. nov.

Trombicula bruynoghei Jadin & Vercammen-Grandjean, 1952: 618, pl. 6.

Trombicula bruynoghei – Audy & Vercammen-Grandjean 1961a: 132. — Zumpt 1961: 138.
Eltonella (Eltonella) bruynoghei – Vercammen-Grandjean 1965a: 61, pl. E; 1965c: 41.

Holotype

RMCA 76048.

Material revised

Holotype and seven paratypes from RMCA, not suitable for examination.

Distribution

Rwanda (Butare).

Hosts

Dasymys incomtus, *Grammomys dolichurus*, *Otomys irroratus*.

Microtrombicula bukamae Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) bukamae Vercammen-Grandjean, 1965a: 95, pl. OO.

Microtrombicula (Microtrombicula) bukamae – Taufflieb 1965a: 26.
Microtrombicula bukamae – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA (not found).

Distribution

DR Congo (Bukama), Angola (Dundo).

Hosts

Heliosciurus gambianus rhodesiae, *H. rufobrachium brauni*.

Microtrombicula celiae (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) celiae Vercammen-Grandjean, 1965a: 75, pls U–V.

Eltonella (Eltonella) celiae – Vercammen-Grandjean 1965c: 41.

Holotype

RMCA (not found).

Distribution

Kenya (Marigat).

Host

Unknown (the species was described on the base of larvae collected off-host).

Microtrombicula centropi (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) centropi centropi Vercammen-Grandjean, 1965a: 73, pls R–S.

Eltonella (Eltonella) centropi – Vercammen-Grandjean 1965c: 41.

Holotype

RMCA (not found).

Material revised

Two paratypes (Nos 113936–13937) from RMCA, labeled as "*Scapuscula (Eltonella) centropi*".

Distribution

DR Congo (Bukavu).

Host

Centropus grillii.

Microtrombicula cynictia (Radford, 1942)

Trombicula cynictia Radford, 1942: 62, fig. 29.

Trombicula cynictia – Radford 1947: 586, figs 11–12. — Zumpt 1961: 135.
Trombicula (Trombicula) cynictia – Wharton & Fuller 1952: 64.
Trombicula (Microtrombicula) cynictia – Audy & Vercammen-Grandjean 1961a: 129.
Microtrombicula (Microtrombicula) cynictia – Vercammen-Grandjean 1965a: 115, pl. RR.
Microtrombicula cynictia – Vercammen-Grandjean 1965c: 45.

Holotype

BMNH (Wharton & Fuller 1952; Vercammen-Grandjean 1965a). This specimen is present in the BMNH catalogue but it was not found during my visit to the Musem.

Distribution

South Africa (Hoopstad).

Host

Cynictis penicillata ogilbyii.

Microtrombicula draconensis (Lawrence, 1949) comb. nov.

Eutrombicula draconensis Lawrence, 1949: 441, fig. 27.

Trombicula (Trombicula) draconensis – Wharton & Fuller 1952: 64.
Eutrombicula (Squamicola) draconensis – Audy & Vercammen-Grandjean 1961b: 137. — Zumpt 1961: 147.
Eltonella (Eltonella) draconensis – Vercammen-Grandjean 1965a: 80, pl. BB; 1965c: 41.

Holotype

NMSA 4828 (Lawrence 1949; Vercammen-Grandjean 1965a), USNM (Wharton & Fuller 1952).

Distribution

South Africa (Mullers Pass).

Host

Pseudocordylus subviridis.

Microtrombicula dschangi (Taufflieb & Mouchet, 1959) comb. nov.

Trombicula mini dschangi Taufflieb & Mouchet, 1959: 229, pl. 1.

Trombicula mini dschangi – Zumpt 1961: 137.
Eltonella (Eltonella) mini dschangi – Vercammen-Grandjean 1965a: 60, pl. D.

Holotype

ORSTOM, Brazzaville (Vercammen-Grandjean 1965a).

Distribution

Cameroon (Dschang).

Host

Procavia capensis ruficeps.

Microtrombicula duboisi Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) duboisi Vercammen-Grandjean, 1965a: 114, pls AQ, AB.

Microtrombicula duboisi – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA 82731.

Material revised

Holotype.

Distribution

DR Congo (Lwiro).

Hosts

Lophuromys aquilus, *Oenomys hypoxanthus*.

Microtrombicula eastoni Brown, 2004

Microtrombicula eastoni Brown, 2004: 42, fig. 2.

Holotype

USNM.

Distribution

Tanzania (Seronera).

Host

Procavia capensis ruficeps.

Microtrombicula evilla (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) evilla Vercammen-Grandjean, 1965a: 61, pl. F.

Eltonella (Eltonella) evilla – Vercammen-Grandjean 1965c: 41.

Holotype

RMCA (not found).

Distribution

DR Congo (Lubumbashi).

Host

Elephantulus brachyrhynchus.

Microtrombicula felis (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) ugandae felis Vercammen-Grandjean, 1965a: 68, pls L–O.

Eltonella (Eltonella) ugandae felis – Kolebinova & Vercammen-Grandjean 1980b: 69.

Holotype

RMCA (not found).

Distribution

DR Congo (Luvungi), Uganda (Buhugu).

Hosts

Crocidura olivieri occidentalis, *Leptailurus serval.*

Microtrombicula gerrhosauri (Lawrence, 1949) comb. nov.

Eutrombicula gerrhosauri Lawrence, 1949: 446, fig. 33.

Trombicula (Trombicula) gerrhosauri – Wharton & Fuller 1952: 65.
Eutrombicula (Squamicola) gerrhosauri – Audy & Vercammen-Grandjean 1961b: 137. — Zumpt 1961: 147.
Eltonella (Eltonella) gerrhosauri – Vercammen-Grandjean 1965a: 81, pl. DD; 1965c: 41.

Syntypes

NMSA 4874.

Distribution

South Africa (Skukuza, Modimolle).

Hosts

Broadleysaurus major, *Matobosaurus validus*.

Microtrombicula heliosciuri (Vercammen-Grandjean, 1965)

Microtrombicula (Microtrombicula) heliosciuri Vercammen-Grandjean, 1965a: 92, pl. MM.

Microtrombicula heliosciuri – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA (not found).

Distribution

DR Congo (Shabunda).

Host

Heliosciurus rufobrachium.

Microtrombicula hexasternalis Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) hexasternalis Vercammen-Grandjean, 1965a: 87, pl. JJ.

Microtrombicula hexasternalis – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA 92896.

Material revised

Holotype and two more specimens from RMCA (Nos 92897–92898) labeled as "*Scapuscula (Verruscuta) hexasternalis*".

Distribution

DR Congo (Bukavu).

Host

Lissonycteris angolensis.

Microtrombicula homopholis (Lawrence, 1949)

Eutrombicula homopholis Lawrence, 1949: 441, fig. 28.

Trombicula (Eutrombicula) homopholis – Wharton & Fuller 1952: 48.
Eutrombicula (Squamicola) homopholis – Audy & Vercammen-Grandjean 1961b: 137. — Zumpt 1961: 147.
Eltonella (Eltonella) homopholis – Vercammen-Grandjean 1965a: 79, pl. Y; 1965c: 42.
Microtrombicula (Eltonella) homopholis – Goff 1979: 323.

Syntypes

NMSA 2373.

Distribution

South Africa (Nelspruit).

Host

Epomophorus wahlbergi.

Microtrombicula hyracis (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) hyracis Vercammen-Grandjean, 1965a: 67, pl. J.

Eltonella (Eltonella) hyracis – Vercammen-Grandjean 1965c: 42. — Taufflieb *et al.* 1972: 61.

Holotype

RMCA 135.848/1.

Material revised

Holotype and 12 paratypes from RMCA.

Distribution

Uganda (Kaabong), Djibouti (Tadjoura).

Host

Procaviidae gen. sp.

Microtrombicula iecensis (Taufflieb, 1960)

Trombicula (Microtrombicula) iecensis Taufflieb, 1960c: 476, pl. 3.

Microtrombicula (Microtrombicula) iecensis – Taufflieb 1965a: 26. — Vercammen-Grandjean 1965a: 90, pl. QQ. — Taufflieb *et al.* 1967: 119.
Microtrombicula iecensis – Vercammen-Grandjean 1965c: 44. — Whitaker *et al.* 1983: 31.

Holotype

Institut d'Etudes Centrafricaines, Brazzaville (Vercammen-Grandjean 1965a).

Distribution

Congo (Brazzaville), Angola (Nhefo), Central African Republic (Bangui), Nigeria (Ibadan).

Hosts

Funisciurus bayonii, *Graphiurus murinus*, *Nandinia binotata*, *Rattus rattus* (type host).

Microtrombicula intranasalis Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) intranasalis intranasalis Vercammen-Grandjean, 1965a: 102, pl. VV.

Microtrombicula intranasalis – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

Rwanda (Nyakibanda).

Host

Chaerephon sp.

Microtrombicula irangiensis Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) irangiensis Vercammen-Grandjean, 1965a: 101, pl. TT.

Microtrombicula irangiensis – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA (not found).

Distribution

DR Congo (Irangi, colline Mabondo).

Host

Hipposideros caffer.

Microtrombicula jadini (Vercammen-Grandjean, 1952)

Eutrombicula jadini Vercammen-Grandjean, 1952: 645, pl. 15.

Trombicula (Microtrombicula) jadini – Audy & Vercammen-Grandjean 1961a: 129.
Trombicula jadini – Zumpt 1961: 135.
Microtrombicula (Microtrombicula) jadini – Vercammen-Grandjean 1965a: 111, pls AM, YY.
Microtrombicula jadini – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA 76133.

Material revised

Holotype and 11 paratypes from RMCA.

Distribution

Rwanda (Butare), DR Congo (Bukavu).

Hosts

Dasymys incomtus (type host), *Graphiurus murinus*, *Otomys irroratus*.

Microtrombicula kanyei Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) kanyei Vercammen-Grandjean, 1965a: 106, pl. WW.

Microtrombicula kanyei – Vercammen-Grandjean 1965c: 45.

Holotype
RMCA (not found).

Distribution
Botswana (Kanye).

Host
Tadarida aegyptiaca bocagei.

Microtrombicula katangae Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) katangae Vercammen-Grandjean, 1965a: 94, pl. OO.

Microtrombicula katangae – Vercammen-Grandjean 1965c: 44.

Holotype
RMCA (not found).

Distribution
DR Congo (Bukama).

Host
Heliosciurus gambianus rhodesiae.

Microtrombicula kawaensis Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) kawaensis Vercammen-Grandjean, 1965a: 107, pl. XX.

Microtrombicula kawaensis – Vercammen-Grandjean 1965c: 45.

Holotype
RMCA (not found).

Distribution
DR Congo (Kawa).

Host
Lophuromys sikapusi.

Microtrombicula kikuyuensis Kolebinova & Vercammen-Grandjean, 1980

Microtrombicula (Microtrombicula) kikuyuensis Kolebinova & Vercammen-Grandjean, 1980b: 65, pl. 1.

Holotype

NHMW 281102/1.

Distribution

Kenya (Kikuyu).

Host

Crocidura olivieri occidentalis.

Microtrombicula lawrencela Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) lawrencela Vercammen-Grandjean, 1965a: 95, pl. OO.

Microtrombicula lawrencela – Vercammen-Grandjean 1965c: 44.

Holotype

NMSA.

Distribution

South Africa (Dargle).

Host

Procavia capensis.

Microtrombicula lophuromyia Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) lophuromyia Vercammen-Grandjean, 1965a: 107, pl. XX.

Microtrombicula lophuromyia – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

DR Congo (Lemera).

Host

Lophuromys aquilus.

Microtrombicula lumsdeni (Radford, 1953) comb. nov.

Eutrombicula lumsdeni Radford, 1953: 212, figs 8–11.

Eutrombicula (Squamicola) lumsdeni – Audy & Vercammen-Grandjean 1961b: 137. — Zumpt 1961: 147.
Eltonella (Eltonella) lumsdeni – Vercammen-Grandjean 1965c: 42.

Holotype

No data.

Material revised

One paratype from RMCA (No. 80616). One specimen from BMNH (1996.259), collected from type host and locality, labeled by Radford.

Distribution

Uganda (Kaabong).

Host

Procavia capensis habessinicus.

Microtrombicula machadoi Taufflieb, 1965

Microtrombicula (Microtrombicula) machadoi Taufflieb, 1965a: 26, fig. 2.

Microtrombicula (Microtrombicula) machadoi – Taufflieb *et al.* 1967: 119.

Holotype

Museu do Dundo 17393-5.

Distribution

Angola (Dundo, Caungula), Cameroon (Yaoundé), Central African Republic (Bangui), Congo (Méya).

Hosts

Chiroptera gen. sp., *Mastomys natalensis*, *Praomys jacksoni.*

Microtrombicula mafekingi Vercammen-Grandjean, 1967

Microtrombicula cynictia mafekingi Vercammen-Grandjean, 1967: 135, figs 1–6.

Microtrombicula cynicta [sic] *mafekingi* – Goff 1989: 103.

Holotype

USNM.

Distribution

South Africa (Mafikeng).

Host

Cynictis penicillata.

Microtrombicula major Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) major Vercammen-Grandjean, 1965a: 114, pls AR, AB, AS.

Microtrombicula major – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA 82719.

Material revised

Holotype and four paratypes from RMCA, including one nymph.

Distribution

DR Congo (Lwiro).

Hosts

Dendromus mystacalis, *Lophuromys aquilus*.

Microtrombicula mastomyia (Radford, 1942) comb. nov.

Trombicula mastomyia Radford, 1942: 64, fig. 32.
Thrombicula giroudi André, 1951a: 218, fig. 2.
Trombicula mastomyia kivuensis Vercammen-Grandjean & Jadin, 1956b: 346, figs $1A_1$, B_1, C_1, 2.

Trombicula mastomyia – Radford 1947: 585, figs 9–10. — Audy & Vercammen-Grandjean 1961a: 130. — Zumpt 1961: 137, figs 81, 82b, c.
Thrombicula giroudi – André 1951c: 374; 1952: 534. — Le Gac 1951: 545; 1952a: 748. — Giroud *et al.* 1952: 450.
Trombicula (Trombicula) mastomyia – Wharton & Fuller 1952: 67. — Taufflieb 1960b: 224.
Trombicula (Trombicula) giroudi – Wharton & Fuller 1952: 65.
Trombicula mastomyia giroudi – Vercammen-Grandjean & Jadin 1956b: 345, fig. 1A3, B3, C3. — Taufflieb & Mouchet 1959: 228. — Zumpt 1961: 137.
Trombicula mastomyia mastomyia – Vercammen-Grandjean & Jadin 1956b: 345, fig. 1A2, B2, C2.
Eltonella (Coecicula) mastomyia – Vercammen-Grandjean 1965a: 54, pl. B; 1965c: 40. — Taufflieb *et al.* 1967: 118. — Paperna *et al.* 1970: 330.
Trombicula mastomyia kivuensis – Zumpt 1961: 137.

Holotype

Trombicula mastomyia: BMNH 1946.12.18.10. *Thrombicula giroudi*: no data. *Trombicula mastomyia kivuensis*: RMCA 82313.

Material revised

Holotype of *Trombicula mastomyia* (the slide is crystallized, coverslip is cracked). One specimen originated from the collection of Marc André, labeled as "*Trombicula giroudi*", from RMCA (No. 82323). Holotype and nine paratypes of *Trombicula mastomyia kivuensis* from RMCA, including two nymphs.

Distribution

Sierra Leone (Freetown, Wellington), Ivory Coast (Minankro), DR Congo (Gemena, Matadi, Mutwanga), Central African Republic (Bangui, Batangafo, Bewiti, Bimbo, Boali, Bomango, Bossangoa, Boukoko, Bouar, Dekoa, M'Baiki, Mobaye, Mongoumba, N'Gotto, Possel, Yaka), Cameroon (Douala), Ghana (Tema).

Hosts

Arvicanthis rufinus, *A. niloticus*, *Crocidura* sp., *Lemniscomys striatus*, *Mastomys erythroleucus* (type host), *M. natalensis*, *Mus musculus*, *Mus (Nannomys)* sp., *Mylomys dybowskii*, *Praomys tullbergi*, *Rattus norvegicus*, *R. rattus.*

Remarks

Thrombicula giroudi and subspecies *Trombicula mastomyia kivuensis* were synonymized with *Eltonella mastomyia* by Vercammen-Grandjean (1965a).

Microtrombicula mesopica Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) mesopica Vercammen-Grandjean, 1965a: 93, pl. MM.

Microtrombicula mesopica – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA (not found).

Distribution

Rwanda (Bugarama).

Host

Dendropicos griseocephalus.

Microtrombicula microps (Lawrence, 1951) comb. nov.

Eutrombicula microps Lawrence, 1951b: 458, fig. 8A.

Trombicula (Trombicula) microps – Wharton & Fuller 1952: 67.
Eutrombicula (Squamicola) microps – Audy & Vercammen-Grandjean 1961b: 137. — Zumpt 1961: 147.
Eltonella (Eltonella) microps – Vercammen-Grandjean 1965c: 42.

Holotype

NMSA (Wharton & Fuller 1952).

Distribution

Zambia (Zambesi River).

Host

Mochlus sundevalli.

Microtrombicula mini (Vercammen-Grandjean & Brennan, 1957) comb. nov.

Trombicula mini Vercammen-Grandjean & Brennan, 1957: 486, figs 1D–F, 2C–E.

Trombicula mini – Taufflieb & Mouchet 1959: 231. — Audy & Vercammen-Grandjean 1961a: 131. — Zumpt 1961: 137.
Eltonella (Eltonella) mini – Vercammen-Grandjean 1965a: 60, pl. D; 1965c: 42.

Holotype

RMCA (original data), RML 31305 (Vercammen-Grandjean 1965a).

Material revised

Three specimens (Nos 135.271–135.273, labeled as "*Eltonella mini*") plus one specimen (No. 87519, labeled as "*Trombicula (Pentacula) rossi mini*") from RMCA, all from type host and locality.

Distribution

Uganda (Kaabong), Tanzania (Pemba Island).

Host

Procaviidae gen. sp.

Microtrombicula minutissima (Oudemans, 1910)

Microthrombidium minutissimum Oudemans, 1910: 104

Microthrombidium minutissimum – Oudemans 1912: 42, fig. M.
Trombicula minutissimum – Radford 1942: 60, fig. 18. — Fuller 1952: 86.
Trombicula (Eutrombicula) minutissima – Thor & Willmann 1947: 280, fig. 337. — Wharton & Fuller 1952: 49.
Trombicula (Microtrombicula) minutissima – Audy & Vercammen-Grandjean 1961a: 130. — Vercammen-Grandjean 1965a: 86, pl. KK.
Trombicula minutissima – Zumpt 1961: 135.
Microtrombicula minutissimum – Vercammen-Grandjean 1965c: 44.

Holotype

Private collection of Trägårdh, Stockholm (Oudemans 1912), lost (Fuller 1952), RMNH (Wharton & Fuller 1952; Vercammen-Grandjean 1965a).

Distribution

South Africa (Durban).

Hosts

Hipposideros caffer, *Nycteris thebaica capensis*.

Microtrombicula mitelielli Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) mitellieli Vercammen-Grandjean, 1965a: 112, pl. ZZ.

Microtrombicula mitelielli – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

South Africa (Dargle).

Host

Procavia capensis.

Microtrombicula montensis (Lawrence, 1949) comb. nov.

Eutrombicula montensis Lawrence, 1949: 444, fig. 31.

Trombicula (Trombicula) montensis – Wharton & Fuller 1952: 67.
Eutrombicula (Squamicola) montensis – Audy & Vercammen-Grandjean 1961b: 138. — Zumpt 1961: 148.
Eltonella (Eltonella) montensis – Vercammen-Grandjean 1965a: 80, pl. AA; 1965c: 42.

Syntypes

NMSA 4808.

Material revised

One paratype from BMNH (1957.8.12.25).

Distribution

South Africa (Giants Castle, Champagne Castle, Mont-aux-Sources, Royal Natal National Park).

Hosts

Pseudocordylus spinosus, *P. subviridis*, *Tropidosaura cottrelli*, *T. essexi.*

Microtrombicula mushwerensis Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) mushwerensis Vercammen-Grandjean, 1965a: 113, pls AO, AB.

Microtrombicula mushwerensis – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA 82726.

Material revised

Holotype and four paratypes from RMCA.

Distribution

DR Congo (Mushwere).

Hosts

Lophuromys aquilus, *Oenomys hypoxanthus*, *Rattus rattus*.

Microtrombicula myonacis (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) myonacis myonacis Vercammen-Grandjean, 1965a: 61, pl. G.

Eltonella (Eltonella) myonacis – Vercammen-Grandjean 1965c: 42.

Holotype

RMCA (not found).

Material revised

Two paratypes from RMCA (No. 113938) labeled as "*Scapuscula myonax*" [sic].

Distribution

Tanzania (Pemba Island).

Hosts

Herpestes sp., *Otolemur garnettii*.

Microtrombicula nivaria (Lawrence, 1949) comb. nov.

Trombicula nivaria Lawrence, 1949: 439, fig. 25.

Trombicula (Trombicula) nivaria – Wharton & Fuller 1952: 68.
Eutrombicula (Squamicola) nivaria – Audy & Vercammen-Grandjean 1961b: 138. — Zumpt 1961: 148.
Eltonella (Eltonella) nivaria – Vercammen-Grandjean 1965a: 78, pl. X; 1965c: 42.

Syntypes

NMSA 4817 (Lawrence 1949), SAM 4817 (Wharton & Fuller 1952; Vercammen-Grandjean 1965a).

Distribution

South Africa (Royal Natal National Park, Champagne Castle).

Host

Afroedura nivaria.

Microtrombicula nycteris (Jadin, Vercammen-Grandjean & Fain, 1955)

Trombicula nycteris Jadin *et al.*, 1955: 249, figs A–B.

Trombicula nycteris – Zumpt 1961: 135.
Trombicula (Microtrombicula) nycteris – Audy & Vercammen-Grandjean 1961a: 130. — Vercammen-Grandjean 1965a: 98, pl. QQ.
Microtrombicula nycteris – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA 82288.

Material revised

Holotype and ten paratypes from RMCA.

Distribution

Rwanda (Nyanza).

Host

Nycteris macrotis.

Microtrombicula nyctinomi (Taufflieb, 1960)

Trombicula (Microtrombicula) nyctinomi Taufflieb, 1960c: 474, pl. 2.

Microtrombicula (Microtrombicula) nyctinomi – Vercammen-Grandjean 1965a: 92, pl. QQ.
Microtrombicula nyctinomi – Vercammen-Grandjean 1965c: 44.

Holotype

Institut d'Etudes Centrafricaines, Brazzaville (Vercammen-Grandjean 1965a).

Distribution

Congo (Brazzaville).

Host

Chaerephon pumilus.

Microtrombicula oenomyia Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) oenomyia Vercammen-Grandjean. 1965a: 110, pls AN, YY.

Microtrombicula oenomyia – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA 82325.

Material revised

Holotype and 12 paratypes from RMCA.

Distribution

DR Congo (Kabunga, Kindu).

Hosts

Graphiurus murinus, *Oenomys hypoxanthus*, *Rattus rattus*.

Microtrombicula pachydactyli (Lawrence, 1949) comb. nov.

Eutrombicula pachydactyli Lawrence, 1949: 443, fig. 29.

Trombicula (Trombicula) pachydactyli – Wharton & Fuller 1952: 68.
Eutrombicula (Squamicola) pachydactyli – Audy & Vercammen-Grandjean 1961b: 138. — Zumpt 1961: 149, fig. 88a–c.
Eltonella (Eltonella) pachydactyli – Vercammen-Grandjean 1965a: 82, pl. EE; 1965c: 42.

Syntypes

TMSA 13 (original data), NMSA 13 (Wharton & Fuller 1952; Vercammen-Grandjean 1965a).

Distribution

Namibia (Rehoboth, Kamanjab).

Hosts

Chondrodactylus fitzsimonsi, *Pachydactylus laevigatus* (type host).

Microtrombicula panieri (Jadin & Vercammen-Grandjean, 1952)

Trombicula panieri Jadin & Vercammen-Grandjean, 1952: 609, pl. 3.

Trombicula panieri – Zumpt 1961: 135, fig. 82a.
Trombicula (Microtrombicula) panieri – Audy & Vercammen-Grandjean 1961a: 130.
Microtrombicula (Microtrombicula) panieri – Vercammen-Grandjean 1965a: 113, pls AP, AB.
Microtrombicula panieri – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA 76010.

Material revised

Holotype (not suitable for examination) and 29 paratypes from RMCA.

Distribution

Rwanda (Butare), DR Congo (Bukavu).

Hosts

Arvicanthis abyssinicus (original data), *A. niloticus* (Zumpt 1961), *Cricetomys emini* (original data), *C. gambianus* (Zumpt 1961), *Crocidura* sp., *Dasymys incomtus*, *Dendromus mystacalis*, *Grammomys* sp., *Graphiurus murinus*, *Lemniscomys striatus*, *Lophuromys* sp., *Mastomys coucha*, *Mus triton*, *Otomys tropicalis* (original data), *O. irroratus* (Zumpt 1961), *Pelomys minor.*

Microtrombicula paralumsdeni Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) paralumsdeni Vercammen-Grandjean, 1965a: 98, pl. RR.

Microtrombicula paralumsdeni – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA (not found).

Distribution

Uganda (Kaabong).

Host

Procavia capensis habessinicus.

Microtrombicula paraxeri Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) paraxeri Vercammen-Grandjean, 1965a: 94, pl. NN.

Microtrombicula paraxeri – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA (not found).

Distribution

DR Congo (Bukama, Lubumbashi, Mawambi).

Hosts

Anomalurus derbianus, *Heliosciurus gambianus rhodesiae*, *Paraxerus cepapi quotus*.

Microtrombicula pembae Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) pembae Vercammen-Grandjean, 1965a: 90, pl. LL.

Microtrombicula pembae – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA (not found).

Distribution

Tanzania (Pemba Island).

Host

Muridae gen. sp.

Microtrombicula pembaensis (Vercammen-Grandjean, 1965), comb. nov.

Eltonella (Eltonella) pembaensis Vercammen-Grandjean, 1965a: 66, pl. J.

Eltonella (Eltonella) pembaensis – Vercammen-Grandjean 1965c: 42.

Holotype

RMCA (not found).

Distribution

Tanzania (Pemba Island).

Host

Muridae gen. sp.

Microtrombicula phoeniculi Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) phoeniculi Vercammen-Grandjean, 1965a: 96, pl. PP.

Microtrombicula phoeniculi – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA (not found).

Distribution

DR Congo (Idjwi Island).

Host

Phoeniculus bollei.

Microtrombicula polymorpha (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) polymorpha polymorpha Vercammen-Grandjean, 1965a: 71, pls P–Q.

Eltonella (Eltonella) polymorpha – Vercammen-Grandjean 1965c: 42.

Holotype

RMCA (not found).

Distribution

DR Congo (Bukavu, Luvungi).

Hosts

Bubo lacteus, *Centropus grillii*, *C. superciliosus.*

Microtrombicula potto Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) potto Vercammen-Grandjean, 1965a: 111, pl. ZZ.

Microtrombicula potto – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

DR Congo (Bukavu).

Host

Perodicticus potto ibeanus.

Microtrombicula quasigiroudi (Jadin & Vercammen-Grandjean, 1954) comb. nov.

Trombicula quasigiroudi Jadin & Vercammen-Grandjean, 1954a: 196, figs A–F.

Trombicula quasigiroudi – Vercammen-Grandjean & Jadin, 1956b: 346. — Audy & Vercammen-Grandjean 1961a: 130. — Zumpt 1961: 137.
Eltonella (Coecicula) quasigiroudi – Vercammen-Grandjean 1965a: 55, pl. B; 1965c: 40.

Holotype

RMCA 76233.

Material revised

Holotype.

Distribution

Rwanda (Musha).

Host

Dasymys incomtus.

Microtrombicula quasisicei (Taufflieb, 1958) comb. nov.

Trombicula quasisicei Taufflieb, 1958b: 415, fig. 1.

Trombicula (Trombicula) quasisicei – Taufflieb 1960b: 225.
Eltonella (Eltonella) quasisicei – Vercammen-Grandjean 1965a: 65, pl. FF; 1965c: 42.

Holotype

MNHN.

Distribution

Congo (Brazzaville), DR Congo (Boma, Nioro), Ivory Coast (Bouaké), Senegal (Gorom, Sangalkam).

Hosts

Centropus senegalensis, *Dasymys incomtus*, *Lemniscomys striatus*, *Mastomys coucha*, *Passer* sp., *Pternistis bicalcaratus*, *P. clappertoni*, *Rattus rattus*, *Vanellus tectus.*

Microtrombicula resseleri Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) resseleri Vercammen-Grandjean, 1965a: 88, pls AC, LL.

Microtrombicula resseleri – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

DR Congo (Kabunga), Tanzania (Pemba Island).

Host

Graphiurus murinus.

Microtrombicula rhodesiensis (Lawrence, 1949) comb. nov.

Eutrombicula rhodesiensis Lawrence, 1949: 448, fig. 35.

Trombicula (Trombicula) rhodesiensis – Wharton & Fuller 1952: 69.
Eutrombicula (Squamicola) rhodesiensis – Audy & Vercammen-Grandjean 1961b: 138. — Zumpt 1961: 149.
Eltonella (Eltonella) rhodesiensis – Vercammen-Grandjean 1965a: 81, pl. CC; 1965c: 42.

Syntypes

NMSA 4871.

Distribution

Zimbabwe (Bulawayo).

Hosts

Trachylepis margaritifera, *T. quinquetaeniata*, *T. varia.*

Microtrombicula rhoptropi (Lawrence, 1949)

Eutrombicula rhoptropi Lawrence, 1949: 445, fig. 32.

Trombicula (Trombicula) rhoptropi – Wharton & Fuller 1952: 69.
Eutrombicula (Squamicola) rhoptropi – Audy & Vercammen-Grandjean 1961b: 138. — Zumpt 1961: 149.
Microtrombicula (Scapuscutala) rhoptropi – Vercammen-Grandjean 1965a: 125, pl. HH.
Eltonella (Eltonella) rhoptropi – Vercammen-Grandjean 1965c: 42.

Syntypes

TMSA 2.

Material revised

One paratype from BMNH (1957.8.12.17).

Distribution

Namibia (Namib).

Host

Rhoptropus afer.

Microtrombicula rodhaini (Jadin & Vercammen-Grandjean, 1952)

Eutrombicula rodhaini Jadin & Vercammen-Grandjean, 1952: 611, pl. 4.

Trombicula rodhaini – Taufflieb & Mouchet 1959: 228. — Zumpt 1961: 136.
Trombicula (Microtrombicula) rodhaini – Audy & Vercammen-Grandjean 1961a: 130.
Microtrombicula (Microtrombicula) rodhaini – Vercammen-Grandjean 1965a: 96, pls AG, PP.
Microtrombicula rodhaini – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA 76036.

Material revised

Holotype and 7 paratypes from RMCA.

Distribution

Rwanda (Butare), Cameroon (Yaoundé).

Hosts

Crocidura sp., *Dasymys incomtus*, *Graphiurus murinus*, *Lophuromys aquilus.*

Microtrombicula rosamonda (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) rosamonda Vercammen-Grandjean, 1965a: 65, pl. I.

Eltonella (Eltonella) rosamonda – Vercammen-Grandjean 1965c: 42.

Holotype

RMCA (not found).

Distribution

DR Congo (Bukavu).

Host

Lissotis melanogaster.

Microtrombicula rossi (Vercammen-Grandjean & Brennan, 1957)

Trombicula rossi Vercammen-Grandjean, Brennan, 1957: 485, figs 1C, E–F, 2C–E.

Trombicula rossi – Audy & Vercammen-Grandjean 1961a: 131. — Zumpt 1961: 137.
Eltonella (Eltonella) rossi – Vercammen-Grandjean 1965a: 59, pl. C; 1965c: 42.
Microtrombicula rossi – Brown 2004: 44.

Holotype

RMCA (original data), RML 31469 (Vercammen-Grandjean 1965a).

Material revised

35 specimens (Nos 135.274–135.308, labeled as "*Eltonella rossi*") plus one specimen (No. 87520, labeled as "*Trombicula (Pentacula) rossi rossi*") from RMCA, all from type host and locality.

Distribution

Uganda (Kaabong).

Host

Procaviidae gen. sp.

Microtrombicula sciuricola Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) sciuricola Vercammen-Grandjean, 1965a: 109, pl. XX.

Microtrombicula sciuricola – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

DR Congo (Lemera).

Host

Sciurus sp.

Microtrombicula scotophili Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) scotophili Vercammen-Grandjean, 1965a: 91, pl. MM.

Microtrombicula scotophili – Vercammen-Grandjean 1965c: 44.

Holotype

RMCA (not found).

Distribution

South Sudan (Equatoria).

Host

Scotophilus leucogaster leucogaster.

Microtrombicula sicei (André, 1951) comb. nov.

Thrombicula sicei André, 1951a: 216, fig. 1.

Thrombicula sicei – André 1951c: 374. — Le Gac 1951: 545; 1952a: 748; 1952b: 477.
Trombicula (Trombicula) sicei – Wharton & Fuller 1952: 70.
Trombicula sicei – Taufflieb & Mouchet 1959: 231. — Audy & Vercammen-Grandjean 1961a: 131. — Zumpt 1961: 138.
Eltonella (Eltonella) sicei – Vercammen-Grandjean 1965a: 74, pl. T; 1965c: 42. — Taufflieb 1965a: 25. — Taufflieb *et al.* 1967: 118.

Holotype

MNHN (Vercammen-Grandjean 1965a).

Distribution

Central African Republic (Bangui, Berbérati, Bossangoa, Bouar, Kaga Bandoro, Kouki, M'Baiki, Méré, Mongoumba, Possel, Yaka), Cameroon (Yaoundé), Angola (Dundo).

Hosts

Aethomys medicatus, *Anomalurus pusillus*, *Arvicanthis niloticus*, *Gallus gallus*, *Ichneumia albicauda*, *Lemniscomys barbarus*, *L. striatus*, *Mastomys coucha* (Le Gac 1952a), *M. natalensis* (Zumpt 1961), *Mylomys dybowskii*, *Numida meleagris*, *N. meleagris galeatus*, *Pternistis bicalcaratus*, *Ptilopachus petrosus*, *P. petrosus brehmi*, *Rattus rattus*, *Thryonomys swinderianus.*

Microtrombicula smithi (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) smithi Vercammen-Grandjean, 1965a: 64, pl. H.

Eltonella (Eltonella) smithi – Vercammen-Grandjean 1965c: 42.

Holotype

RMCA (not found).

Distribution

Uganda (Lake Victoria).

Host

Heterohyrax brucei.

Microtrombicula sporopipia (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) sporopipia Vercammen-Grandjean, 1965a: 67, pl. K.

Eltonella (Eltonella) sporopipia – Vercammen-Grandjean 1965c: 43.

Holotype

RMCA (not found).

Distribution

South Africa (Brakkloof).

Host

Sporopipes squamifrons.

Microtrombicula squirreli Stekolnikov, nom. nov.

Eltonella (Eltonella) myonacis heliosciuri Vercammen-Grandjean, 1965a: 61, pl. G.

Etymology

The species name is derived from the common English name of the type host family (squirrel).

Holotype

RMCA (not found).

Distribution

DR Congo (Bukama).

Host

Heliosciurus gambianus rhodesiae.

Remarks

The new name is proposed to fix the homonymy of this species with *Microtrombicula (Microtrombicula) heliosciuri* Vercammen-Grandjean, 1965, which arised after transferring the former to the genus *Microtrombicula*.

Microtrombicula streptopelia (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) polymorpha streptopelia Vercammen-Grandjean, 1965a: 71, pls P–Q.

Holotype

RMCA (not found).

Distribution

DR Congo (Bukavu, Luvungi).

Hosts

Lissotis melanogaster, *Streptopelia semitorquata*.

Microtrombicula tadarida Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) intranasalis tadarida Vercammen-Grandjean, 1965a: 102, pl. VV.

Holotype

RMCA (not found).

Distribution

Rwanda (Akanyaru valley).

Host

Mops condylurus.

Microtrombicula tamisci Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) tamisci Vercammen-Grandjean, 1965a: 93, pl. NN.

Microtrombicula tamisci – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

DR Congo (Fundi, Kabambare, Kisangani, Mongbwalu).

Host

Paraxerus boehmi emini.

Microtrombicula tanzaniae Goff, 1982

Microtrombicula (Eltonella) tanzaniae Goff, 1982: 376, fig. 1.

Holotype

BPBM 12147.

Distribution

Tanzania (Kisarawe).

Hosts

Hipposideros ruber ruber, *Nycteris thebaica*, *Triaenops persicus afer*.

Microtrombicula tardaea (Vercammen-Grandjean, 1965), comb. nov.

Eltonella (Eltonella) tardaea Vercammen-Grandjean, 1965a: 75, pl. T.

Eltonella (Eltonella) tardaea – Vercammen-Grandjean 1965c: 43.

Holotype

RMCA (not found).

Distribution

Rwanda (Butare).

Host

Otomys irroratus.

Microtrombicula tragardhi (Oudemans, 1910) comb. nov.

Microthrombidium tragardhi Oudemans, 1910a: 86

Microthrombidium tragardhi – Oudemans 1912: 37, fig. K.
Trombicula tragardhi – Radford 1942: 60, fig. 17. — Fuller 1952: 72.
Pentagonella tragardhi – Thor & Willmann 1947: 294, fig. 351.
Trombicula (Neotrombicula) tragardhi – Wharton & Fuller 1952: 60.
Neotrombicula tragardhi – Zumpt 1961: 146. — Goff 1995: 12.
Eltonella (Eltonella) tragardhi – Vercammen-Grandjean 1965c: 43.

Holotype

Private collection of Trägårdh, Stockholm (Oudemans 1912), lost (Fuller 1952), RMNH (Wharton & Fuller 1952).

Distribution

Sudan (White Nile).

Hosts

Chlorocebus aethiops (original data), *C. pygerythrus* (Zumpt 1961).

Microtrombicula tropidosauri (Vercammen-Grandjean, 1965), comb. nov.

Eltonella (Eltonella) tropidosauri Vercammen-Grandjean, 1965a: 79, pl. Z.

Eltonella (Eltonella) tropidosaurae [sic] – Vercammen-Grandjean 1965c: 43.

Holotype

NMSA 4815.

Distribution

South Africa (Mont-aux-Sources).

Host

Tropidosaura essexi.

Microtrombicula ugandae (Vercammen-Grandjean & Brennan, 1957) comb. nov.

Trombicula ugandae Vercammen-Grandjean & Brennan, 1957: 484, figs 1A–B, F, 2A–B, E.

Trombicula ugandae – Audy & Vercammen-Grandjean 1961a: 131. — Zumpt 1961: 138, fig. 82d–e.
Eltonella (Eltonella) ugandae ugandae – Vercammen-Grandjean 1965a: 68, pls L–O; 1965c: 43.

Holotype

Private collection of Vercammen-Grandjean (original data), RMCA (Vercammen-Grandjean 1965a) (? – not found).

Distribution

Uganda (Entebbe), DR Congo (Shabunda, Luvungi, Bukavu).

Hosts

Canis lupus familiaris (type host), *Centropus grillii*, *Oenomys hypoxanthus*, *Otomys tropicalis*, *Pelomys fallax.*

Remarks

Described from a single specimen.

Microtrombicula vanhoofi Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) vanhoofi Vercammen-Grandjean, 1965a: 108, pls AJ, YY, AK.

Microtrombicula vanhoofi – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA 82740.

Material revised

Holotype and six paratypes from RMCA, including two nymphs, not suitable for examination.

Distribution

DR Congo (Bukavu, Lwiro, Mushweshwe).

Hosts

Oenomys hypoxanthus, *Praomys* sp., *Rattus rattus*.

Microtrombicula verrucascuta Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) verrucascuta Vercammen-Grandjean, 1965a: 99, pls AH, YY, AL.

Microtrombicula verrucascuta – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA 82736.

Material revised

Holotype and three paratypes from RMCA (Nos 82737–82739, not suitable for examination), including one nymph.

Distribution

DR Congo (Bukavu, Mushwere).

Hosts

Dasymys incomtus, *Lophuromys aquilus*.

Microtrombicula villiersi Vercammen-Grandjean, 1965

Microtrombicula (Scapuscutala) villiersi Vercammen-Grandjean, 1965a: 123, pl. GG.

Microtrombicula villiersi – Vercammen-Grandjean 1965c: 46.

Holotype

RMCA (not found).

Distribution

South Africa (Punda Maria Camp).

Host

Aethomys chrysophilus.

Microtrombicula viverida Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) viverida Vercammen-Grandjean, 1965a: 89, pls AE, LL.

Microtrombicula viverida – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

DR Congo (Luvungi).

Host

Genetta tigrina.

Microtrombicula yangi (Vercammen-Grandjean, 1965) comb. nov.

Eltonella (Eltonella) centropi yangi Vercammen-Grandjean, 1965a: 73, pls R–S.

Holotype

RMCA (not found).

Distribution

DR Congo (Luvungi).

Host

Centropus superciliosus.

Microtrombicula youhensis (Abonnenc & Taufflieb, 1957)

Trombicula youhensis Abonnenc & Taufflieb, 1957a: 560, figs 1, 4.

Trombicula youhensis – Audy & Vercammen-Grandjean 1961a: 132. — Zumpt 1961: 139.
Microtrombicula (Microtrombicula) youhensis – Vercammen-Grandjean 1965a: 89, pl. RR.
Microtrombicula youhensis – Vercammen-Grandjean 1965c: 45.

Holotype

MNHN.

Material revised

One paratype from RMCA (No. 86177).

Distribution

Chad (Fianga, Léré).

Hosts

Mastomys coucha (original data), *M. natalensis* (Zumpt 1961).

Microtrombicula zumpti Vercammen-Grandjean, 1965

Microtrombicula (Microtrombicula) zumpti Vercammen-Grandjean 1965a: 112, pl. ZZ.

Microtrombicula zumpti – Vercammen-Grandjean 1965c: 45.

Holotype

RMCA (not found).

Distribution

South Africa (Dargle).

Host

Procavia capensis.

Miyatrombicula Sasa, Kawashima & Egashira, 1952

Diagnosis

SIF = 7BS, 7B-B(N)-3-3(2)11(0)1.1(0)000; fsp = 7.7.7; fCx = 1.1.(1–9); Ip = 660–780. Cheliceral blade with tricuspid cap; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae and sometimes with nude subterminala. Scutum pentagonal, with prominent angulate posterior margin, with 1 AM, 2 AL and 2 PL setae; sensillary bases at level of PL, slightly anterior or posterior; sensilla flagelliform, branched (nude in 1 species). Eyes usually 2 + 2. Legs 7-segmented, 3 or 2 genualae I, mastitarsala III, nude or with few basal cilia, frequently present.

Miyatrombicula ilesi (Radford, 1948)

Pentagonella ilesi Radford, 1948: 214, figs 3–4.

Trombicula (Trombicula) ilesi – Wharton & Fuller 1952: 66.
Trombicula ilesi – Audy & Vercammen-Grandjean 1961a: 131. — Zumpt 1961: 137.
Miyatrombicula (Miyacarus) ilesi – Vercammen-Grandjean 1965c: 24.

Holotype

BMNH 1948.2.3.33.

Material revised

Holotype.

Distribution

This species was collected from a snake kept in Belle Vue Zoological Gardens, Manchester, UK. According to the original data, it was a western green mamba distributed in Western Africa. However, Zumpt (1961) defined the host as an eastern green mamba with an East African areal. Moreover, there is no evidence that the latter host was infested by chiggers in Africa; thus, an African origin of *Miyatrombicula ilesi* is not confirmed.

Host

Dendroaspis angusticeps (Zumpt 1961), *D. viridis* (original data).

Miyatrombicula rixoli (Taufflieb & Mouchet, 1962)

Eutrombicula (Eutrombicula) rixoli Taufflieb & Mouchet, 1962: 346, fig. 1

Miyatrombicula (Miyatrombicula) rixoli – Vercammen-Grandjean 1965c: 24.

Holotype

Private collection of Taufflieb.

Distribution

Cameroon (Maroua).

Host

Atelerix albiventris.

Multigniella Vercammen-Grandjean & Fain, 1957

Diagnosis

SIF = 6B-N-3-5211.0000; fPp = B/B/BNN; fsp = 7.7.7; fSt = 2.4; fCx = 1.3.3; Ip = 1393. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 6 branched setae. Scutum pentagonal, with posterior margin pointed in middle, with 1 AM, 2 AL and 2 PL setae; sensillary bases anterior to PL; sensilla flagelliform, branched in distal half. Eyes 2 + 2, scutal and dorsal idiosomal setae expanded, rod-like, covered by short scale-like barbs. Legs 7-segmented, 5 genualae I, 2 genualae II, genuala and tibiala III present, mastisetae absent, pretarsala III present, leg coxae II and III bear 3 setae.

Multigniella cosmetornis Vercammen-Grandjean & Fain, 1957

Multigniella cosmetornis Vercammen-Grandjean & Fain, 1957b: 14, figs A–D.

Multigniella cosmetornis – Zumpt 1961: 141. — Vercammen-Grandjean 1965c: 25.

Holotype

No data.

Distribution

Rwanda (Kilirambogo).

Host

Caprimulgus vexillarius.

Myotrombicula Womersley & Heaslip, 1943

Diagnosis

SIF = 7B-B(N)-3-3(2)111.0000; fsp = 7.7.7; Ip = 450–1322. Cheliceral blade with tricuspid cap and sometimes few dorsal teeth; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae. Scutum trapezoidal, with anterolateral shoulders and straight or slightly convex posterior margin, with 1 AM, 2 AL and 2 PL setae; sensillary bases anterior to PL; sensilla flagelliform, nude or branched in distal half. Eyes 1 + 1, 2 + 2 or absent. Legs 7-segmented, 3 or 2 genualae I, mastisetae absent. Parasites of bats.

Myotrombicula bidentipalpis Vercammen-Grandjean & Fain, 1958

Myotrombicula bidentipalpis Vercammen-Grandjean & Fain, 1958: 33, pl. 10.

Myotrombicula bidentipalpis – Zumpt 1961: 144, fig. 86.
Myotrombicula (Myotrombicula) bidentipalpis – Vercammen-Grandjean 1965c: 62; 1968a: 73.

Holotype

RMCA (not found).

Distribution

DR Congo (Irangi, colline Mabondo).

Hosts

Hipposideros caffer (Zumpt 1961), *H. ruber ruber* (original data).

Neotrombicula Hirst, 1925

Diagnosis

SIF = 7BS-N(B)-3-(1-3)111.(0–3)(0–2)0(0–1); fsp = 7.7.7. Cheliceral blade with tricuspid cap; galeal setae branched or nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala; palpal femoral and genual setae branched. Scutum subpentagonal, subhexagonal or subtrapezoidal, wider than long, with rounded posterior margin, with 1 AM, 2 AL and 2 PL setae; sensilla flagelliform, usually branched. Eyes 2 + 2. Legs 7-segmented, 3 or 2 (rarely 1) genualae I, mastitarsala III usually present, additional mastitarsalae, 1–2 mastitibialae and 1 mastifemorala sometimes present.

Neotrombicula ceccaldii Taufflieb, 1958

Neotrombicula ceccaldii Taufflieb, 1958a: 619, pl. 1.

Neotrombicula (Neotrombicula) ceccaldii – Vercammen-Grandjean 1965c: 70.

Holotype

No data.

Distribution

Morocco (Oued Cherrat).

Hosts

Apodemus sylvaticus, *Lemniscomys barbarus*, *Mus spretus*, *Mustela nivalis numidica*, *Rattus rattus.*

Neotrombicula centrafricana Goff, 1995

Neotrombicula centrafricana Goff, 1995: 14, fig. 2.

Holotype

USNM.

Distribution

The exact collection locality is unknown (orig. "Central Africa"); however, the distribution of the host species is restricted to NW DR Congo and NE Angola (Wilson & Reeder 2005).

Host

Allenopithecus nigroviridis.

Neotrombicula claviglia (Radford, 1948)

Trombicula claviglia Radford, 1948: 213, figs 1–2.

Trombicula claviglia – Audy & Vercammen-Grandjean 1961a: 132. — Zumpt 1961: 138.
Trombicula (Trombicula) claviglia – Wharton & Fuller 1952: 64.
Neotrombicula (Neotrombicula) claviglia – Vercammen-Grandjean 1965c: 70.

Holotype

BMNH 1948.2.3.

Material revised

Holotype.

Distribution

Uganda (Serere).

Host

Graphiurus murinus.

Neotrombicula kenyaensis Goff, 1995

Neotrombicula kenyaensis Goff, 1995: 12, fig. 1.

Holotype

USNM.

Distribution

Kenya (Sheldrick Falls).

Host

Galago senegalensis.

Neotrombicula lemni Taufflieb, 1960

Neotrombicula roubaudi var. *lemni* Taufflieb, 1960a: 41, pl. 6b–c.

Holotype

No data.

Distribution

Morocco (Oued Cherrat).

Hosts

Dipodillus campestris, *Eliomys munbyanus*, *Lemniscomys barbarus*, *Mus spretus*, *Mustela nivalis numidica*, *Oryctolagus cuniculus*, Passeriformes gen. sp., *Rattus rattus.*

Neotrombicula nicolei Taufflieb, 1958

Neotrombicula nicolei Taufflieb, 1958b: 418, fig. 2.

Neotrombicula (Neotrombicula) nicolei – Vercammen-Grandjean 1965c: 71.

Holotype

MNHN.

Distribution

Congo (Brazzaville).

Hosts

Dasymys incomtus, *Lophuromys sikapusi*, *Oenomys hypoxanthus*.

Neotrombicula orycti Taufflieb, 1960

Neotrombicula roubaudi var. *orycti* Taufflieb, 1960a: 44, pl. 6a–d.

Holotype

No data.

Distribution

Morocco (Oued Cherrat).

Hosts

Dipodillus campestris, *Lemniscomys barbarus*, *Oryctolagus cuniculus*, Passeriformes gen. sp., *Rattus rattus.*

Neotrombicula rickenbachi Taufflieb, 1965

Neotrombicula rickenbachi Taufflieb, 1965c: 523, figs a–f.

Neotrombicula (Neotrombicula) rickenbachi – Taufflieb 1965a: 22. — Vercammen-Grandjean 1965c: 71. — Taufflieb *et al.* 1967: 119.

Holotype

MNHN.

Material revised

Five paratypes from RMCA.

Distribution

Central African Republic (Bangui), Angola (Dundo, Nhefo).

Hosts

Arvicanthis sp., *Crocidura olivieri occidentalis*, *Funisciurus bayonii*, *Heliosciurus* sp., *Mastomys natalensis*, *Praomys jacksoni*, *Rattus rattus.*

Neotrombicula roubaudi (Vercammen-Grandjean, 1956)

Trombicula (Neotrombicula) roubaudi Vercammen-Grandjean, 1956d: 79, pls 1C–D, 2C–D.

Neotrombicula roubaudi – Zumpt 1961: 145. — Goff 1995: 12.
Neotrombicula roubaudi roubaudi – Taufflieb 1960a: 46.
Neotrombicula (Neotrombicula) roubaudi – Vercammen-Grandjean 1965c: 71.

Holotype

No data.

Material revised

Four paratypes from RMCA, not suitable for examination.

Distribution

Morocco (Oued Cherrat, Tit Mellil).

Hosts

Apodemus sylvaticus, *Dipodillus campestris*, *Eliomys munbyanus*, *Lemniscomys barbarus*, *Mus spicilegus*, *M. spretus*, *Mustela nivalis numidica*, *Oryctolagus cuniculus*, Paridae gen. sp., Passeriformes gen. sp., *Rattus rattus.*

Neotrombicula spatulata Vercammen-Grandjean & Langston, 1976

Neotrombicula (Nanneocula) spatulata Vercammen-Grandjean & Langston, 1976: 990, pl. 298.

Neotrombicula (Subfonsecia) spatulata – Vercammen-Grandjean 1965c: 75 (nom. nud.).

Holotype

NMSA 100001-5/15.

Distribution

South Africa (Johannesburg).

Host

Squamata gen. sp.

Neotrombicula zairiensis Taufflieb, 1966

Neotrombicula (Neotrombicula) zairiensis Taufflieb, 1966a: 296, fig. 1.

Neotrombicula (Neotrombicula) zairiensis – Taufflieb *et al.* 1967: 119.

Holotype

MNHN.

Material revised

Two paratypes from RMCA (No. 128388).

Distribution

Congo (Ile M'Bamou, Pointe-Noire), Central African Republic (Bangui, Boukoko), Angola (Dundo), Cameroon (Mbalmayo).

Hosts

Crocidura sp., *Lophaetus occipitalis*, *Lophuromys sikapusi*, *Praomys tullbergi* (type host), *P. morio*, *Rattus rattus.*

Neotrombiculoides Vercammen-Grandjean, 1960

Diagnosis

SIF = 7B-N(B)-3-(1-3)111.(0–2)0(1)00; fsp = 7.7.7; Ip = 640–840. Cheliceral blade with tricuspid cap; galeal setae nude or branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae; palpal femoral and genual setae usually branched. Scutum subhexagonal, wider than long, with rounded posterior margin, with 1 AM, 2 AL and 2 PL setae; sensilla flagelliform, branched. Eyes 2 + 2. Legs 7-segmented, 3 or 2 (rarely 1) genualae I, 1–2 mastitarsalae III present or absent, mastitibiala sometimes present.

Neotrombiculoides abonnenci (Taufflieb, 1960) comb. nov.

Eutrombicula abonnenci Taufflieb, 1960b: 227, pl. 2.

Neotrombicula (Neotrombiculoides) abonnenci – Vercammen-Grandjean 1965c: 74.

Holotype

No data.

Distribution

Mauritania (Mbout).

Host

Procavia capensis ruficeps.

Neotrombiculoides claviglicola (Lawrence, 1949) comb. nov.

Trombicula claviglicola Lawrence, 1949: 410, figs 1–2.

Trombicula (Trombicula) claviglicola – Wharton & Fuller 1952: 64.
Trombicula claviglicola – Audy & Vercammen-Grandjean 1961a: 132. — Zumpt 1961: 138.
Neotrombicula (Neotrombiculoides) claviglicola – Vercammen-Grandjean 1965c: 74. — Vercammen-Grandjean & Langston 1976: 983, pl. 292.
Neotrombicula claviglicola – Goff 1995: 12.

Syntypes

NMSA 4893.

Distribution

South Africa (?).

Host

Graphiurus murinus.

Neotrombiculoides elegantissima (Kolebinova, 1981) comb. nov.

Neotrombicula (Neotrombiculoides) elegantissima Kolebinova, 1981: 293, figs 1–5.

Holotype

SMF pA.11.1980.1.

Distribution

Tanzania (Kondoa).

Host

Elephantulus rufescens.

Oudemansidium Vercammen-Grandjean & André, 1966

Diagnosis

SIF = 7BS-B-3-2111.0001; fPp = N/N/NNN; fsp = 7.7.7; fCx = 1.1.1; fSt = 2.2. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala; palpal femoral, genual and tibial setae nude. Scutum trapezoidal, with posterior margin straight or slightly concave, with 1 AM, 2 AL and 2 PL setae; sensilla flagelliform, branched. Eyes 2 + 2. Legs 7-segmented, 2 genualae I, nude femorala III present. Parasites of bats.

Oudemansidium howelli (Goff, 1983) comb. nov.

Chiroptella (Oudemansidium) howelli Goff, 1983d: 306, fig. 1.

Holotype

BPBM 12709.

Distribution

Tanzania (Kisarawe).

Host

Hipposideros ruber ruber.

Pentidionis Vercammen-Grandjean & Loomis, 1967

Diagnosis

SIF = 7BS-B-3-3111.2(1)000; fsp = 7.7.7; Ip = 883–1002. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala. Scutum subpentagonal, with prominent rounded posterior margin, with 1 AM, 2 AL and 2 PL setae; sensillary bases situated not far apart; sensilla flagelliform, branched. Eyes 2 + 2. Legs 7-segmented, long and thin, 3 genualae I, 1–2 mastitarsalae III, nude or with few cilia. Parasites of reptiles and birds.

Pentidionis maura (Taufflieb, 1960) comb. nov.

Eutrombicula maura Taufflieb, 1960a: 30, pl. 2.

Microtrombicula (Scapuscutala) maura – Vercammen-Grandjean 1965a: 124, pl. FF.
Hexidionis (Pentidionis) maura – Vercammen-Grandjean 1965c: 77.

Holotype

No data.

Distribution

Morocco (Assa, Et Tnine Bouchane, Marrakesh).

Hosts

Agama impalearis, *Mesalina guttulata*.

Pentidionis meridialis (Taufflieb, 1960) comb. nov.

Eutrombicula meridialis Taufflieb, 1960a: 32, pl. 3.

Microtrombicula (Scapuscutala) meridialis – Vercammen-Grandjean 1965a: 124, pl. FF.
Hexidionis (Pentidionis) meridialis – Vercammen-Grandjean 1965c: 77.

Holotype

No data.

Distribution

Morocco (Guelmim).

Host

Stenodactylus mauritanicus.

Sasatrombicula Vercammen-Grandjean, 1960

Diagnosis

SIF = 5B-N-3-3121.0000; fsp = 7.7.7; fCx = 1.1.1; Ip = 730–1150; fSc = PL > AM > AL. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 5 branched setae; dorsal palpal tibial seta always nude. Scutum subquadrate or subpentagonal, with 1 AM, 2 AL and 2 PL setae, puncta of scutum very small, indistinct or absent; sensilla flagelliform, branched. Eyes 2 + 2. Legs 7-segmented, 3 genualae I, 2 genualae III (one genuala can be regarded as mastigenuala), mastisetae absent. Parasites of bats.

Sasatrombicula cherrata (Taufflieb, 1960)

Trombicula cherrata Taufflieb, 1960a: 27, pl. 1.

Sasatrombicula (Sasatrombicula) cherrata – Vercammen-Grandjean 1965c: 68.

Holotype

No data.

Distribution

Morocco (Oued Cherrat).

Host

Rhinolophus ferrumequinum.

Sauriscus Lawrence, 1949

Diagnosis

fsp = 7.7.7; fCx = 1.1.1; fSt = 2.4. Cheliceral blade with tricuspid cap; palpal claw 2-pronged. Scutum with 1 AM and 2 AL; PL setae extrascutal (peniscutum); sensilla flagelliform, branched. Eyes 1 + 1. Legs 7-segmented, anterior tibialae I and II thickened and thumb-like, mastitarsala III present.

Sauriscus ewingi Lawrence, 1949

Sauriscus ewingi Lawrence, 1949: 453, fig. 39.

Sauriscus ewingi – Zumpt 1961: 149, fig. 89. — Audy & Vercammen-Grandjean 1961b: 138.
Tecomatlana ewingi – Wharton & Fuller 1952: 90.

Syntypes

TMSA 15.

Distribution

Namibia (Aus, Kamanjab).

Hosts

Chondrodactylus bibronii, *C. fitzsimonsi*, *C. turneri* (type host), *Pachydactylus laevigatus*.

Remarks

This species was listed by Vercammen-Grandjean (1965c) as a synonym of *Eutrombicula pachydactyli* Lawrence, 1949 without any evidence or justification.

Tanautarsala Vercammen-Grandjean, 1960

Diagnosis

SIF = 7B-b-3-3111.0000; fPp = B/N/NNB; fsp = 7.7.7; fCx = 1.1.1; fSt = 2.2; Ip = 722–743; NDV = 68–72. Cheliceral blade with tricuspid cap; galeal setae with one branch; palpal claw 3-pronged; palpal tarsus with 7 branched setae. Scutum rectangular, with sinuous posterior margin, with 1 AM, 2 AL and 2 PL setae; sensilla flagelliform, branched. Eyes 2 + 2. Legs 7-segmented, tarsala I gigantic, more than twice as long as tarsala II, 3 genualae I, mastisetae absent.

Tanautarsala callithrixa Brown, 2007

Tanautarsala callithrixa Brown, 2007: 224, figs 1–2.

Holotype

USNM.

Distribution

Gambia (Kudang).

Host

Chlorocebus sabaeus.

Vercammenia Audy & Nadchatram, 1957

Diagnosis

SIF = 7B, 7BS-N-3-(3-4)111.0(1)000; fsp = 7.7.7, sometimes 7.6.6; Ip = 517–1016; NDV = 34–66. Cheliceral blade with large terminal hooks; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 7 branched setae and sometimes nude subterminala. Scutum subtrapezoidal, sometimes subquadrate, with 1 AM, 2 AL and 2 PL setae; sensilla flagelliform, nude or with few branches. Eyes 2 + 2, idiosomal setae not numerous, elongated, covered with short barbs. Legs 7-segmented, tarsala I gigantic, much longer than tarsala II, 3–4 genualae I, mastitarsala sometimes present. Parasites of amphibians and reptiles.

Vercammenia pringlei Vercammen-Grandjean & Langston, 1976

Vercammenia (Ubiquitella) pringlei Vercammen-Grandjean & Langston, 1976: 980, pl. 288.

Holotype

NMSA 4822.

Distribution

South Africa (Kranzkop).

Host

Trachylepis striata.

Remarks

Described from a single specimen.

Whartonacarus Vercammen-Grandjean, 1960

Diagnosis

SIF = 7BS-N-2-3111.1000; fPp = B/B/NNN or B/N/NNN; fsp = 7.7.7; Ip = 1022–1455. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 2-pronged, axial prong internal; palpal tarsus with 7 branched setae and nude subterminala. Scutum trapezoidal, with anterolateral shoulders, with 1 AM, 2 AL and 2 PL setae; sensilla flagelliform, nude or branched. Eyes 2 + 2. Legs 7-segmented, 3 genualae I, mastitarsala III present.

Whartonacarus sulae (Oudemans, 1910) comb. nov.

Microthrombidium sulae Oudemans, 1910a: 85.

Microthrombidium sulae – Oudemans 1912: 7, fig. A.
Trombicula sulae – Radford 1942: 60, fig. 19. — Audy & Vercammen-Grandjean 1961a: 132. — Zumpt 1961: 139.
Trombicula (Eutrombicula) sulae – Thor & Willmann 1947: 278, fig. 333.
Eutrombicula sulae – Fuller 1952: 135.
Trombicula (Trombicula) sulae – Wharton & Fuller 1952: 70.
Eutrombicula (?) sulae – Taufflieb 1960b: 224.
Eutrombicula (Eutrombicula) sulae – Vercammen-Grandjean 1965c: 33.
Neacariscus (Whartonacarus) sulae – Vercammen-Grandjean & Langston 1976: 969, pl. 282.

Holotype

Private collection of Oudemans (Oudemans 1912), RMNH (Fuller 1952; Wharton & Fuller 1952).

Distribution

West Africa.

Hosts

Morus bassanus (Zumpt 1961), *M. capensis* (original data).

Remarks

The description was based on a single specimen from unknown collection locality in Western Africa.

Willmannium Vercammen-Grandjean & Langston, 1976

Diagnosis

SIF = 7BS-B-3-2111.0000; fPp = N/N/NNN; fsp = 7.7.7; fCx = 1.1.1; fSt = 2.2; Ip = 770–1064. Cheliceral blade with tricuspid cap; galeal setae branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala; setae on palpal femur, genu and tibia nude. Scutum trapezoidal

or subrectangular, with posterior margin almost straight, slightly sinuous or concave, with 1 AM, 2 AL and 2 PL setae; sensilla flagelliform, branched. Eyes 2 + 2. Legs 7-segmented, 2 genualae I, mastisetae absent. Parasites of bats, occasionally on other hosts.

Willmannium natalense (Lawrence, 1949) comb. nov.

Trombicula natalensis Lawrence, 1949: 413, fig. 3.

Trombicula natalensis – Lawrence 1951a: 114.
Trombicula (Trombicula) natalensis – Wharton & Fuller 1952: 67.
Leptotrombidium natalensis – Zumpt 1961: 141, fig. 84 (a).
Leptotrombidium (Leptotrombidium) natalense – Vercammen-Grandjean 1965c: 54.
Chiroptella (Willmannium) natalensis – Vercammen-Grandjean & Langston 1976: 911, pl. 256.

Syntypes

NMSA 4789.

Distribution

South Africa (Noodsberg, Sterkfontein Caves, Town Bush cave, Howick).

Hosts

Myotis tricolor, *Procavia capensis*, *Rhinolophus clivosus zuluensis.*

Willmannium suswaensis (Vercammen-Grandjean & Langston, 1976) comb. nov.

Chiroptella (Willmannium) suswaensis Vercammen-Grandjean & Langston, 1976: 916, pl. 258.

Holotype

BMNH (not found).

Distribution

Kenya (Suswa Mt).

Host

Otomops martiensseni.

Xinjiangsha Wen & Shao, 1984

Diagnosis

SIF = 7BS-N(B)-3-3(2)111.1000; fsp = 7.7.7. Cheliceral blade with tricuspid cap; galeal setae nude or branched; palpal claw 3-pronged; palpal tarsus with 7 branched setae and nude subterminala; setae on palpal femur and genu usually branched. Scutum subpentagonal or nearly trapezoidal, with rounded posterior margin, with 1 AM, 2 AL, 2 PL and 2 or more PPL setae (on scutal margin) or scuto-ocular setae (between scutal margin and eyes); sensilla flagelliform, usually branched. Eyes 2 + 2. Legs 7-segmented, 2–3 genualae I, mastitarsala III present.

Xinjiangsha blanci (Vercammen-Grandjean, 1956)

Trombicula (Heaslipia) blanci Vercammen-Grandjean, 1956d: 77, pls 1A–B, 2A–B.

Neotrombicula blanci – Zumpt 1961: 146.
Heaslipia (Hoffmannina) blanci – Vercammen-Grandjean 1965c: 48.
Xinjiangsha blanci – Stekolnikov & Daniel 2012: 15.

Holotype

No data.

Material revised

Two specimens from RMCA (Nos 87515 and 87516) not suitable for examination.

Distribution

Morocco (Oued Cherrat, Tit Mellil).

Hosts

Apodemus sylvaticus, *Eliomys munbyanus*, *Lemniscomys barbarus*, *Mus spicilegus*.

Xinjiangsha imlilica (Brown, 2008)

Aboriginesia imlilica Brown, 2008: 146, figs 1–2.

Xinjiangsha imlilica – Stekolnikov & Daniel 2012: 15.

Holotype

USNM.

Distribution

Morocco (Marrakech Sector, a village trailhead into the High Atlas Mountains).

Hosts

Apodemus sylvaticus, *Crocidura russula*, *Mus spretus*.

Zumptrombicula Vercammen-Grandjean, 1967

Diagnosis

SIF = 6B-N-3-1001.(2–3)(1–2)00; fsp = 7.7.7; fCx = 1.1.(1–3); Ip = 503–670; NDV = 66–70. Cheliceral blade with tricuspid cap; galeal setae nude; palpal claw 3-pronged; palpal tarsus with 6 branched setae. Scutum with pronounced angulate posterior margin, with 1 AM and 2 AL setae; PL setae extrascutal (peniscutum); sensilla flagelliform, branched from their base. Eyes 2 + 2. Legs 7-segmented, 1 genuala I, genualae II and III absent, 2–3 mastitarsalae III and 1–2 mastitibialae III present.

Zumptrombicula cynictia Vercammen-Grandjean, 1967

Zumptrombicula cynictia Vercammen-Grandjean, 1967: 138, figs 7–12.

Zumptrombicula cynictia – Vercammen-Grandjean 1965c: 26 (nom. nud.).
Zumptrombicula cynicta [sic] – Goff 1989: 103.

Holotype

USNM.

Distribution

South Africa (Mafikeng).

Host

Cynictis penicillata.

Zumptrombicula misonnei Goff, 1983

Zumptrombicula misonnei Goff, 1983e: 511, fig. 1.

Zumptrombicula missonnei [sic] – Goff 1989: 118.

Holotype

USNM.

Distribution

South Africa (Studers Pass).

Host

Micaelamys namaquensis.

Species known from active postlarval forms only

Trombicula algerica André, 1932

Thrombicula algerica André, 1932: 284, figs C, E, I, P1.

Thrombicula algerica – André 1945: 475. — Vercammen-Grandjean 1965c: 134.
Trombicula algerica – Thor & Willmann 1947: 351, fig. 417.
Euschoengastia algerica – Wharton & Fuller 1952: 73.

Holotype

MNHN (Wharton & Fuller 1952).

Distribution

Algeria (Arfiane El Bared).

Trombicula strinatii Cooreman, 1951

Trombicula canestrinii var. *strinatii* Cooreman, 1951: 2, fig.

Trombicula (Trombicula) strinatii – Wharton & Fuller 1952: 70.

Holotype

No data.

Distribution

Morocco (Jebel Bou Adli, Ras el Oued).

Trombicula crassipalpis (André, 1958) comb. nov.

Trägårdhula crassipalpis André, 1958: 122, figs 257–260.

Holotype

No data.

Distribution

Angola (Dundo).

Tenotrombicula minteri Vercammen-Grandjean, 1965

Tenotrombicula minteri Vercammen-Grandjean, 1965b: 259, figs 1–14.

Holotype

RMCA (not found).

Distribution

Kenya (Nairobi).

Trombicula scapulosa André, 1945

Thrombicula scapulosa André, 1945: 472, figs A, C–E, I, P1.

Trombicula (Trombicula) scapulosa – Wharton & Fuller 1952: 70.
Thrombicula scapulosa – André 1957: 344; 1958: 118, figs 249–253. — Vercammen-Grandjean 1965c: 135.
Trombicula scapulosa – Audy & Vercammen-Grandjean 1961a: 132.

Holotype

BMNH (Wharton & Fuller 1952).

Material revised

Two imago from RMCA (Nos 124462–124463) collected in Lubero, DR Congo, January 1952 and April 1954.

Distribution

Tanzania (Amani), DR Congo (100 km from Tshikapa, between Tshikapa and Luluaborg), Angola (Tshikapa, 50 km SW of Dundo), Ivory Coast (Banco).

Trombicula termitophila André, 1958

Thrombicula termitophila André, 1958: 120, figs 254–256.

Holotype

No data.

Distribution

Angola (27 km N of Quilengues).

Incertae sedis

Guntherana laurenti (Jadin & Vercammen-Grandjean, 1954)

Euschoengastia laurenti Jadin & Vercammen-Grandjean, 1954a: 202, figs A–G; 205, fig. D.

Euschoengastia laurenti – Zumpt 1961: 165.
Guntherana (Guntherana) laurenti – Vercammen-Grandjean 1965c: 115.

Holotype

RMCA 76215.

Material revised

Holotype.

Distribution

Rwanda (Musha).

Host

Dasymys incomtus.

Remarks

This species was not included in the revision of *Guntherana* published by Vercammen-Grandjean & Langston (1971). Its proper generic placement remains unclear.

Trombicula guineense (Bruyant & Joyeux, 1913)

Microtrombidium guineense Bruyant & Joyeux, 1913: 202, figs 1–4.

Microtrombidium guineense – Le Gac 1950: 711.
Trombicula guineense – Ewing 1931: 8. — Taufflieb 1960b: 224. — Audy & Vercammen-Grandjean 1961a: 132.
Trombicula (Eutrombicula) guineensis – Thor & Willmann 1947: 281.
Trombicula (Trombicula) guineense – Wharton & Fuller 1952: 65. — Zumpt 1961: 138.

Holotype

No data.

Distribution

Guinea (Kouroussa).

Hosts

Chlorocebus aethiops, *C. sabaeus*, *Erythrocebus patas*, *Gallus gallus.*

Schoengastia bottegi (Parona, 1895)

Trombidium bottegi Parona, 1895: 543, figs 1–4.

Schoengastia bottegi – Thor & Willmann 1947: 309.
Euschoengastia bottegi – Wharton & Fuller 1952: 74. — Zumpt 1961: 165.
Trombidium bottegi – Vercammen-Grandjean 1965c: 133.

Holotype

No data.

Distribution

Somalia (Hargeisa).

Host

Heterocephalus glaber.

Nomina nuda

Ascoschoengastia (Ascoschoengastia) sciuridea Vercammen-Grandjean, 1965c: 92 (two specimens designated as paratypes in RMCA, not suitable for examination).
Schoengastia (Endotrombicula) perreti Vercammen-Grandjean, 1965c: 83.
Neoschoengastia (Neoschoengastia) cosmetornis Vercammen-Grandjean, 1965c: 124 (six specimens in RMCA, not suitable for examination, one designated as "type").
Neoschoengastia (Neoschoengastia) estiennei Vercammen-Grandjean, 1965c: 124 (three specimens in RMCA).
Neoschoengastia (Hypogastia) gaudi Vercammen-Grandjean, 1965c: 125.
Neoschoengastia (Neoschoengastia) ghidesi Vercammen-Grandjean, 1965c: 125 (one larva and one nymph both designated as "type", and 25 more specimens in RMCA; 2 specimens in BMNH).
Neoschoengastia (Neoschoengastia) magnoculis Vercammen-Grandjean, 1965c: 125.
Neoschoengastia (Neoschoengastia) melittophaga Vercammen-Grandjean, 1965c: 125.
Neoschoengastia (Hypogastia) saimiri Vercammen-Grandjean, 1965c: 125.
Neoschoengastia (Neoschoengastia) streptopelia Vercammen-Grandjean, 1965c: 125 (29 specimens in RMCA, designated as type and paratypes; 1 specimen in BMNH).
Neoschoengastia (Neoschoengastia) turdidaea Vercammen-Grandjean, 1965c: 125.
Schoengastia (Schoengastia) derouaui Vercammen-Grandjean, 1965c: 81.
Schoengastia (Schoengastia) urumusuri Vercammen-Grandjean, 1965c: 82.
Schoengastia (Schoengastia) zanzibariensis Vercammen-Grandjean, 1965c: 82.
Blankaartia (Blankaartia) cuculidaea Vercammen-Grandjean, 1965c: 22.
Blankaartia (Blankaartia) edwardensis Vercammen-Grandjean, 1965c: 22.
Blankaartia (Blankaartia) maji Vercammen-Grandjean, 1965c: 22.
Blankaartia (Blankaartia) pojeri Vercammen-Grandjean, 1965c: 22.
Blankaartia (Blankaartia) rhampholeonis Vercammen-Grandjean, 1965c: 22.

Leptotrombidium (Ericotrombidium) longitarsi Vercammen-Grandjean, 1965c: 51 (15 specimens in RMCA).
Leptotrombidium (Ericotrombidium) tafi Vercammen-Grandjean, 1965c: 51.
Neotrombicula (Neotrombicula) cercopitheci Vercammen-Grandjean, 1965c: 70 (seven specimens including two nymphs in RMCA, designated as type and paratypes).
Neotrombicula (Neotrombicula) chicapa Vercammen-Grandjean, 1965c: 70 (one specimen in RMCA, designated as paratype, not suitable for examination).
Neotrombicula (Neotrombicula) christhyi Vercammen-Grandjean, 1965c: 70 (one specimen in RMCA, not suitable for examination).
Neotrombicula (Neotrombicula) hirsuta Vercammen-Grandjean, 1965c: 70 (18 specimens, including one nymph, in RMCA, designated as type and paratypes; 1 specimen in BMNH).
Neotrombicula (Neotrombicula) kinduensis Vercammen-Grandjean, 1965c: 71 (348 specimens in RMCA, designated as type and paratypes).
Neotrombicula (Neotrombicula) lucassei Vercammen-Grandjean, 1965c: 71 (47 specimens in RMCA, designated as type and paratypes).
Neotrombicula (Neotrombicula) mambakaensis Vercammen-Grandjean, 1965c: 71.
Neotrombicula (Neotrombicula) maxpolli Vercammen-Grandjean, 1965c: 71 (one larva and one nymph, both designated as "type", plus two larvae and five nymphs designated as paratypes in RMCA).
Neotrombicula (Neotrombicula) sciuri Vercammen-Grandjean, 1965c: 71 (two specimens in RMCA, designated as paratypes).
Neotrombicula (Neotrombicula) turdi Vercammen-Grandjean, 1965c: 71.
Neotrombicula (Neotrombicula) ueleensis Vercammen-Grandjean, 1965c: 71 (eight specimens in RMCA, one designated as type).
Pentagonaspis (Pentagonaspis) centropi Vercammen-Grandjean, 1965c: 27.
Pentagonaspis (Pentagonaspis) pentamastia Vercammen-Grandjean, 1965c: 27.

Discussion

History of African chigger studies

The first record of a chigger species on the African continent was connected with the name of a famous Italian explorer of Africa, captain Vittorio Bòttego (1860–1897). His first expedition to the Horn of Africa commenced from Berbera on 30 September 1892. From 10 to 12 October 1892, the caravan stayed near Errer-es-Saghir (modern Hargeisa), where Bòttego found and described a colony of naked mole-rats, *Heterocephalus glaber* (Bòttego 1895). The skin of a naked mole-rat specimen collected at that locality was examined in the Museum of Genoa (Italy) by Prof. Parona, who found chigger mites attached to it. The mites were described under the name *Trombidium bottegi* (Parona 1895). This chigger species has numerous idiosomal setae and fusiform sensilla; as the chaetotaxy of its legs and gnathosoma was not properly described and the shape of the scutum is unknown, the species remains *incertae sedis*.

The next three African trombiculid species were described by Trägårdh in 1905 using specimens collected during the Swedish expedition of 1901 to Egypt and Sudan (Trägårdh 1905). Two of them, *Schoengastia cercopitheci* (from an African green monkey, *Chlorocebus aethiops*) and *Blankaartia ardeae* (from a grey heron, *Ardea cinerea*) were collected in unknown localities of Sudan; based on the text of Trägårdh's report, I take Khartoum as an arbitrary reference point for those findings. The third species, *Blankaartia nilotica*, was described from postlarval instars that were erroneously associated with larvae of another family (Vercammen-Grandjean 1973; Kudryashova 1983). The adult trombiculids with trombidiid larvae parasitizing them were found on leaves of aquatic plants near the Jebel Ahmed Agha hill situated on the bank of the Nile in Sudan. This place is also known as a type locality for some insect species.

Subsequently, a series of African chigger species was briefly described by Oudemans (1910a, 1910b, 1911) from Sudan, Egypt (Helwan) and South Africa (Durban). The complete illustrated redescriptions were published the following year (Oudemans 1912); in this paper, eight African trombiculid species were considered in total. After this publication and before World War II, only a few occasional species descriptions were made by Bruyant & Joyeux (1913), Hirst (1926), Sambon (1928), Ewing (1928, 1931) and André (1932).

The beginning of extensive studies of African chiggers may be attributed to the works of Charles Denys Radford (1903–1973). His review (Radford 1942) considered 20 African chigger species, including seven new ones; his following two papers (Radford 1947, 1948) added 11 more species. An outstanding contribution to the knowledge on South African chiggers was made by Reginald Frederick Lawrence (1897–1987), a South African arachnologist who described 51 species of trombiculids (Lawrence 1949, 1951a, 1951b). The rapid progress in studies of African chiggers, which coincided with the increased attention to this medically important group of mites worldwide at the end of 1940s, is evident from the comparison of two summaries of the world chigger fauna separated by only five years. A fundamental German series *Das Tierreich* (Thor & Willmann 1947) included descriptions of 17 African trombiculids, while *A Manual of the Chiggers* (Wharton & Fuller 1952) gives brief information on 92 species.

In the 1950s, the taxonomy of African chiggers was raised to a new level by Paul Henry Vercammen-Grandjean (1915–1995). He was born in Brussels (Belgium), graduated from the Sorbonne in Paris and worked as a parasitologist in the Belgian Congo. During the 1950s, Vercammen-Grandjean published a series of papers, partly in collaboration with J.B. Jadin, A. Fain, J.M. Brennan and other specialists, with descriptions of new species and revisions of some genera. His taxonomic works met the highest standards of morphological description and were illustrated by drawings of unequaled quality. His attempts to provide data on postlarval stages for new species, by rearing engorged trombiculid larvae to the nymphal stage in the laboratory, also must be recognized, although they did not overcome the general trend in chigger taxonomy, which is based at present on the traits of the parasitic larval stage only.

After the beginning of the Congo Crisis (1960), Vercammen-Grandjean left Africa and worked for a short time at the Royal Museum for Central Africa (Tervuren, Belgium). In 1961, he received a position as a research parasitologist at the George Williams Hooper Research Foundation, an organized research unit within the University of California at San Francisco (US). During his time at this organization, Vercammen-Grandjean prepared his most important publications, such as a checklist of the world fauna of Trombiculinae (Vercammen-Grandjean 1965c); an illustrated key and synopsis of Far Eastern chiggers (Vercammen-Grandjean 1968b); and revisions of the genera *Microtrombicula* and *Eltonella* (Vercammen-Grandjean 1965a), *Guntherana* (Vercammen-Grandjean & Langston 1971) and *Leptotrombidium* s. lat., including *Ericotrombidium* and *Hypotrombidium* (Vercammen-Grandjean & Langston 1976). Unfortunately, all of these monographs, except the revision of *Microtrombicula* and *Eltonella*, were published as mimeographed typescripts, probably as just a few copies, which are hardly accessible at present. After his retirement in 1974, Vercammen-Grandjean worked as an independent researcher, but his papers published in that period are few. In 1981, he sold his personal chigger collection of almost 30 000 specimens to the Museum of Geneva, Switzerland (Prasad 1995).

The main contribution to African chigger studies in the 1960s was made by Roger Taufflieb, an entomologist who published high-quality descriptions of many trombiculid species from different countries throughout Africa (Morocco, Cameroon, Angola, Djibouti, etc.). His revisions of the African species of the genera *Schoengastiella*, *Gahrliepia* and *Neotrombicula* (Taufflieb 1964, 1965b, 1966a) should be considered among the most important sources on the taxonomy of these genera. In the last decades of the 20th century, many new African chigger species were described by M.L. Goff (University

of Hawaii, Honolulu, HI, USA), M.G. Kolebinova (Institute of Zoology, Bulgarian Academy of Sciences, Sofia, Bulgaria) and some other authors, followed by the taxonomic works of W.A. Brown (University of Hawaii, Honolulu, HI, USA) in the 21st century (Brown 2004, 2006a, etc.).

The last summary review of African chiggers was prepared by J.R. Audy, R.F. Lawrence and P.H. Vercammen-Grandjean. It is cited here under the name of F. Zumpt, the editor of the volume (Zumpt 1961). This work covered the chigger fauna of Africa south of the Sahara; thus, chiggers of North Africa were not included. In total, 210 species were briefly characterized, including synonymy, distribution, hosts and figures for some selected species. A key to genera was also provided. As many new genera and species have been found in Africa since this publication, it should now be considered as completely outdated.

Diversity

According to our data, 443 valid species of trombiculids from 61 genera have been recorded from the African continent to the present. Two additional dubious records could be mentioned here. Chiggers collected from *Ovis aries* in South Africa (Amersfoort) were identified as *Guntheria* sp. (Otto & Jordaan 1992). This report was probably based on a misidentified species of some other genus of Schoengastiini. The record of *Leptotrombidium* sp. in Ghana (Tema) on *Arvicanthis niloticus* and *Mastomys natalensis* (Paperna *et al.* 1970) was probably based on a misidentified species of *Hypotrombidium* or *Ericotrombidium*.

The most diverse genera, which create the characteristic appearance of the African chigger fauna, are *Microtrombicula* (87 species recorded in Africa), *Schoutedenichia* (62 species), *Schoengastia* (44 species) and *Herpetacarus* (26 species). These genera comprise 219 species in total, i.e., almost half of African chigger species. Detailed revisions of these taxa, including fully illustrated descriptions sufficient for exact species identification, were published by Vercammen-Grandjean (1958a, 1958b, 1965a, 1966).

Previously, a full account of chiggers across a whole continent was published only for Australia (Domrow & Lester 1985). These authors reported 107 species in 19 genera from the continent; these numbers are much smaller than those for Africa.

Distribution

African chiggers were collected from 305 localities (Appendix 1) and from 310 host species (Appendix 2) belonging to mammals, reptiles, birds, amphibians, arthropods (one host species) and molluscs (one case). Coverage of the continent by collection site is very irregular (Fig. 5). The best examined territories are Morocco; the region near lakes Kivu, Edward and Albert (at the border of DR Congo with Rwanda and Uganda); the vicinity of Lubumbashi (south of DR Congo); the western part of the Central African Republic; and the Drakensberg in South Africa. In other parts of the continent, the number of known collection localities is scarce. North Africa (except Morocco) remains a white spot: chiggers have never been collected in Western Sahara, Mali, Niger, nor in Libya; only two localities are known from Mauritania, Algeria, Tunisia, Chad, Sudan, Egypt, Ethiopia and Somalia; and one locality has been sampled in Eritrea. The countries leading by the number of species are DR Congo with 125 chigger species recorded, South Africa (80 species), Rwanda (38), Uganda (35), Angola (35), Morocco (30), Tanzania (27), Cameroon (26) and the Central African Republic (25 species).

The majority of African trombiculid species, 323 of 443 (i.e., 73%), are known from their type localities only; the obvious cause of such a high number of local species is the greater prevalence of publications with new species descriptions over faunistic works. Thus, the real level of endemism in African chiggers

cannot be estimated at present. Connections between the African chigger fauna and that of other continents are unclear too. Only eight African species have also been recorded outside the continent:

1) *Schoengastiella wansoni* was recorded in Kyrgyzstan (Kudryashova 1998);
2) *Brunehaldia brunehaldi*, in addition to Morocco and Egypt, was found in the western and southern provinces of Turkey (Stekolnikov & Daniel 2012);

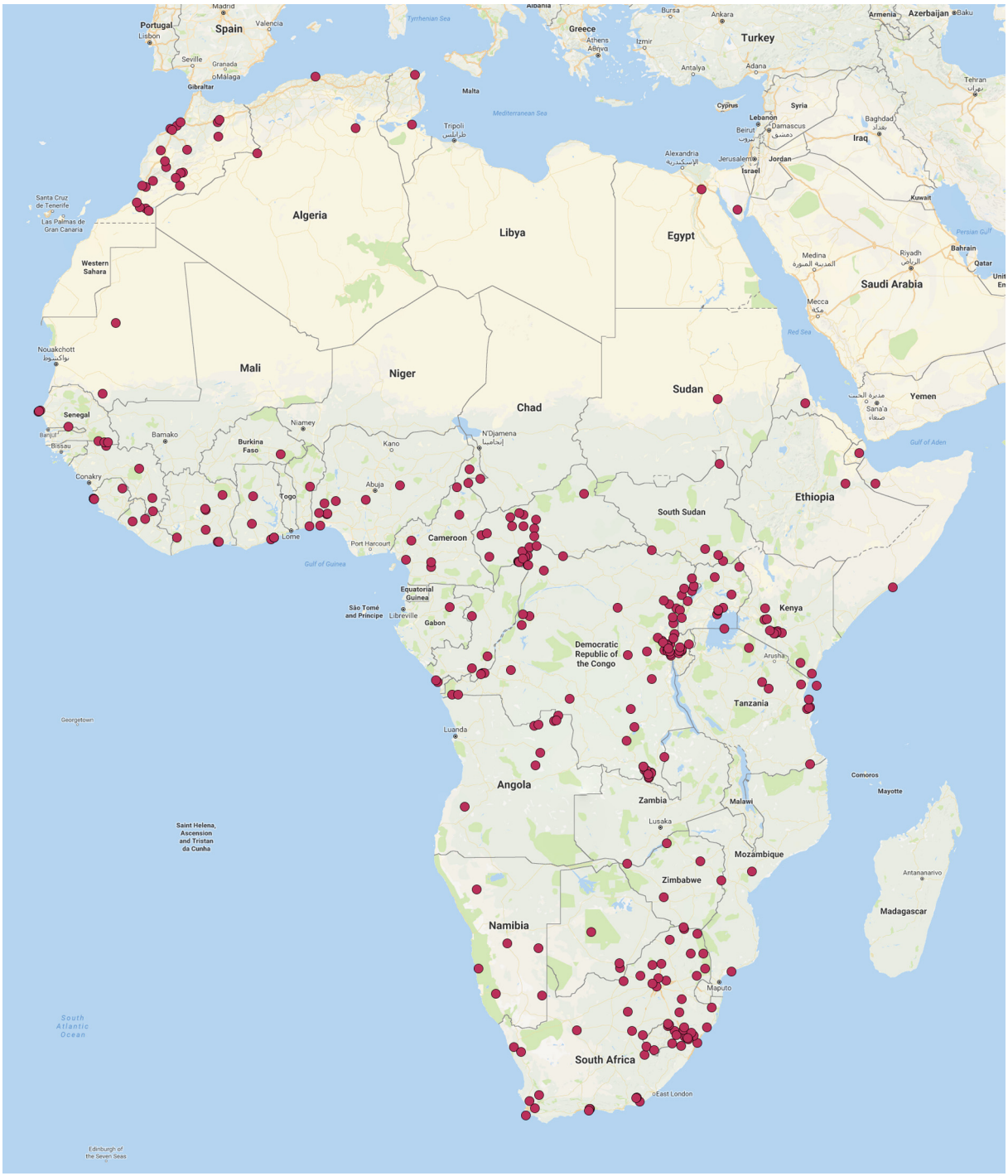

Fig. 5. Map of collection localities.

3) *Helenicula pilosa* was found in Nepal (Nadchatram & Traub 1971) and Thailand (Chaisiri *et al.* 2016);
4) *Neoschoengastia brennani* was described from the USA (Kansas and Colorado) and later reported from Africa;
5) *Schoutedenichia dipodilli* is known from Morocco and Spain;
6) *Trisetica aethiopica* was recorded from Madagascar (André 1946a);
7) *Blankaartia acuscutellaris* was originally described from Sumatra and later also recorded from many Asian and European countries (Fuller 1952; Kudryashova 1983; Ripka & Stekolnikov 2006), Cameroon, Central African Republic and Congo;
8) *Ericotrombidium geloti* was reported by Stekolnikov *et al.* (2016) from dogs in Crimea.

Of the above species, *B. brunehaldi* and *S. dipodilli* are obviously elements of the Mediterranean fauna common to Northern Africa, Southern Europe and Asia Minor. The presence of other such species is possible on the Mediterranean coast of Africa. The cause of the very wide distribution of *B. acuscutellaris* is undoubtedly the transport of parasitic larvae by their preferred hosts, namely, waterfowl. Probably, *N. brennani* represents a similar case. Although the feeding time of chiggers on their hosts usually constitutes just a few days, the possibility of a prolonged association with hosts extending beyond the actual parasitic phase has been indirectly demonstrated for some species (Moniuszko & Mąkol 2016). Thus, the participation of migrating birds in the dissemination of trombiculids hypothesized by Varma (1964) is highly probable.

Data on the chigger fauna of the Ethiopian zoogeographical region outside Africa, namely in Madagascar and the southern Arabian Peninsula, are few. At present, nine species are known from Madagascar (Sambon 1928; André 1946a, 1950a; Vercammen-Grandjean & Watkins 1965a; Stekolnikov & Fain 2004). One of these (*Trisetica aethiopica*) was also found in Africa, one (*Brygoovia opluri* Stekolnikov & Fain, 2004) belongs to a monotypic genus described from Madagascar, and the seven other species are members of the genera *Schoengastia*, *Endotrombicula* and *Schoutedenichia*. These genera are characteristic of the African chigger fauna, and all their species from Madagascar have close relatives in Africa.

Nine species were described by Radford (1954b) from Yemen. Four of them, according to the modern system, belong to widely distributed genera of bat chiggers (*Sasatrombicula*, *Myotrombicula*, *Trombigastia* and *Whartonia*); one is a member of *Endotrombicula*, the genus parasitizing amphibians; one belongs to *Matacarus*, a genus of Leeuwenhoekiinae parasitizing reptiles in Africa and the Crimean Peninsula; and three, which were collected from rodents, are members of the widely distributed genera *Microtrombicula* and *Ascoschoengastia*. All nine species are still known from their type localities only. Their descriptions are insufficient for detailed comparisons with closely related species; redescriptions from type series are badly needed. One very unusual monotypic genus of Apoloniinae, *Arabapolonia* Stekolnikov, Carranza & Gómez-Díaz, 2012 was also described from Oman by Stekolnikov *et al.* (2012).

Host spectrum

As evident from the list of hosts (Appendix 2), chigger mites are most frequently parasites of murid rodents, of which *Dasymys incomtus*, *Mastomys natalensis*, *Oenomys hypoxanthus* and *Rattus rattus* predominate by the number of chigger species found (more than 20 on each host species). Animals regarded as megafauna, such as elephants, giraffes, hippopotamuses, rhinoceroses and large bovines, probably cannot be attacked by chiggers. Otherwise, these parasites could hardly be missed during extensive acarological surveys which resulted in finding other minute mites on large African animals (e.g., Fain 1970; Fain & Zumpt 1974; Alasaad *et al.* 2012). However, a case of *Schoengastia equina* parasitizing zebra in Kruger Park (South Africa) should be noted (Vercammen-Grandjean 1971a). Bats have a highly specific chigger fauna including the genera *Whartonia*, *Riedlinia*, *Trombigastia*, *Sasatrombicula*, *Grandjeana*, *Oudemansidium*, *Chiroptella*, *Myotrombicula* and *Willmannium*. Chigger

faunas of birds and reptiles are not so isolated; however, some chigger genera parasitize birds or reptiles almost exclusively. Thus, bird chiggers are represented in Africa by the genera *Blankaartia*, *Neoschoengastia* and *Ornithogastia*; species of the genus *Vercammenia* are found on amphibians and reptiles; *Pentidionis* was recorded from reptiles and birds; and species of the genera *Herpetacarus* and *Matacarus* parasitize mostly reptiles.

Medical and veterinary importance

Reports of trombiculiasis in humans and domestic animals from the African continent include the following cases (in chronological order):

- *Hypotrombidium legaci*, described from eight specimens taken from the ear of a young cat in Bangui, Central African Republic, was also reported from chickens (André 1950b) and a large range of small mammal species in many African countries.
- A specimen of the bat chigger *Trisetica aethiopica* was removed from the eyelid of an African baby of a few weeks old in Uganda (Radford 1952).
- *Microtrombicula sicei* was collected from 85 chickens in the territory of the Central African Republic (Le Gac 1952b).
- *Microtrombicula ugandae* was described from a single specimen taken from the eyelid of a dog in Uganda (Vercammen-Grandjean & Brennan 1957).
- *Ericotrombidium marcandrei* was described from two larvae collected on a dog in Brazzaville, Congo (Taufflieb 1960c).
- *Schoutedenichia paradoxa* parasitizes the nasal cavities of murid rodents from DR Congo (Jadin *et al.* 1954a); occasionally it has been removed from the nasal cavities of domestic cats (Zumpt 1961).
- Mass parasitosis of sheep with unidentified Schoengastiine species in Amersfoort (South Africa) caused orf-like lesions on the host (Otto & Jordaan 1992).
- Attacks of *Hypotrombidium subquadratum* were reported as a cause of severe itching and dermatitis in dogs and children at Bloemfontein (South Africa) by Heyne *et al.* (2001).

I do not include in this list the record of *Trombicula guineense* on chickens in Guinea (Bruyant & Joyeux 1913), as the taxonomic position of this species is unclear. According to the data above, African chiggers of most probable medical and veterinary importance are representatives of two closely related genera: *Hypotrombidium* and *Ericotrombidium*. This hypothesis is supported by the fact that *Ericotrombidium* (including one species originally described from Djibouti) was recently proved as a cause of feline and canine trombiculiasis in Europe (Stekolnikov *et al.* 2016). The role of *Microtrombicula* as agents of trombiculiasis in Africa requires further investigation. Revealing chigger species that can attack cattle in Africa is also of some interest.

African chiggers in the collection of RMCA

According to my revision, the chigger collection in the Royal Museum for Central Africa includes 2815 microscope slides stored in 42 boxes. The greater part of this material represents African chiggers; only a few slides include Asian or American species. Moreover, 28 specimens belong to the genus *Durenia* Vercammen-Grandjean, 1955, a member of another Prostigmata family, Trombellidae, and one slide labeled as *Schoengastia* sp. (No. 116801) includes in fact a specimen of some other family. The collection of Acari in RMCA is supplied with an online catalogue (http://www.africamuseum.be/collections/browsecollections/naturalsciences/biology/acari). A search for "Trombiculidae" in the catalogue gives 2828 entries for specimens, which is almost equal to the number of slides I have counted (2815). However, I did not use the catalogue during my revision.

The collection contains material of 137 valid African chigger species, i.e., about 30% of the African fauna. I should note, however, that more than half the slides are not suitable for examination at present, mainly due to crystallization of the medium. Moreover, many slides were initially of very bad quality – insufficiently cleared or, conversely, too cleared, too flattened, or prepared from destroyed or dried specimens, etc. I estimate only 549 slides of 2815 as suitable for examination.

According to the literature, holotypes of 153 species were reported as preserved in RMCA. However, the real count is far from that number. Holotypes of 53 species are definitely absent from the collection; probable types of nine more species are present, but they are not designated as types on labels. The most striking difference is in the genus *Microtrombicula*: holotypes of 57 of its species were reported as deposited in RMCA but 39 of them are actually absent. I believe that Vercammen-Grandjean, who founded the chigger collection in RMCA, retained many types of species described by him in his private collection. This could be explained by the fact that he would have required *Microtrombicula* types during the revision of this genus he carried out in the American period of his scientific activity.

On the other hand, the collection contains many series of unpublished species, sometimes including specimens designated as holotypes and paratypes. Thus, I found there specimens of 16 *nomina nuda* from *Trombiculinae of the World* (Vercammen-Grandjean 1965c) and a series of several species with names absent anywhere in the literature, but included in the online collection catalogue. I am planning to describe those species as new, under new names, or establish their identity with previously described taxa in the coming years.

I conclude that the chigger collection of RMCA has only limited usefulness in the taxonomy of African trombiculids. Usually, slides made by Radford are of better quality than those labeled by the hand of Vercammen-Grandjean. Therefore, there is hope that species inadequately described by the former specialist will be suitable for redescription on the basis of the original type series, including paratypes stored in RMCA. As for problems associated with Vercammen-Grandjean's species, examination of his private collection, which is currently deposited in the Natural History Museum of Geneva (Switzerland) (Prasad 1995), will be valuable in the future. An attempt to find the collection of Vercammen-Grandjean in Geneva was performed by Milan Daniel (formerly the Institute for Postgraduate Medical Education, Prague, Czech Republic) during his visit to Switzerland in 1992 (M. Daniel, personal communication). Although his endeavour failed, I believe that new search efforts should lead to the rediscovery of this collection.

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Appendix 1 (continued on next pages)**.** List of collection localities.

Country	Locality	Coordinates
Algeria	Arfiane El Bared	33°39′21″ N, 5°58′45″ E
Algeria	Hydra	36°44′40″ N, 3°2′35″ E
Angola	Alto Chicapa	10°56′26″ S, 19°09′30″ E
Angola	27 km N Quilengues (by Google Earth 1)	13°50′32″ S, 13°59′10″ E
Angola	Tshikapa river, 50 km SW Dundo (by Google Earth 2)	7°46′01″ S, 20°32′35″ E
Angola	Caungula	8°05′ S, 19°05′ E
Angola	Cuilo	10°03′ S, 19°31′ E
Angola	Dundo	7°22′ S, 20°49′ E
Angola	Luita	8°01′ S, 19°24′ E
Angola	Nhefo	7°42′21″ S, 20°41′50″ E
Benin	Parakou	9°21′ N, 2°37′ E
Benin	Porto-Novo	6°29′50″ N, 2°36′18″ E
Botswana	Kanye	24°59′ S, 25°21′ E
Botswana	Kaotwe Pan	22°33′ S, 23°15′ E
Botswana	Kubung	24°37′59″ S, 25°18′31″ E
Burkina Faso	Natiaboani	11°42′ N, 0°30′ E
Cameroon	Douala	4°03′ N, 9°41′ E
Cameroon	Dschang	5°27′ N, 10°04′ E
Cameroon	Garoua	9°18′ N, 13°24′ E
Cameroon	Maroua	10°35′50″ N, 14°18′57″ E
Cameroon	Mbalmayo	3°31′ N, 11°30′ E
Cameroon	Ngaoundéré	7°19′ N, 13°35′ E
Cameroon	Yaoundé	3°52′ N, 11°31′ E
CAR	Bangui	4°22′ N, 18°35′ E
CAR	Batangafo	7°18′ N, 18°18′ E
CAR	Berbérati	4°15′41″ N, 15°47′22″ E
CAR	Bewiti	5°49′26″ N, 15°12′56″ E
CAR	Bimbo	4°15′21″ N, 18°24′15″ E
CAR	Boali	4°40′12″ N, 18°12′31″ E
CAR	Bomango	3°55′ N, 17°54′ E
CAR	Bossangoa	6°29′ N, 17°27′ E
CAR	Bouar	5°57′ N, 15°36′ E
CAR	Bouca	6°30′ N, 18°17′ E
CAR	Boukoko	3°54′ N, 17°56′ E
CAR	Damara	4°58′ N, 18°42′ E
CAR	Dekoa	6°19′ N, 19°04′ E
CAR	Kaga Bandoro	6°59′23″ N, 19°11′15″ E
CAR	Kouki	7°09′27″ N, 17°18′35″ E
CAR	M’Baiki	3°52′15″ N, 17°59′06″ E

Appendix 1 (continued)**.** List of collection localities.

Country	Locality	Coordinates
CAR	Méré	7°26′24″ N, 17°57′22″ E
CAR	Mobaye	4°19′32″ N, 21°10′45″ E
CAR	Mongoumba	3°38′ N, 18°36′ E
CAR	N'Gotto	4°01′22″ S, 17°20′08″ E
CAR	Possel	5°01′55″ N, 19°15′29″ E
CAR	Sibut	5°44′16″ N, 19°05′12″ E
CAR	Soulemaka	8°49′20″ N, 22°42′36″ E
CAR	Yaka	4°07′44″ N, 18°14′36″ E
Chad	Fianga	9°54′55″ N, 15°08′15″ E
Chad	Léré	9°38′41″ N, 14°12′54″ E
Congo	Brazzaville	4°16′04″ S, 15°17′31″ E
Congo	Djoue River	4°18′01″ S, 15°12′23″ E
Congo	Ile M'Bamou	4°15′ S, 15°25′ E
Congo	Inoni	3°01′24″ S, 15°39′46″ E
Congo	Kellé	0°04′ S, 14°30′ E
Congo	Lac Cayo	4°54′59″ S, 12°00′53″ E
Congo	Méya	3°53′16″ S, 14°31′19″ E
Congo	Nganga Lingolo	4°19′43″ S, 15°09′24″ E
Congo	Pointe-Noire	4°46′43″ S, 11°51′49″ E
Djibouti	Tadjoura	11°47′29″ N, 42°52′47″ E
DR Congo	Baya	11°52′12″ S, 27°27′28″ E
DR Congo	Beni	0°30′ N, 29°28′ E
DR Congo	Bikoro	0°43′58″ S, 18°08′03″ E
DR Congo	Blukwa	1°45′28″ N, 30°36′37″ E
DR Congo	Bokuma	0°05′60″ S, 18°41′60″ E
DR Congo	Boma	5°50′59″ S, 13°02′60″ E
DR Congo	Bukama	9°12′ S, 25°50′ E
DR Congo	Bukavu	2°30′ S, 28°52′ E
DR Congo	100 km from Tshikapa, between Tshikapa and Luluaborg (by Google Earth 3)	6°07′17″ S, 21°39′43″ E
DR Congo	Doruma	4°44′ N, 27°42′ E
DR Congo	Fulubwe	11°41′ S, 27°29′ E
DR Congo	Fundi	2°06′ N, 30°46′ E
DR Congo	Futuka	11°29′22″ S, 27°38′24″ E
DR Congo	Gemena	3°15′ N, 19°46′ E
DR Congo	Idjwi Island	2°09′57″ S, 29°03′22″ E
DR Congo	Irangi, colline Mabondo	1°54′ S, 28°27′ E
DR Congo	Irumu	1°27′00″ N, 29°52′01″ E
DR Congo	Kabambare	4°40′59″ S, 27°40′59″ E
DR Congo	Kabunga	1°40′43″ S, 28°08′37″ E

Appendix 1 (continued)**.** List of collection localities.

Country	Locality	Coordinates
DR Congo	Kafubu	11°43′16″ S, 27°29′46″ E
DR Congo	Kamande	0°35′46″ S, 29°15′36″ E
DR Congo	Kamaniola	2°46′40″ S, 29°00′05″ E
DR Congo	Kanienga	6°52′ S, 26°10′ E
DR Congo	Kasapa	11°35′10″ S, 27°23′43″ E
DR Congo	Kasenga	10°22′ S, 28°36′ E
DR Congo	Katana	2°13′16″ S, 28°49′51″ E
DR Congo	Kawa	0°48′ N, 28°58′ E
DR Congo	Kikondja	8°11′40″ S, 26°25′48″ E
DR Congo	Kikuswe	11°18′31″ S, 27°08′40″ E
DR Congo	Kindu	2°57′ S, 25°55′ E
DR Congo	Kisanga	11°41′54″ S, 27°25′24″ E
DR Congo	Kisangani	0°31′ N, 25°12′ E
DR Congo	Kiswishi	11°29′27″ S, 27°26′22″ E
DR Congo	Lemera	2°08′19″ S, 28°50′29″ E
DR Congo	Libenge	3°39′12″ N, 18°38′08″ E
DR Congo	Luberizi	2°59′44″ S, 29°05′43″ E
DR Congo	Lubero	0°09′19″ S, 29°14′37″ E
DR Congo	Lubumbashi	11°40′ S, 27°28′ E
DR Congo	Luvungi	2°52′ S, 29°02′ E
DR Congo	Lwiro	2°14′23″ S, 28°48′43″ E
DR Congo	Makulo	11°04′ S, 27°03′ E
DR Congo	Matadi	5°49′ S, 13°29′ E
DR Congo	Mawambi	1°04′ N, 28°34′ E
DR Congo	Mbandaka	0°02′52″ N, 18°15′21″ E
DR Congo	Mongbwalu	1°56′07″ N, 30°02′46″ E
DR Congo	Mukwen	11°45′36″ S, 27°26′38″ E
DR Congo	Mushwere	2°34′12″ S, 28°36′00″ E
DR Congo	Mushweshwe	2°31′49″ S, 28°48′35″ E
DR Congo	Mususwa	11°31′02″ S, 27°37′28″ E
DR Congo	Mutwanga	0°20′19″ N, 29°44′47″ E
DR Congo	Mwera	11°19′ S, 27°18′ E
DR Congo	Nioro	2°42′ N, 30°37′ E
DR Congo	Nya Ngezi	2°39′46″ S, 28°52′27″ E
DR Congo	Rugari	1°24′41″ S, 29°22′29″ E
DR Congo	Shabunda	2°41′30″ S, 27°20′47″ E
DR Congo	Tshabunda	2°02′13″ S, 28°31′49″ E
DR Congo	Tshamalale	11°37′44″ S, 27°26′25″ E
DR Congo	Walyanshiku	11°04′ S, 27°04′ E

Appendix 1 (continued)**.** List of collection localities.

Country	Locality	Coordinates
Egypt	Helwan	29°51′ N, 31°20′ E
Egypt	Saint Catherine's Monastery	28°33′20″ N, 33°58′34″ E
Eritrea	Asmara	15°20′ N, 38°56′ E
Ethiopia	Mago National Park (by original data 1)	5°24′11″ S, 36°15′41″ E
Ethiopia	Dire Dawa	9°36′ N, 41°52′ E
Gabon	Makokou	0°33′48″ N, 12°51′26″ E
Gambia	Kudang	13°40′ N, 15°04′ W
Ghana	Accra	5°33′ N, 0°12′ W
Ghana	Black Volta	8°41′ N, 1°33′ W
Ghana	Kumasi	6°40′ N, 1°37′ W
Ghana	Tema	5°40′ N, 0°00′ E
Guinea	Diécké Classified Forest (by original data 2)	7°35′46″ N, 8°52′18″ W
Guinea	Pic de Fon	8°32′21″ N, 8°54′16″ W
Guinea	Kouroussa	10°39′ N, 9°53′ W
Ivory Coast	Adiopodoume	5°20′26″ N, 4°08′00″ W
Ivory Coast	Banco	5°21′26″ N, 4°03′19″ W
Ivory Coast	Bouaké	7°41′ N, 5°01′ W
Ivory Coast	Comoé National Park Research Station	8°46′11″ N, 3°47′21″ W
Ivory Coast	Lamto	6°13′05″ N, 5°01′49″ W
Ivory Coast	Minankro	7°45′28″ N, 5°02′33″ W
Ivory Coast	Taï National Park	5°39′ N, 7°08′ W
Kenya	Njoro, Egerton University	0°22′11″ S, 35°55′58″ E
Kenya	Dandora	1°15′ S, 36°54′ E
Kenya	Kahawa	1°11′24″ S, 36°55′48″ E
Kenya	Kikuyu	1°15′ S, 36°40′ E
Kenya	Koma Rock	1°18′ S, 37°13′ E
Kenya	Lanet	0°18′ S, 36°08′ E
Kenya	Langata	1°21′58″ S, 36°44′17 E
Kenya	Marigat	0°28′12″ N, 35°58′48″ E
Kenya	Nairobi	1°17′ S, 36°49′ E
Kenya	Ngong	1°22′ S, 36°38′ E
Kenya	Sagalla	3°30′36″ S, 38°34′28″ E
Kenya	Sheldrick Falls	4°17′07″ S, 39°25′52″ E
Kenya	Suswa Mt	1°9′ S, 36°21′ E
Liberia	Gbarnga	6°59′44″ N, 9°28′16″ W
Liberia	Njebele	6°49′12″ N, 10°21′52″ W
Mauritania	Mbout	16°01′18″ N, 12°35′02″ W
Mauritania	Ouadane	20°56′ N, 11°37′ W
Morocco	Assa	28°36′31″ N, 9°25′37″ W

Appendix 1 (continued)**.** List of collection localities.

Country	Locality	Coordinates
Morocco	Beni-Mellal	32°20′22″ N, 6°21′39″ W
Morocco	Bouizakarne	29°58′48″ N, 9°25′33″ W
Morocco	10 km S Taroudant (by Google Earth 4)	30°22′46″ N, 8°52′28″ W
Morocco	5 km away from reservoir at river Massa (by NGA database 1)	30°04′42″ N, 9°39′11″ W
Morocco	20 km north of Oued Draa (by NGA database 2)	30°53′53″ N, 6°40′50″ W
Morocco	Tarfaya, Tuisgui Remz (by original data 3)	28°28′ N, 9°12′ W
Morocco	Agadir, Aouinet Torkoz (by original data 4)	28°42′ N, 9°52′ W
Morocco	Ouarzazate, Foum Zguid (by original data 5)	30°04′ N, 6°53′ W
Morocco	Ouarzazate (by original data 6)	30°52′ N, 6°52′ W
Morocco	Imlil, Marrakech Sector, a village trailhead into the High Atlas Mountains (by original data 7)	31°14′ N, 7°56′ W
Morocco	Fes Missour (by original data 8)	33°08′ N, 4°05′ W
Morocco	Casablanca	33°35′57″ N, 7°37′12″ W
Morocco	Et Tnine Bouchane	32°17′19″ N, 8°19′10″ W
Morocco	Figuig	32°06′31″ N, 1°13′47″ W
Morocco	Guelmim	28°59′ N, 10°04′ W
Morocco	Jebel Bou Adli	34°01′28″ N, 4°07′22″ W
Morocco	Marrakesh	31°37′48″ N, 8°00′32″ W
Morocco	Oued Cherrat	33°48′55″ N, 7°06′36″ W
Morocco	Rabat	34°01′15″ N, 6°50′30″ W
Morocco	Ras el Oued	34°09′ N, 4°00′ W
Morocco	Tazenakht	30°34′38″ N, 7°12′17″ W
Morocco	Tit Mellil	33°33′12″ N, 7°28′56″ W
Mozambique	Inhaminga	18°24′55″ S, 35°1′21″ E
Mozambique	Limpopo River	25°12′ S, 33°32′ E
Namibia	Aminuis	23°39′18″ S, 19°21′54″ E
Namibia	Aroab	26°48′ S, 19°39′ E
Namibia	Aus	26°40′ S, 16°16′ E
Namibia	Kamanjab	19°38′ S, 14°50′ E
Namibia	Namib	25° S, 15° E
Namibia	Rehoboth	23°19′ S, 17°05′ E
Nigeria	Afon	8°18′47″ N, 4°31′39″ E
Nigeria	Felele	7°20′44″ N, 3°53′04″ E
Nigeria	Ibadan	7°23′47″ N, 3°55′00″ E
Nigeria	Igbo-Ora	7°26′02″ N, 3°17′06″ E
Nigeria	Panyam Fish Farm	9°26′14″ N, 9°13′08″ E
Nigeria	Sakka	8°24′ N, 6°43′ E
Nigeria	University of Lagos	6°31′00″ N, 3°23′10″ E
Nigeria	Upper Ogun Estate Plantation	8°10′ N, 3°41′ E

Appendix 1 (continued)**.** List of collection localities.

Country	Locality	Coordinates
Rwanda	Bugarama	2°41′50″ S, 29°0′30″ E
Rwanda	Butare	2°36′ S, 29°45′ E
Rwanda	30 km S Astrida (Butare), Akanyaru river (by Google Earth 5)	2°47′29″ S, 29°39′57″ E
Rwanda	Gisenyi	1°42′ S, 29°15′ E
Rwanda	Kamembe	2°27′44″ S, 28°54′28″ E
Rwanda	Kilirambogo	2°37′ S, 29°54′ E
Rwanda	Mugesera	2°07′55″ S, 30°25′26″ E
Rwanda	Musha	2°31′43″ S, 29°51′54″ E
Rwanda	Nyakibanda	2°38′15″ S, 29°42′35″ E
Rwanda	Nyanza	2°21′06″ S, 29°45′03″ E
Senegal	Bandafassi	12°19′ N, 12°19′ W
Senegal	Ebarak	12°38′ N, 12°53′ W
Senegal	Etiess	12°34′ N, 12°26′ W
Senegal	Gorom	14°49′15″ N, 17°09′17″ W
Senegal	Kédougou	12°33 N, 12°11 W
Senegal	Rufisque	14°43′ N, 17°16′ W
Senegal	Sangalkam	14°46′49″ N, 17°13′39″ W
Sierra Leone	Bintumani Mt	9°13′30″ N, 11°07′00″ W
Sierra Leone	Freetown	8°29′04″ N, 13°14′04″ W
Sierra Leone	George Water Brook	8°29′12″ N, 13°14′28″ W
Somalia	Hargeisa	09°33′36″ N, 044°03′54″ E
Somalia	Mogadishu	2°02′ N, 45°21′ E
South Africa	Amersfoort	27°00′28″ S, 29°52′16″ E
South Africa	Bathurst	33°30′14″ S, 26°49′26″ E
South Africa	Bayswater	29°4′57″ S, 26°14′25″ E
South Africa	Blaauwberg	23°04′ S, 28°59′ E
South Africa	Boegoeberg Dam	29°02′57″ S, 22°11′59″ E
South Africa	Brakkloof	25°28′46″ S, 26°49′46″ E
South Africa	Bronkhorstspruit	25°48′18″ S, 28°44′47″ E
South Africa	Bushman’s Nek Pass	29°52′23″ S, 29°09′51″ E
South Africa	Cape of Good Hope	34°21′29″ S, 18°28′19″ E
South Africa	Cedara	29°32′02″ S, 30°16′24″ E
South Africa	Champagne Castle	29°05′03″ S, 29°20′45″ E
South Africa	Cold Bokkeveld	33°05′ S, 19°25′ E
South Africa	Creighton	30°01′41″ S, 29°50′24″ E
South Africa	Curry’s Post	29°21′58″ S, 30°08′01″ E
South Africa	Dargle	29°28′21″ S, 30°06′18″ E
South Africa	Diepwalle	33°56′55″ S, 23°09′27″ E
South Africa	Durban	29°51′28″ S, 31°01′45″ E

Appendix 1 (continued)**.** List of collection localities.

Country	Locality	Coordinates
South Africa	Franschhoek	33°54′39″ S, 19°07′11″ E
South Africa	Giants Castle	29°20′45″ S, 29°28′57″ E
South Africa	Glen Craig	33°15′24″ S, 26°35′13″ E
South Africa	Grahamstown	33°18′ S, 26°32′ E
South Africa	Herschel	30°36′54″ S, 27°9′43″ E
South Africa	Holfontein	29°21′17″ S, 27°02′29″ E
South Africa	Hoopstad	27°50′ S, 25°55′ E
South Africa	Howick	29°28′ S, 30°14′ E
South Africa	Johannesburg	26°12′16″ S, 28°02′44″ E
South Africa	Jonkersberg	33°56′05″ S, 23°05′50″ E
South Africa	Knysna	34°02′08″ S, 23°02′56″ E
South Africa	Kranzkop	30°03′23″ S, 27°17′47″ E
South Africa	Kruger National Park	24°00′41″ S, 31°29′07″ E
South Africa	Leydsdorp	23°59′44″ S, 30°31′14″ E
South Africa	Mafikeng	25°51′ S, 25°38′ E
South Africa	Malmesbury	33°27′ S, 18°44′ E
South Africa	Modimolle	24°42′00″ S, 28°24′22″ E
South Africa	Mont-aux-Sources	28°45′34″ S, 28°53′05″ E
South Africa	Mt Moorosi	30°16′43″ S, 27°52′20″ E
South Africa	Mullers Pass	27°52′01″ S, 29°42′36″ E
South Africa	Musina	22°20′17″ S, 30°02′30″ E
South Africa	Natal Province	29° S, 30° E
South Africa	Nelspruit	25°27′57″ S, 30°59′07″ E
South Africa	Ngoya Forest	28°50′48″ S, 31°43′56″ E
South Africa	Noodsberg	29°23′ S, 30°45′ E
South Africa	Onderstepoort	25°39′ S, 28°11′ E
South Africa	Pietermaritzburg	29°37′ S, 30°23′ E
South Africa	Punda Maria Camp	22°41′31″ S, 31°01′09″ E
South Africa	Rooiberg	24°46′34″ S, 27°44′17″ E
South Africa	Royal Natal National Park	28°41′20″ S, 28°56′42″ E
South Africa	Sevenoaks	29°12′26″ S, 30°35′50″ E
South Africa	Skukuza	24°59′45″ S, 31°35′31″ E
South Africa	Soebatsfontein	30°07′ S, 17°35′ E
South Africa	Sterkfontein Caves	26°00′57″ S, 27°44′05″ E
South Africa	Studers Pass	30°23′33″ S, 18°05′20″ E
South Africa	Town Bush cave	29°31′ S, 30°18′ E
South Africa	Ubombo	27°34′ S, 32°05′ E
South Africa	Weenen	28°51′ S, 30°04′ E
South Africa	Witzieshoek Naturellereserwe	28°36′ S, 28°52′ E

Appendix 1 (continued)**.** List of collection localities.

Country	Locality	Coordinates
South Sudan	Imatong Mountains	3°57′ N, 32°54′ E
South Sudan	Juba	4°50′45″ N, 31°36′04″ E
South Sudan	Torit	4°24′29″ N, 32°34′30″ E
Sudan	Jebel Ahmed Agha	10°59′34″ N, 32°40′17″ E
Sudan	Khartoum	15°38′ N, 32°32′ E
Tanzania	Amani	5°06′ S, 38°38′ E
Tanzania	9.6 km N of Dar es Salaam, Ladder Cove Cave, Oyster Bay (by Google Earth 6)	6°45′40″ S, 39°17′05″ E
Tanzania	Kisarawe	6°54′ S, 39°04′ E
Tanzania	Kondoa	4°54′00″ S, 35°46′12″ E
Tanzania	Nambunga	10°52′ S, 39°16′ E
Tanzania	Pemba Island	5°10′ S, 39°47′ E
Tanzania	Seronera	2°26′10″ S, 34°49′16″ E
Tanzania	University of Dar es Salaam Research Flats	6°46′50″ S, 39°12′19″ E
Tanzania	Zanzibar	6°10′ S, 39°12′ E
Tunisia	Carthage	36°51′ N, 10°19′ E
Tunisia	Gabès	33°53′ N, 10°07′ E
Uganda	Buhugu	0°31′ N, 32°54′ E
Uganda	Entebbe	0°03′00″ N, 32°27′36″ E
Uganda	Gulu	2°46′54″ N, 32°17′57″ E
Uganda	Kaabong	3°31′12″ N, 34°07′12″ E
Uganda	Katwe	0°17′48″ N, 32°34′32″ E
Uganda	Kazinga Channel	0°12′13″ S, 29°53′08″ E
Uganda	Lake Victoria	1° S, 33° E
Uganda	Mulago	0°20′33″ N, 32°34′37″ E
Uganda	Serere	1°30′ N, 33°33′ E
Uganda	Toro-Semliki Wildlife Reserve	1°00′ N, 30°20′ E
Zambia	Zambesi River	17°51′ S, 25°52′ E
Zimbabwe	Beitbridge	22°13′ S, 30°00′ E
Zimbabwe	Bulawayo	20°10′12″ S, 28°34′48″ E
Zimbabwe	Chishawasha mission	17°47′09″ S, 31°13′49″ E
Zimbabwe	Kariba	16°31′ S, 28°48′ E
Zimbabwe	Vumba Mountains	19°06′ S, 32°47′ E

Appendix 2 (continued on next pages)**.** List of hosts.

Host species	No. of records
Arachnida: Scorpiones	
Buthus sp.	1
Gastropoda: Stylommatophora	
Granularion lomaensis Van Mol	1
Amphibia: Anura	
Amietia angolensis (Bocage)	2
Amietia fuscigula (Duméril & Bibron)	2
Amietophrynus maculatus Hallowell	1
Heleophryne regis Hewitt	1
Petropedetes natator Boulenger	1
Phrynobatrachus acridoides (Cope)	1
Phrynobatrachus alleni Parker	1
Phrynobatrachus calcaratus (Peters)	1
Phrynobatrachus francisci Boulenger	1
Phrynobatrachus latifrons Ahl	1
Phrynobatrachus minutus (Boulenger)	1
Phrynobatrachus natalensis (Smith)	1
Phrynobatrachus phyllophilus Rödel & Ernst	1
Phrynobatrachus plicatus (Gunther)	1
Phrynobatrachus tokba (Chabanaud)	1
Phrynobatrachus villiersi Guibé	1
Aves: Accipitriformes	
Lophaetus occipitalis (Daudin)	1
Aves: Bucerotiformes	
Ceratogymna atrata (Temminck)	1
Phoeniculus bollei (Hartlaub)	1
Tockus erythrorhynchus (Temminck)	1
Aves: Caprimulgiformes	
Caprimulgus vexillarius (Gould)	2
Aves: Charadriiformes	
Actophilornis africanus (Gmelin)	1
Gallinago media (Latham)	1
Glareola nuchalis Gray	1
Philomachus pugnax (L.)	1
Sterna hirundo L.	1
Vanellus lugubris (Lesson)	1
Vanellus tectus (Boddaert)	1

Appendix 2 (continued)**.** List of hosts.

Host species	No. of records
Aves: Columbiformes	
Streptopelia semitorquata (Rüppell)	1
Aves: Cuculiformes	
Centropus grillii Hartlaub	8
Centropus monachus Rüppell	2
Centropus senegalensis (L.)	4
Centropus superciliosus Hemprich & Ehrenberg	7
Centropus toulou (Statius Muller)	5
Clamator jacobinus (Boddaert)	1
Aves: Galliformes	
Gallus gallus (L.)	3
Gallus gallus bankiva Temminck	1
Meleagris gallopavo L.	1
Numida meleagris (L.)	9
Numida meleagris galeatus Pallas	1
Pternistis bicalcaratus (L.)	4
Pternistis clappertoni (Children & Vigors)	2
Pternistis squamatus (Cassin)	1
Ptilopachus petrosus (Gmelin)	1
Ptilopachus petrosus brehmi Neumann	1
Aves: Otidiformes	
Lissotis melanogaster (Rüppell)	3
Aves: Passeriformes	
Laniarius erythrogaster (Cretzschmar)	1
Luscinia megarhynchos Brehm	1
Mirafra africana Smith	1
Mirafra africana tropicalis Hartert	1
Passer sp.	1
Sporopipes squamifrons (Smith)	1
Turdoides leucopygia (Rüppell)	2
Turdus merula L.	1
Vidua fischeri (Reichenow)	1
Aves: Pelecaniformes	
Ardea cinerea L.	1
Ardeola ralloides (Scopoli)	2
Ixobrychus minutus (L.)	1
Aves: Piciformes	
Dendropicos griseocephalus (Boddaert)	1

Appendix 2 (continued)**.** List of hosts.

Host species	No. of records
Aves: Strigiformes	
Bubo lacteus (Temminck)	1
Aves: Suliformes	
Morus bassanus (L.)	1
Morus capensis (Lichtenstein)	1
Reptilia: Squamata (lizards)	
Acanthocercus atricollis (Smith)	1
Afroedura nivaria (Boulenger)	1
Agama armata Peters	1
Agama hispida (Kaup)	1
Agama impalearis (Boettger)	5
Broadleysaurus major (Duméril)	1
Chondrodactylus bibronii (Smith)	1
Chondrodactylus fitzsimonsi (Loveridge)	2
Chondrodactylus turneri (Gray)	1
Cryptoblepharus africanus (Sternfeld)	1
Gerrhosaurus flavigularis Wiegmann	2
Gerrhosaurus typicus (Smith)	1
Lepidothyris fernandi (Burton)	1
Matobosaurus validus (Smith)	1
Meroles squamulosus (Peters)	2
Mesalina guttulata (Lichtenstein)	1
Mochlus sundevalli (Smith)	2
Pachydactylus bicolor Hewitt	1
Pachydactylus laevigatus Fischer	2
Pedioplanis lineoocellata (Duméril & Bibron)	1
Pedioplanis lineoocellata pulchella (Gray)	2
Platysaurus guttatus Smith	2
Platysaurus intermedius rhodesianus Fitzsimons	2
Podarcis muralis (Laurenti)	1
Psammodromus algirus (L.)	3
Pseudocordylus spinosus Fitzsimons	2
Pseudocordylus subviridis (Smith)	6
Rhoptropus afer Peters	1
Rhoptropus barnardi Hewitt	1
Stenodactylus mauritanicus Guichenot	1
Tarentola mauritanica (L.)	4
Tetradactylus seps (L.)	1

Appendix 2 (continued)**.** List of hosts.

Host species	No. of records
Trachylepis maculilabris (Gray)	1
Trachylepis margaritifera (Peters)	5
Trachylepis quinquetaeniata (Lichtenstein)	4
Trachylepis striata (Peters)	6
Trachylepis varia (Peters)	6
Tropidosaura cottrelli (Hewitt)	3
Tropidosaura essexi Hewitt	4
Reptilia: Squamata (snakes)	
Aspidelaps scutatus Smith	1
Boaedon lineatus Duméril, Bibron & Duméril	3
Causus resimus (Peters)	1
Causus rhombeatus (Lichtenstein)	2
Crotaphopeltis hotamboeia (Laurenti)	1
Dendroaspis angusticeps (Smith)	1
Dendroaspis viridis (Hallowell)	1
Elapsoidea sundevallii Smith	1
Naja melanoleuca Hallowell	2
Psammophis sibilans (L.)	1
Pseudaspis cana (L.)	1
Vipera sp.	1
Mammalia: Afrosoricida	
Amblysomus hottentotus longiceps (Broom)	1
Chrysochloris stuhlmanni Matschie	3
Micropotamogale ruwenzorii (de Witte & Frechkop)	2
Potamogale velox (Du Chaillu)	7
Mammalia: Artiodactyla	
Neotragus pygmaeus (L.)	1
Ovis aries L.	1
Phacochoerus aethiopicus (Pallas)	1
Raphicerus campestris (Thunberg)	1
Mammalia: Carnivora	
Atilax paludinosus (G.[Baron] Cuvier)	2
Canis lupus familiaris L.	3
Cynictis penicillata (G.[Baron] Cuvier)	2
Cynictis penicillata ogilbyii (A. Smith)	1
Felis catus L.	2
Felis silvestris lybica Forster	1
Felis silvestris ugandae Schwann	1

Appendix 2 (continued)**.** List of hosts.

Host species	No. of records
Galerella sanguinea (Rüppell)	1
Genetta genetta felina (Thunberg)	1
Genetta thierryi Matschie	1
Genetta tigrina (Schreber)	1
Herpestes ichneumon cafra (Gmelin)	1
Ichneumia albicauda (G.[Baron] Cuvier)	1
Leptailurus serval (Schreber)	2
Mustela nivalis numidica Pucheran	3
Nandinia binotata (Gray)	2
Vulpes pallida (Cretzschmar)	1
Mammalia: Chiroptera	
Cardioderma cor (Peters)	1
Chaerephon pumilus (Cretzschmar)	1
Epomophorus wahlbergi (Sundevall)	2
Hipposideros caffer (Sundevall)	13
Hipposideros ruber (Noack)	1
Hipposideros ruber ruber (Noack)	12
Lissonycteris angolensis (Bocage)	3
Lissonycteris angolensis smithii Thomas	1
Miniopterus fraterculus Thomas & Schwann	1
Miniopterus schreibersii (Kuhl)	1
Mops condylurus (A. Smith)	2
Myotis goudoti (A. Smith)	1
Myotis tricolor (Temminck)	1
Nycteris hispida (Schreber)	1
Nycteris macrotis Dobson	1
Nycteris thebaica E. Geoffroy	2
Nycteris thebaica capensis (A. Smith)	1
Nycteris thebaica damarensis Peters	1
Otomops martiensseni (Matschie)	1
Rhinolophus clivosus Cretzschmar	1
Rhinolophus clivosus zuluensis K. Andersen	2
Rhinolophus eloquens K. Andersen	1
Rhinolophus ferrumequinum (Schreber)	1
Rhinolophus hildebrandtii Peters	1
Rhinopoma hardwickii cystops Thomas	1
Rousettus aegyptiacus (E. Geoffroy)	1
Scotophilus leucogaster leucogaster (Cretzschmar)	2
Scotophilus nigrita (Schreber)	1

Appendix 2 (continued)**.** List of hosts.

Host species	No. of records
Tadarida aegyptiaca bocagei Seabra	1
Triaenops persicus afer Peters	2
Mammalia: Erinaceomorpha	
Atelerix albiventris (Wagner)	2
Mammalia: Hyracoidea	
Dendrohyrax arboreus (A. Smith)	4
Heterohyrax brucei (Gray)	2
Procavia capensis (Pallas)	9
Procavia capensis habessinicus (Hemprich & Ehrenberg)	3
Procavia capensis ruficeps (Hemprich & Ehrenberg)	5
Procavia capensis syriacus (Schreber)	1
Mammalia: Lagomorpha	
Lepus microtis Heuglin	1
Lepus saxatilis F. Cuvier	1
Oryctolagus cuniculus (L.)	7
Mammalia: Macroscelidea	
Elephantulus brachyrhynchus (A. Smith)	8
Elephantulus fuscipes (Thomas)	3
Elephantulus intufi (A. Smith)	1
Elephantulus myurus Thomas & Schwann	1
Elephantulus rozeti (Duvernoy)	2
Elephantulus rufescens (Peters)	1
Elephantulus rupestris (A. Smith)	1
Petrodromus tetradactylus Peters	1
Petrodromus tetradactylus sultani Thomas	1
Petrodromus tetradactylus tordayi Thomas	1
Mammalia: Perissodactyla	
Equus burchellii (Gray)	1
Mammalia: Pholidota	
Manis tricuspis Rafinesque	1
Mammalia: Primates	
Allenopithecus nigroviridis (Pocock)	1
Cercopithecus mitis Wolf	2
Chlorocebus aethiops (L.)	4
Chlorocebus pygerythrus (F. Cuvier)	1
Chlorocebus sabaeus (L.)	5
Erythrocebus patas (Schreber)	2

Appendix 2 (continued)**.** List of hosts.

Host species	No. of records
Galago senegalensis É. Geoffroy	3
Galago zanzibaricus Matschie	1
Homo sapiens L.	2
Otolemur crassicaudatus (É. Geoffroy)	2
Otolemur garnettii (Ogilby)	4
Papio papio (Desmarest)	1
Perodicticus potto ibeanus Thomas	2
Mammalia: Rodentia: Muridae	
Acomys dimidiatus (Cretzschmar)	1
Aethomys bocagei (Thomas)	1
Aethomys chrysophilus (de Winton)	2
Aethomys kaiseri (Noack)	4
Aethomys medicatus Wroughton	5
Aethomys nyikae (Thomas)	1
Apodemus sylvaticus (L.)	6
Arvicanthis abyssinicus (Rüppell)	13
Arvicanthis niloticus (É. Geoffroy)	19
Arvicanthis rufinus (Temminck)	3
Colomys goslingi Thomas & Wroughton	2
Dasymys incomtus (Sundevall)	27
Deomys ferrugineus Thomas	1
Dipodillus campestris (Loche)	5
Dipodillus simoni Lataste	1
Gerbilliscus afra (Gray)	2
Gerbilliscus boehmi (Noack)	1
Gerbilliscus brantsii (Smith)	1
Gerbilliscus leucogaster (Peters)	2
Gerbilliscus validus (Bocage)	1
Gerbillus gerbillus (Olivier)	1
Gerbillus nanus Blanford	1
Grammomys dolichurus (Smuts)	10
Grammomys dryas (Thomas)	1
Grammomys poensis (Eisentraut)	2
Lemniscomys barbarus (L.)	10
Lemniscomys griselda (Thomas)	1
Lemniscomys striatus (L.)	16
Lophuromys ansorgei De Winton	1
Lophuromys aquilus (True)	16
Lophuromys flavopunctatus Thomas	9

Appendix 2 (continued)**.** List of hosts.

Host species	No. of records
Lophuromys sikapusi (Temminck)	14
Malacomys longipes Milne-Edwards	2
Mastomys coucha (Smith)	17
Mastomys erythroleucus (Temminck)	2
Mastomys natalensis (Smith)	26
Meriones libycus Lichtenstein	4
Meriones shawi (Duvernoy)	1
Micaelamys namaquensis (A. Smith)	7
Mus (Nannomys) sp.	3
Mus minutoides Smith	1
Mus musculoides Temminck	1
Mus musculus L.	1
Mus spicilegus Petényi	3
Mus spretus Lataste	4
Mus triton (Thomas)	4
Mylomys dybowskii (Pousargues)	5
Oenomys hypoxanthus (Pucheran)	23
Otomys anchietae (Bocage)	1
Otomys angoniensis Wroughton	5
Otomys irroratus (Brants)	16
Otomys tropicalis Thomas	7
Pelomys fallax (Peters)	10
Pelomys minor Cabrera & Ruxton	1
Praomys daltoni (Thomas)	1
Praomys jacksoni (de Winton)	13
Praomys morio (Trouessart)	4
Praomys tullbergi (Thomas)	8
Rattus norvegicus (Berkenhout)	1
Rattus rattus (L.)	27
Rhabdomys dilectus (De Winton)	1
Rhabdomys pumilio (Sparrman)	3
Stochomys longicaudatus (Tullberg)	2
Taterillus emini (Thomas)	2
Mammalia: Rodentia: Anomaluridae	
Anomalurus derbianus (Gray)	3
Anomalurus pusillus Thomas	1
Mammalia: Rodentia: Bathyergidae	
Cryptomys darlingi (Roberts)	1
Cryptomys hottentotus (Lesson)	3

Appendix 2 (continued)**.** List of hosts.

Host species	No. of records
Heterocephalus glaber Rüppell	2
Mammalia: Rodentia: Gliridae	
Eliomys munbyanus (Pomel)	5
Graphiurus murinus (Desmarest)	13
Mammalia: Rodentia: Hystricidae	
Atherurus africanus Gray	6
Mammalia: Rodentia: Nesomyidae	
Cricetomys ansorgei Thomas	2
Cricetomys emini Wroughton	7
Cricetomys gambianus Waterhouse	10
Dendromus melanotis (Smith)	1
Dendromus mesomelas (Brants)	1
Dendromus mystacalis (Heuglin)	2
Saccostomus campestris Peters	4
Steatomys pratensis Peters	1
Mammalia: Rodentia: Sciuridae	
Funisciurus anerythrus (Thomas)	1
Funisciurus bayonii (Bocage)	5
Funisciurus isabella (Gray)	2
Funisciurus leucogenys auriculatus (Matschie)	1
Funisciurus leucogenys oliviae (Dollman)	1
Funisciurus pyrrhopus (F. Cuvier)	1
Heliosciurus gambianus (Ogilby)	1
Heliosciurus gambianus rhodesiae (Wroughton)	5
Heliosciurus rufobrachium (Waterhouse)	2
Heliosciurus rufobrachium brauni St. Leger	1
Paraxerus boehmi (Reichenow)	1
Paraxerus boehmi emini (Stuhlman)	2
Paraxerus cepapi (A. Smith)	1
Paraxerus cepapi quotus Wroughton	4
Sciurus sp.	2
Xerus erythropus (E. Geoffroy)	2
Xerus inauris (Zimmermann)	1
Mammalia: Rodentia: Spalacidae	
Tachyoryctes ruandae Lönnberg & Gyldenstolpe	2
Tachyoryctes splendens (Rüppell)	2
Mammalia: Rodentia: Thryonomyidae	
Thryonomys swinderianus (Temminck)	1

Appendix 2 (continued)**.** List of hosts.

Host species	No. of records
Mammalia: Soricomorpha	
Crocidura flavescens (I. Geoffroy)	4
Crocidura fuscomurina (Heuglin)	3
Crocidura ichnusae Festa	2
Crocidura olivieri kivu Osgood	1
Crocidura olivieri occidentalis (Pucheran)	7
Crocidura russula (Hermann)	1
Crocidura suaveolens (Pallas)	3
Myosorex varius (Smuts)	2