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Callipodida (Diplopoda) in the
Natural History Museum in Vienna**

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Catalogue front cover: *Eurygyrus bilselii* (VERHOEFF, 1940)
"creeping" over a jar with *Dischizopetalum illyricum* (Latzel, 1884).

Type specimens of the order Callipodida (Diplopoda) in the Natural History Museum in Vienna

Verena Stagl¹, Pavel Stoev²

Abstract

This paper reviews the type specimens of the order Callipodida (Diplopoda) in the collection of the Natural History Museum in Vienna. The collection comprises type material representing 39 (sub)species and 3 varieties belonging to four families: Callipodidae (4), Schizopetalidae (33), Dorypetalidae (2) and Caspiopetalidae (3). The types were established by Karl W. Verhoeff (18), Carl Attems (17), Robert Latzel (5) and one each by Ludwig Koch and Sergei Golovatch, and they originate from the following countries of Europe and Asia (listed in alphabetical order): Albania (3), Bosnia and Herzegovina (5), Croatia (7), Greece (7), Italy (7), India (1), Iran (2), Portugal (1), Romania (1), Serbia (2), Syria (1) and Turkey (7). Information on the current status is included, very often along with remarks on the history of acquisition of individual lots and the possible ambiguities of type identification. The study revealed the following synonyms: *Callipus foetidissimus* (SAVI, 1819) = *Aulocosoma compactile* ATTEMES, 1894, and *Callipus* RISSO, 1826 = *Aulocosoma* ATTEMES, 1894, both syn. n. The status of two unpublished manuscript names is clarified. *Balkanopetalum bulgaricum*, described from SW Bulgaria, is reported in northern Greece for the first time. A list of all species of Callipodida preserved in the museum is also provided.

Zusammenfassung

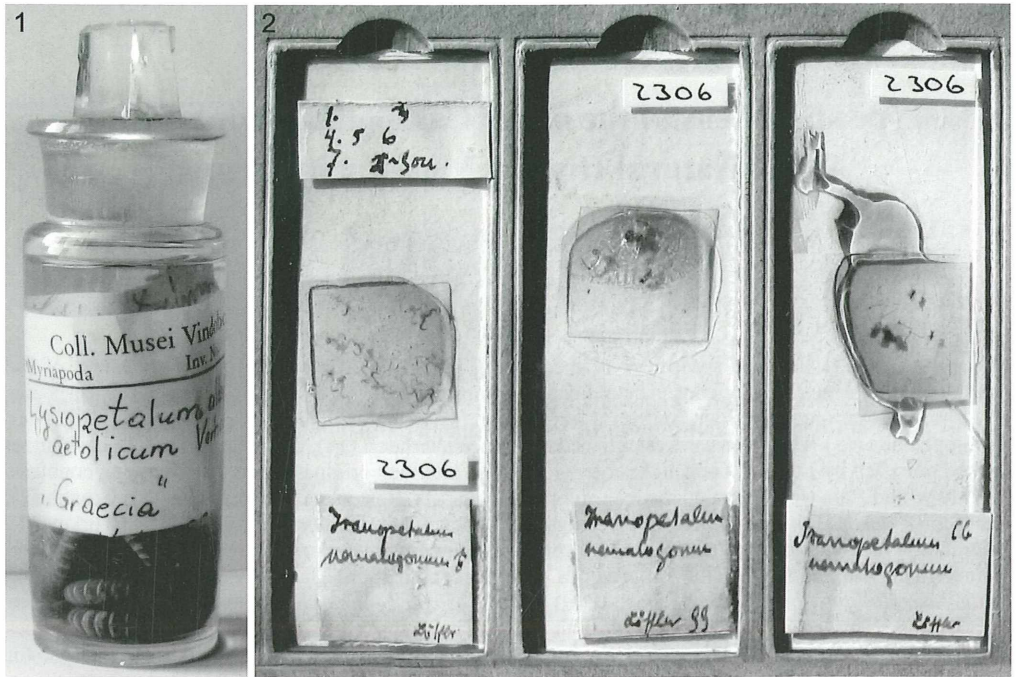
Der vorliegende Typenkatalog behandelt die in der Myriapoda Sammlung des Naturhistorischen Museums in Wien (NHMW) vorhandenen Typenserien der Callipodida (Diplopoda). Typusexemplare von 39 Arten bzw. Unterarten und 3 Varietäten der Familien Callipodidae (4), Schizopetalidae (33), Dorypetalidae (2) und Caspiopetalidae (3) werden aufgelistet. Die Typen stammen von Beschreibungen durch Karl W. Verhoeff (18), Carl Attems (17), Robert Latzel (5) und je einer durch Ludwig Koch und Sergei Golovatch. Die Typenlokalitäten sind (in alphabetischer Reihenfolge): Albanien (3), Bosnien und Herzegovina (5), Kroatien (7), Griechenland (7), Italien (7), Indien (1), Iran (2), Portugal (1), Rumänien (1), Serbien (2), Syrien (1) und die Türkei (7). Die Liste der Arten beinhaltet auch Informationen über den aktuellen Stand der Nomenklatur, der Typenkategorie, der Familienzugehörigkeit und gegebenenfalls auch nähere Angaben über die Akquisitionen der einzelnen Serien und Kommentare zu Unklarheiten. Folgende Synonyme wurden neu etabliert: *Callipus foetidissimus* (SAVI, 1819) = *Aulocosoma compactile* ATTEMES, 1894 syn.n. und *Callipus* RISSO, 1826 = *Aulocosoma* ATTEMES, 1894 syn.n. Der Status zweier unpublizierter Manuskriptnamen konnte geklärt werden. *Balkanopetalum bulgaricum*, beschrieben von SW Bulgarien, konnte erstmalig auch von N-Griechenland nachgewiesen werden. Im Anhang findet sich eine Liste aller im NHMW vorhandenen Callipodida - Arten.

Introduction

Millipedes (class Diplopoda) are widespread terrestrial animals playing important roles in soil formation processes (e.g., MIKHALJOVA 2004). Approximately 11,000 species

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Figs. 1, 2: (Fig. 1) *Acanthopetalum albidicolle aetolicum* (VERHOEFF, 1903) (NHMW 4380). (Fig. 2) *Bollmania nematogona* (ATTEMS, 1951) (NHMW 2306)

are currently known in the world, and at least 50,000 others are still expected to be discovered (MINELLI & GOLOVATCH 2001).

The Natural History Museum in Vienna (NHMW), as one of the globe's most important natural history museums, houses a high number of type specimens. Its myriapod holdings comprise the old museum collection put together in the mid-19th century, the private collection of Carl Attems, and a variety of further acquisitions. The most significant are the purchases of the Robert Latzel and Karl W. Verhoeff collections.

Carl Attems (1868-1952), one of the most distinguished scientists in the history of myriapodology, was active in the NHMW for nearly sixty years (STAGL 2001). His scientific work gave the museum's myriapod collection its great significance. In 1884, another remarkable myriapodologist, **Robert Latzel** (1845-1919), sold a part of his collection comprising 125 series with 1098 specimens. After his death in 1919, the museum obtained the remaining part (420 series and 7000 specimens) from his legatees. The third significant contributor was **Karl Wilhelm Verhoeff** (1867-1945), who sold type and voucher specimens to the NHMW in 1896, 1897, 1899, 1908, 1909, and 1940. Furthermore, in 1935 the museum obtained numerous myriapods from him by exchange.

At present, the **Callipodida** collection of the NHMW comprises approximately 70 species-group taxa, 42 of which are represented by type specimens. The catalogue summarizes data concerning 34 species, 5 subspecies and 3 varieties (arranged alphabetically) belonging to the following four families: Callipodidae (4),

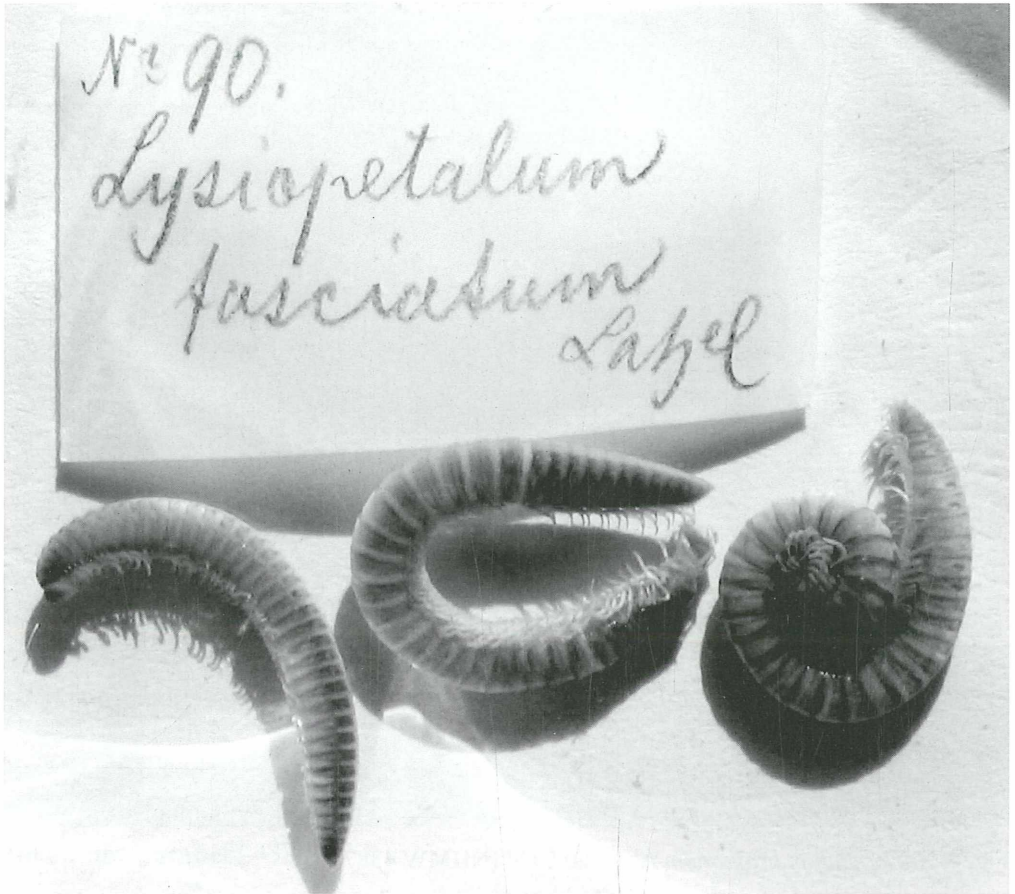


Fig. 3: *Callipodella fasciata* (LATZEL, 1884) (NHMW 4384)

Schizopetalidae (33), Dorypetalidae (2) and Caspiopetalidae (3). Moreover, we have found two lots (listed separately) of species considered by different authors as being new but that were never published. These specimens have been allotted preliminary names (unpublished manuscript names), which are currently of no value from a nomenclatural viewpoint. Most of the specimens are stored in glass tubes and preserved in 75% ethanol (Fig. 1). Some of them were dissected by Attems, with parts mounted on slides (Fig. 2). Eighteen types were established by Verhoeff, 17 by Attems, 5 by Latzel, and 1 each by Ludwig Koch and Sergei Golovatch. These proportions are atypical when viewing the whole type collection of Myriapoda in the NHMW, where the types of Attems generally strongly dominate over those of the other authors.

It is also noteworthy that Latzel did not specify localities, neither in the original descriptions nor on the labels in the jars (Fig. 3). He gave only general data about the regions from which the species were collected, for instance "österreichischen Küstenlande, Kärnten, Niederösterreich". Only in the book of acquisitions for 1884 is information on the exact localities provided, written in red ink by Latzel himself (STAGL 2001, STAGL & MILDNER 2001). The vials that Verhoeff sold to the museum



Fig. 4: *Antropetalum brazzanum* ATTEMS, 1927 (NHMW 4387)

always contained labels written in pencil by him personally. The exact type locality of the specimen is very rarely mentioned. Usually, Attems indicated it later on while re-writing Verhoeff's original label. Attems' handwriting is often difficult to decipher, especially in his card index. His labels always comprised detailed information about the species name, locality, collector and often the date of collecting (Fig. 4), but never the number of specimens in the lot. The actual type status of the material was very rarely noted.

The following information is given here for the type(s) of each of the (sub)species and varieties listed in the catalogue:

- Species' name with reference to the original publication, including exact pages containing the description and the figure numbers when illustrated. For practical reasons, the papers of Attems and Verhoeff are listed according to the numbers assigned in their bibliographies prepared by STROUHAL (1961) and MAUERMAYER (1962), respectively, in the following way: number of publication according to the relevant bibliography, slash (/), and exact page numbers;
- Current taxonomic status with relevant references;
- Family attribution;

- Type category (holo-, para-, syntype), number and sex of the specimens – males (♂♂), females (♀♀), subadults (subad.), juveniles (juv.) – for specimens preserved in alcohol and/or mounted on slides. Mention is given to whether the specimens are intact, broken into pieces, or when parts of their torsos are missing (frgm.). The name of the type locality (in English spelling), the collector (coll.), donator (don.) and the date of collecting are given in square brackets. Occasionally, data from the original label are indicated in parentheses. The different type series, e.g. a), b), c) are separated by a hyphen (-);
- Inventory number/s. Usually, the inventory numbers are also supplemented (in square brackets) by numbers of the acquisition from the main collection. In the books of acquisition the lots are listed in chronological order, indicated by Roman numerals, while the single series are indicated by Arabic numerals. Listed here are all the lots included in the collection by donation, purchase or exchange;
- Notes if necessary.

Catalogue of the type specimens

aetolicum VERHOEFF

Lysiopetalum albidicolle aetolicum VERHOEFF, 1903 (209/147, Taf. IV, Abb. 1-2)

Current status: uncertain, preliminary *Acanthopetalum albidicolle aetolicum* (VERHOEFF, 1903)

Family: Schizopetalidae

Syntypes: 2 intact ♂♂, 2 intact ♀♀ [Greece (Graecia), don. K.W. Verhoeff]

Inventory number: 4380

Notes: Verhoeff's original label in the jar indicates only the species name without any hint concerning the locality. Attems' label adds only "Graecia" Syntypes of this subspecies are preserved also in the Zoologischen Museums Berlin (ZMB, MORITZ & FISCHER 1974).

africana ATTEMS

Brölemannia africana ATTEMS, 1927 (64/108, Figs. 112-113)

Current status: uncertain, but very likely junior synonym of *E. turcicus* (VERHOEFF, 1898), now *Eurgyrus africanus* (ATTEMS, 1927), see HOFFMAN & LOHMANDER (1964)

Family: Schizopetalidae

Holotype: 1 ♂ broken into many pieces, gonopods in separate microtube [Senaar, coll. don. Th. Kotschy]

Inventory number: 2299 [Acquisition 1866.I.65 or 1866.I.169]

Notes: ATTEMS (1927) described *E. africana* from Senaar in Sudan, a quite unexpected find situated far away from the mostly Anatolian area of the genus. As shown later by HOFFMAN & LOHMANDER (1964), *E. africanus* and *E. turcicus* actually occur in the

region of the Toros Mountains (Cilicischer Taurus) in Turkey, where they were re-discovered by Curt Kosswig. The authors called into doubt whether the type material really came from Africa and speculated that the name Senaar has also been applied to Babylon, as the material could have been collected by Viennese archaeologists somewhere along the Turkish coast on their way to Mesopotamia. Based on new evidence, we arrived at another, more probable, interpretation for the "African" root of the species. Theodor Kotschy, an Austrian naturalist (botanist) who undertook several expeditions to Turkey, the Near East, Egypt and Sudan between 1836 and 1839, found the new species. He collected much material for the so-called k.k. Zoologische Hof-Cabinet – the institution preceding today's museum – and became a curator there in 1847. Kotschys' material was very likely mixed up and the jars with the labels interchanged. In the book of acquisition under the number 1866.I.169 there is an entry "*Eurygurus* Kotschy Taurus", which suits the specimen much better than the label "*Julus* sp. Kotschy Senaar" numbered 1866.I.65. Most probably the same happened to the material of *E. asiaeminoris* labeled "Senaar" (ATTEMS 1927). In conclusion, there are currently no reliable records for the occurrence of genus *Eurygurus* in Africa.

albanicum VERHOEFF

Lysipetalum albanicum VERHOEFF, 1932 (448/480, Taf. IV, Figs. 4-6)

Current status: junior synonym of *Acanthopetalum* (*Petalysium*) *carinatum* (BRANDT, 1840), see MAURIÈS et al. (1997)

Family: Schizopetalidae

Syntype: 1 intact adult ♂ [Albania, don. K.W.Verhoeff 1.7.1940]

Inventory number: 4374

Notes: although being labeled only "Albanien", our material most likely belongs to the type series comprising three males, two females and two juveniles collected from the Korab Mts., two juveniles from Jablanica Mts. and probably also two juveniles from the Shar Planina Mts. (cf. VERHOEFF 1932). In addition to the Viennese types, one syntype female is preserved also in the ZMB (MORITZ & FISCHER 1974).

albidicolle VERHOEFF

Lysipetalum (*Acanthopetalum*) *albidicolle* VERHOEFF, 1900 (170/55, Taf. IX, Figs. 38-39)

Current status: valid species, now *Acanthopetalum albidicolle* (VERHOEFF, 1900)

Family: Schizopetalidae

Syntypes: 1 adult ♂, 1 ♀, 1 juv., all broken into pieces; male gonopods undissected [Greece, Corfu, don. K.W. Verhoeff]

Inventory number: 2106

Notes: in the original description, Verhoeff did not specify the exact number of specimens available to him. Further syntypes are preserved in the ZMB (MORITZ & FISCHER 1974).

***alternans* VERHOEFF**

Lysioptalum alternans VERHOEFF, 1893 (54/167)

Current status: valid, now *Lusitanipus alternans* (VERHOEFF, 1893), see MAURIÈS (1978)

Family: Dorypetalidae

Syntypes: 2 intact ♀♀ [Portugal, coll. don. K.W. Verhoeff]

Inventory number: 2111 [Acquisition 1896.I.34]

Note: one syntype female is preserved also in the Zoological Museum in Hamburg (WEIDNER 1960).

***anceps* LATZEL**

Lysioptalum anceps LATZEL, 1884: 232

Current status: junior synonym of *Acanthopetalum richii* (GRAY, 1832), see POCOCK (1893) and JEEKEL (2000b)

Family: Schizopetalidae

Syntypes: a) 1 adult ♂ broken into two pieces [Italy, Trieste coll. R. Latzel or E. Haase, don. R. Latzel]; - b) 2 adult ♀♀ broken into many pieces ["österreichischen Küstenlande" coll. R. Latzel or E. Haase, don. R. Latzel]

Inventory number: a) 2100 [Acquisition 1886.I.91]; - b) 4373 [Acquisition 1919]

Notes: in Latzel's monograph (1884), Trieste was not mentioned as a type locality of *L. anceps*. This information is present only in the NHMW acquisition books (see Introduction).

***argolicum* VERHOEFF**

Lysioptalum (Acanthopetalum) argolicum VERHOEFF, 1900 (170/57, Taf. IX, Figs. 40-41)

Current status: junior synonym of *Acanthopetalum richii* (GRAY, 1832), see STRASSER (1970) and JEEKEL (2000b)

Family: Schizopetalidae

Syntype: 1 adult ♂ broken into three pieces, gonopods undissected [Greece, Peloponnese, coll. don. K.W. Verhoeff]

Inventory number: 2107

Notes: in the original description, Verhoeff did not specify the exact number of specimens available to him. Slides of other syntype specimens from Larisa and Tripoliza are preserved in the ZMB (MORITZ & FISCHER 1974).

***brazzanum* ATTEMS**

Antropetalum brazzanum ATTEMS, 1927 (64/114, Figs. 122-124)

Current status: valid species

Family: Schizopetalidae

Syntypes: a) 2 adult ♂♂ with dissected gonopods in separate microtubes, 1 juv. [Dalmatia, Brazza Island, Cave II near Milna, 23.07.1912, coll. Raab & Wettstein], two slides of leg-pairs 6-9; - b) 4 adult ♀♀, 1 subad. ♀ [Brazza Island, cave I near Milna, 22.07.1912, coll. Raab & Wettstein] (Fig. 4); - c) 5 adult ♀♀, one of them mounted in a special glass cylinder for an exhibition [Cave near Nerezišće (Neresi), 20.07.1912, coll. Raab & Wettstein]

Inventory number: a) 2304; - b) 4387; - c) 4388

Note: the status of this species will be considered in a forthcoming revision of the tribe Apfelbeckiini (STOEV, ENGHOF & HOFFMAN in progress).

byzantinum VERHOEFF

Lysipetalum (*Brölemannia*) *byzantinum* VERHOEFF, 1896 (121/14, Figs. XIV-XVI)

Current status: junior synonym of *Eurygyrus rufolineatus* C.L. Koch, 1847, see HOFFMAN & LOHMANDER (1964) and HOFFMAN (1972)

Family: Schizopetalidae

Syntypes: 1 adult broken ♀, 1 juv. [Turkey, Istanbul/Üsküdar (Scutari), coll. K. Escherich, don. K.W. Verhoeff]

Inventory number: 4419 [Acquisition 1896.I.51]

camaldulense ATTEMS

Lysipetalum (*Callipodella*) *camaldulense* ATTEMS, 1903 (24/131, Taf. 9, Figs. 34-36)

Current status: junior synonym of *Callipodella vinciguerrae* (SILVESTRI, 1894), see STRASSER & MINELLI (1984)

Family: Schizopetalidae

Syntypes: 4 ♂♂, 6 ♀♀ all intact, 1 frgm.; two slides of gonopods and legs 1-10 [Italy, Camaldoli, Naples (between dead leaves), coll. don. C. Attems]

Inventory number: 4378

cognatum LATZEL

Lysipetalum cognatum LATZEL, 1884: 234

Current status: uncertain

Family: Schizopetalidae

Holotype? and voucher material: a) 1 slide with leg-pairs 7-9; - b) 1 adult intact ♀ and 1 ♀ broken into pieces, 1 dissected ♂, gonopods in separate microtube [Dalmatia, Bosnia, don. R. Latzel 1919]

Inventory number: a) 3990; - b) 4382

Notes: for the original description, Latzel had at his disposal only one female collected in Ragusa by Rudolph von Fischer-Benzon. Later, he received for study additional material collected at Celebic (Bosnia) by Justyn Karlinski (LATZEL 1888). As usual, Latzel did not specify the exact localities on the labels in the collection, mentioning only "Dalmatia, Bosnia". He probably mixed the female holotype with the specimens from the Karlinski collection. Attems made the slide later.

comma VERHOEFF

Lysiopetalum (Lysiopetalum) comma VERHOEFF, 1900 (170/58, Taf. 9, Figs. 30-33)

Current status: junior synonym of *Acanthopetalum (Petalsium) carinatum* (BRANDT, 1840), see MAURIÈS et al. (1997)

Family: Schizopetalidae

Syntypes: 1 adult ♂, 1 ♀, 1 juv., all intact [Greece, Corfu, coll. don. K.W. Verhoeff]

Inventory number: 2103

Notes: in the original description, Verhoeff did not specify the exact number of available specimens. Two slides of another syntype specimen are preserved in the ZMB (MORITZ & FISCHER 1974).

compactile ATTEMS

Aulocosoma compactile ATTEMS, 1894 (in SCHNEIDER 1893: 57-58, not mentioned in STROUHAL 1961)

Current status: junior synonym of *Callipus foetidissimus* (SAVI, 1819) **syn. n.**, also genus *Aulocosoma* ATTEMS, 1894 = genus *Callipus* RISSO, 1826 **syn. n.** *A. compactile* is certainly based on a juvenile specimen of *C. foetidissimus*. The type has 28 pleurotergites and 6 ocelli arranged in three rows, which characterizes the third stage of the species, see NGUYEN DUY-JACQUEMIN (1976). Consequently, we confirm the suspicion of JEEKEL (2000a), although he, certainly by mistake, referred to *Callipus rissonius* (SAVI, 1819) instead of *C. foetidissimus*. *Callipus rissonius* was described by LEACH, 1826, not by SAVI (1819), see JEEKEL (1971: 96), and is considered as a junior synonym of *C. foetidissimus*. ATTEMS (1895) used the genus name again, but misspelled it as *Aulacosoma*, which is to be regarded as an incorrect subsequent spelling without status in nomenclature, see JEEKEL (2000a).

Family: Callipodidae

Holotype: 1 juv. [Italy, San Remo, coll. don. O. Schneider] (Fig. 5)

Inventory number: 4390 [Acquisition 1892.I.14]

Notes: *Aulocosoma compactile* is undoubtedly one of the most hidden and uncertain species of all millipedes described by Attems. It was listed between *Craspedosoma rawlinsii* and *Lysiopetalum foetidissimum* without any indication of its proper position in the higher classification of Diplopoda. It has long remained in oblivion and was even missed in STROUHAL's list of Attems' myriapod species (1961), in JEEKEL's "Nomenclator generum et familiarum" (1971) and its addendum (SHELLEY et al. 2000),

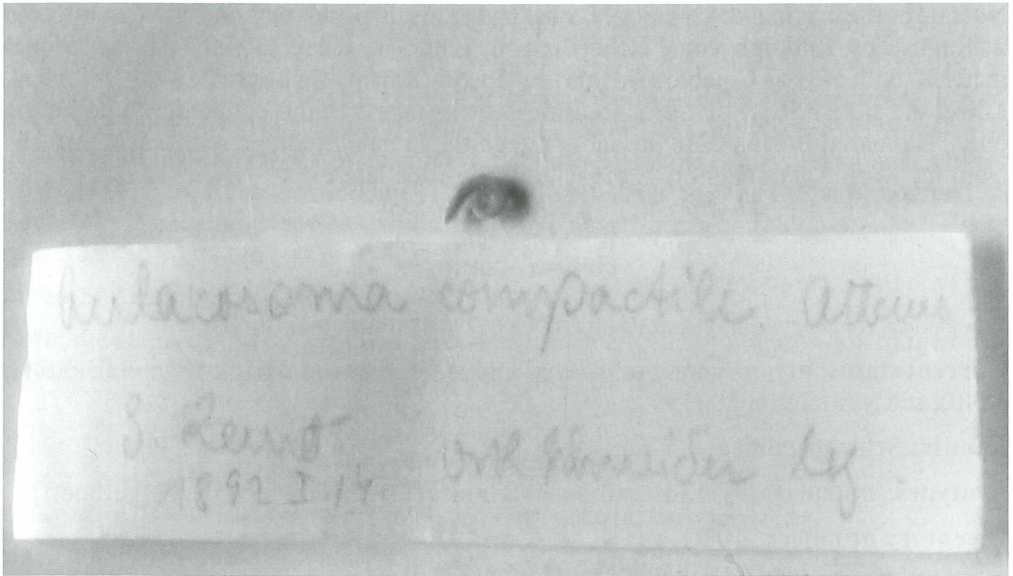


Fig. 5: *Aulocosoma compactile* ATTEMS, 1894, junior synonym of *Callipus foetidissimus* (SAVI, 1819) (NHMW 4390)

as well as in HOFFMAN'S "Classification" (1980). The main reason for these omissions is the fact that its short description in Latin appeared in the general zoological paper of O. SCHNEIDER (1894) "San Remo und seine Thierwelt im Winter"; there, among the other myriapods, the author merely briefly mentioned that this new genus and species were described by Attems in a letter to him. Just recently, JEEKEL (2000a) called our attention to this long-forgotten taxon and considered the problem with its identity, suggesting that it could be based on a juvenile callipodidan. Initially, the type was not found among the Callipodid types of the NHMW and it was also missing among those of Chordeumatida (WIRKNER et al. 2002). It was found by chance among the voucher specimens of *Chordeuma silvestre* C.L. KOCH, 1847, being labeled as such by Karl Koelbel (1834-1896), who was the former curator of the Crustacea, Arachnoidea and Myriapoda collection of the museum. He had examined the specimen prior to Attems and registered it as "*C. silvestre*" in the book of acquisition in 1892. About two years later, Attems, who had been a regular visitor in the Hofmuseum at that time (STAGL 2000), examined the museum's collection and described the new species. He neglected to label it as a type, and only the species' name, written in pencil and quite faded with the years (see Fig. 5), was found in the jar together with Koelbel's label.

degenerans LATZEL

Lysiopetalum degenerans LATZEL, 1884: 218, Taf. IX, Fig. 111; Taf. X, Fig. 112

Current status: valid, now *Dorypetalum degenerans* (Latzel, 1884)

Family: Dorypetalidae

Syntypes: a) 1 adult intact ♂ and ♀; - b) 1 adult intact ♂ and 2 ♀♀, 2 frgm. [Serbia, coll.? don. Latzel]

Inventory number: a) 4383 [Acquisition 1884.I.87]; - b) 4389 [Acquisition 1919]

Notes: in the original description the type locality of this species is indicated as Serbia in its former boundaries. Latzel mentioned that, through Erich Haase, he received for study 10 specimens collected by Bodemeyer and Hopffgarten. In the book of acquisition of 1884 and on the subsequent label of Attems, we found "Serbia" as a type locality for *L. degenerans*, as opposed to Latzel's original label which (as usual) lacked any locality specification. Latzel also wrote that he was unable to find any specimens of *L. degenerans* on the territory of the Austro-Hungarian monarchy, but presumed that it may occur somewhere in southeast Hungary or "Siebenbürgen" (Romania), both adjacent to Serbia. A further five female and one juvenile syntypes from Serbia are preserved in the ZMB (MORITZ & FISCHER 1974).

dorsovittatum VERHOEFF

Lysiopetalum (*Callipodella*) *dorsovittatum* VERHOEFF, 1900 (170/61, Taf. 7, Figs. 8-10)

Current status: valid species, now *Callipodella dorsovittata* (VERHOEFF, 1900)

Family: Schizopetalidae

Syntypes: 2 intact adult ♀♀ [Greece, Corfu, coll. don. Verhoeff]

Inventory number: 2108 [Acquisition 1896.I.30]

Notes: in the original description, Verhoeff did not specify the exact number of available specimens. Syntypes of this species are also preserved in the ZMB (MORITZ & FISCHER 1974).

duplocalca ATTEMS

Apfelbeckia duplocalca ATTEMS, 1951 (130/256), 1959 (138/369, Abb. 143-145)

Current status: uncertain

Family: Schizopetalidae

Syntype: gonopods of 2 ♂♂, adult ♀ broken into two pieces [Bosnia and Herzegovina, Gorodnica Cave, coll. don. K. Absolon]

Inventory number: 2302

Notes: Attems provided a brief description of the species in a paper published in 1951, while the main description supplied with figures appeared nearly seven years after his death in a publication edited by Hans Strouhal. The status of this species will be considered in a forthcoming revision of the tribe Apfelbeckiini (STOEV, ENGHOF & HOFFMAN in progress).

epiroticum ATTEMS

Acanthopetalum argolicum.epiroticum ATTEMS, 1935 (97/151, Abb. 9-10)

Current status: junior synonym of *Acanthopetalum richii* (GRAY, 1832), see STRASSER (1970)

Family: Schizopetalidae

Syntype: 1 heavily macerated ♂, gonopods in separate microtube; slide of gonopods and legs [Greece, Epirus, Paraskevi (Tannenwald oberhalb der Baumgrenze) 1400m (1300m in the original description) 16.06.1933, coll. don. M. Beier]

Inventory number: 2407

fasciatum LATZEL

Lysiopetalum fasciatum LATZEL, 1883: 282, 1884: 225, Taf. IX, Fig. 110

Current status: valid, now *Callipodella fasciata* (Latzel, 1884)

Family: Schizopetalidae

Syntypes: a) 1 adult ♂, 2 ♀♀, all intact [Romania, Baile Herculane (Galiciae et Hungariae superioris montes" cf. LATZEL, 1882; S-Ungarn, Banat, Herkulesbad, cf. Latzel, 1884) coll. R. Latzel; Serbia, don. E. Haase to R. Latzel, don. R. Latzel]; - b) 8 ♂♂, 13 ♀♀, most specimens intact [Serbia, Bosnia, Romania (S-Ungarn, in the original label), coll. R. Latzel? or J. Karlinski? don. R. Latzel] (Fig. 3)

Inventory number: a) 4384 [Acquisition 1884.I.90]; - b) 4385 [Acquisition 1919]

Notes: a) the type locality is not specified in the Latzel's original label, but in the books of acquisition we found the following data: "Banat, Herkulesbad" (now Baile Herculane in Romania) and "Serbia", which are the type localities of the species (LATZEL 1884); - b) this is clearly a mixed lot, as typical for Latzel (see Introduction). The specimens from Serbia and "S-Ungarn" are assumed types, while those from Bosnia may belong to the Karlinski collection (see LATZEL 1888). Further syntypes from Serbia are preserved in the ZMB (MORITZ & FISCHER 1974). The year of publication of the 32nd volume of "Verhandlungen der k. k. zoologisch-botanischen Gesellschaft in Wien" and hence the description of *L. fasciatum* is 1883, not 1882 as perceived by most myriapodologists.

flavipes ATTEMS

Apfelbeckia lendenfeldi var. *flavipes* ATTEMS, 1929 (73/352)

Current status: uncertain

Family: Schizopetalidae

Syntype: 1 adult ♂ broken into pieces, gonopods in separate microtube [Albania, cave in Sildi Mountain near Shkodër (Scutari), leg. Petrovič 30.07.1905, don. Petrovič 1905]

Inventory number: 4367

Note: the taxonomic status of this variety will be considered in a forthcoming revision of the tribe Apfelbeckiini (STOEVE, ENGHOFF & HOFFMAN in progress).

***gracilis* GOLOVATCH**

Bollmania gracilis GOLOVATCH, 1983: 158, Fig. 1-2

Current status: valid species

Family: Caspiopetalidae

Holotype: a) 1 adult ♂, gonopods in separate microtube; - b) **Paratype:** 1 juv. [Iran, river valley 50 km W of Shiraz, under stones, slope with oak bush, coll. G. Pretzmann 04.1970]

Inventory number: a) 1658; - b) 1659

***hamatum* ATTEMS**

Lysipetalum (Acanthopetalum) hamatum ATTEMS, 1903 (24/129, Taf. 8, Figs. 24-27)

Current status: uncertain. A species belonging to the *Acanthopetalum furculigerum* (VERHOEFF, 1901) species-group (cf. STRASSER 1976)

Family: Schizopetalidae

Syntypes: adult intact ♂ and ♀, 1 ♂ broken into pieces; two slides of gonopods and legs 1-7 [Turkey (Kleinasien), coll. don. F. Werner]

Inventory number: 2297

***herzogowinense* VERHOEFF**

Lysipetalum herzogowinense VERHOEFF, 1897 (138/153)

Current status: valid, now *Callipodella herzogowinensis* (VERHOEFF, 1897), see STRASSER (1971)

Family: Schizopetalidae

Holotype?: 1 ♀ [Bosnia and Herzegovina (Hercegowina), coll. don. Verhoeff]

Inventory number: 2113 [Acquisition 1899.III.43]

Notes: Verhoeff described *L. herzogowinense* based on only one female specimen found in Trebinje (Bosnia and Herzegovina) by Viktor Apfelbeck. He sold a female specimen to the Viennese Museum in 1899, specifying only "Hercegowina" on the label. The type status of the Viennese specimen is still uncertain. The same applies to the female specimen housed in the Zoological Museum in Hamburg (WEIDNER 1960), whose exact locality is also unknown. Originally described as *herzogowinensis*, in most (all?) subsequent reports this species was incorrectly spelled "*herzegowinensis*"

***illyricum* LATZEL**

Lysipetalum illyricum LATZEL, 1884: 221, Taf. IX, Figs. 106-109

Current status: valid, now *Dischizopetalum illyricum* (LATZEL, 1884)

Family: Schizopetalidae

Syntypes: a) 4 ♂♂, 4 ♀♀, 1 juv., all intact [the localities specified in the book of acquisition are "Triest and Görz", coll. don R. Latzel]; - b) numerous ♂♂ and ♀♀, most of them broken into pieces ["österreichischen Küstenlande", coll. don. R. Latzel]

Inventory number: a) 2114 [Acquisition 1884.1.88]; - b) 4386 [Acquisition 1919]

Note: syntypes of 1 male, 1 female and 3 juveniles labeled "Triest" are preserved also in the ZMB (MORITZ & FISCHER 1974).

insculptum L. KOCH

Lysiopetalum insculptum L. KOCH, 1867: 893

Current status: uncertain

Family: Schizopetalidae

Syntype?: 1 adult intact ♀ [Dalmatia, coll. don. J. Erber 1861]

Inventory number: 4376 [Acquisition 1866.I.53]

Notes: in the original description, Ludwig Koch did not specify the exact number of specimens available to him. The type status of the material is very doubtful and only supposed based on the fact that his specimens have the same origin as those in the Vienna Museum – collected in Dalmatia by Josef Erber. There is an old label in the jar "*Lysiopetalum insculptum* Dalmatien 1861 Erber", probably written by A. Rogenhofer (1831-1897), curator at that time. In the book of acquisition, only "*Eurygurus* Dalmatia Erber" is mentioned. The status of this poorly known species will be considered in a forthcoming revision of the tribe Apfelbeckiini (STOEV, ENGHOFF & HOFFMAN in progress).

isotropum ATTEMS

Lysiopetalum (Schizopetalum) isotropum ATTEMS, 1903 (24/130, Taf. 8, Fig. 28; Taf. 9, Figs. 29-33)

Current status: valid species, now *Prolysiopetalum isotropum* (ATTEMS, 1903), see HOFFMAN & LOHMANDER (1964) and HOFFMAN (1972)

Family: Schizopetalidae

Syntypes: ♂ and ♀ broken into pieces; two slides of gonopods and legs 1-8 [Turkey, Ayassoluk (Ajassoluk), coll. don. F. Werner]

Inventory number: 2296

Note: according to HOFFMAN & LOHMANDER (1964) the type locality is part of the ancient city of Ephesus in the province of Lydia.

kerkanum ATTEMS

Callipodella (Micropodella) mostarense kerkanum VERHOEFF 1929 (419/643, Taf. VII, Figs. 41-43)

Current status: uncertain, preliminary *Callipodella (Micropodella) mostarense kerkana* VERHOEFF, 1929, see STRASSER (1971)

Family: Schizopetalidae

Syntypes: 2 ♂♂, 1 ♀, all intact [Dalmatia, coll. K.W. Verhoeff, don. K.W. Verhoeff 01.07.1940]

Inventory number: 4379

Notes: the description of *C. mostarensis kerkana* was based on 30 males, 30 females and 16 juveniles from Knin and Split, Dalmatia. The Viennese material is labeled only "Dalmatia", but it is clearly part of the type series. Further syntypes from Dalmatia are preserved in the ZMB (MORITZ & FISCHER 1974).

kervillei ATTEMS

Lysipetalum (Brölemannia) Kervillei ATTEMS, 1911 (45/63), 1926 (62/252, Pl. XXX, Figs. 27-31)

Current status: junior synonym of *Eurygyrus phoeniceus phoeniceus* (VERHOEFF, 1900), see HOFFMAN & LOHMANDER (1964)

Family: Schizopetalidae

Syntypes: adult intact ♂ and ♀, 1 adult ♂ broken into two pieces, gonopods of two males and legs in separate microtube [Syria, Berzé near Damas, under stones, coll. H. Gadeau de Kerville 1908, don. H. Gadeau de Kerville]

Inventory number: 2300

koelbeli VERHOEFF

Lysipetalum Koelbeli VERHOEFF, 1895 (99/207)

Current status: valid species, now *Schizopetalum koelbeli* (VERHOEFF, 1895), see VERHOEFF (1900)

Family: Schizopetalidae

Syntypes: 2 intact ♂♂, 1 intact ♀, 1 ♀ broken into pieces, 3 juv. [Croatia, Rijeka (Fiume) coll. don. K.W. Verhoeff]

Inventory number: 2110 [Acquisition 1896.I.33]

Notes: Verhoeff described *L. koelbeli* based on two males and two females that he collected in Fiume. In the book of acquisition, only one female is mentioned, so most likely the other specimens were later added to the tube. Indirect supported that one of the specimens (a female) in the collection is part of the syntype series is the fact that this species was named after Karl Koelbel – curator in the Vienna Museum at that time. One male syntype is also preserved in the ZMB (MORITZ & FISCHER 1974), three further specimens (their sex unknown) in the Zoological Museum in Hamburg (WEIDNER 1960).

kohalana ATTEMS

Apatidea kohalana ATTEMS, 1936 (100/249, Figs. 54-56)

Current status: valid species, now *Bollmania kohalana* (ATTEMS, 1936), see JEEKEL (1955)

Family: Caspiopetalidae

Syntypes: 1 specimen broken into pieces; two slides of female 2nd leg-pair, antenna, midbody legs and male gonopods [India, Punjab, Kohala, 2000 feet, Murree Subdivision (Stat. 34), coll. H.S. Pruthi, 30.09.1928, don. Calcutta Museum]

Inventory number: 2305

Notes: Attems described *A. kohalana* based on two specimens from "Kohala, 2000 feet" and "Country round about Gharial, ca. 6000 feet" The latter locality is not indicated on the label, although either specimens or their parts are preserved in the collection of the NHMW.

kosswigi VERHOEFF

Lysipetalum (Osmanopetalum) kosswigi VERHOEFF, 1940 (590/16, Abb. 13-16)

Current status: uncertain, now *Acanthopetalum furculigerum kosswigi* (VERHOEFF, 1940), see STRASSER (1976)

Family: Schizopetalidae

Syntype: 1 specimen (F?) heavily broken into many pieces (probably dried out and afterwards put in spirit) [Turkey, Istanbul, don. Verhoeff, 12.4.1940]

Inventory number: 2104

Notes: in the original paper, Verhoeff only mentioned male characters, which, however, does not mean that the type series comprised only males. Although we are not entirely certain, we consider the heavily damaged, possibly female specimen as being part of the type series, as did MORITZ & FISCHER (1974) with another female preserved in the ZMB.

lendenfeldii VERHOEFF

Lysipetalum (Apfelbeckia) Lendenfeldii VERHOEFF, 1896 (119/466, Figs. 1-4)

Current status: uncertain, now *Apfelbeckia lendenfeldii* (VERHOEFF, 1896), see VERHOEFF (1900)

Family: Schizopetalidae

Syntypes: 1 adult ♂, 1 subad. ♂ with undeveloped gonopods [Bosnia, don. Verhoeff 1897]

Inventory number: 2115 [Acquisition 1897.XXIII.2]

Notes: we assume the type status of the Viennese material even though the locality and the collector are not specified on the label. While describing *L. lendenfeldii*, Verhoeff had at his disposal only two adult males, one female and two juveniles with 14 and 13 leg-pairs, respectively, which he obtained from A. v. Lendenfeld in Czernowitz (Chernivtsi, Ukraine today). The material was collected by Viktor Apfelbeck in the Bilek Cave in Bosnia. The museum in Vienna received the specimens only one year after publication. The gonopods of one male are stored in the Berlin Museum (see MORITZ & FISCHER 1974), so the Viennese material apparently houses the remaining adult specimens. What Verhoeff thought to be a female is actually a subadult male

with undeveloped gonopods. The taxonomic status of this species will be considered in a forthcoming revision of the tribe Apfelbeckiini (STOEV, ENGHOF & HOFFMAN in progress).

ligurinus VERHOEFF

Callipus foetidissimus var. *ligurinus* VERHOEFF, 1902 (196/187)

Current status: junior synonym of *C. foetidissimus* (SAVI, 1819), see STRASSER & MINNELI (1984)

Family: Callipodidae

Syntypes: 1 ♂, 1 ♀, both intact [Italy, Nervi, coll. don. Verhoeff]

Inventory number: 2102

Notes: the description of this variety was based on 17 specimens collected from Nervi in Italy. Two female syntypes preserved in spirit, along with three slides, are kept also in the ZMB (Moritz & Fischer 1974).

longobardius VERHOEFF

Callipus longobardius VERHOEFF, 1910 (263/375, 381, Tab. VIII, Abb. 147, Textabb. 30-32, 35)

Current status: junior synonym of *C. foetidissimus* (SAVI, 1819), see STRASSER & MINNELI (1984)

Family: Callipodidae

Syntypes: 2 adult ♀♀ broken into pieces, 1 adult intact ♀, 1 intact juv. [Italy, Como, coll. don. Verhoeff]

Inventory number: 2101 [Acquisition 1908.XIII]

Note: further syntypes of this species are preserved in the ZMB (MORITZ & FISCHER 1974) and in the Zoological Museum in Hamburg (WEIDNER 1960).

minotauri ATTEMS

Lysiopetalum (Acanthopetalum) minotauri ATTEMS, 1902 (23/588, Taf. II, Fig. 20-29)

Current status: valid species, now *Acanthopetalum minotauri* (ATTEMS, 1902)

Family: Schizopetalidae

Syntypes: a) 86 ♂♂, 74 ♀♀, most intact; three slides of telson, legs 1-8 and gonopods [Greece, Crete, Labyrinth near Ampelusa, coll. don. C. Attems]; - b) slide of legs 4-9 [Greece, Crete, Homalos, coll. don. C. Attems]; - c) slide of gonopods [Greece, Crete, Aselakia, coll. don. C. Attems]

Inventory number: a-c): 2298

Note: further two male syntypes from Labyrinth are preserved in the ZMB (see MORITZ & FISCHER 1974).

***mirabilis* ATTEMS**

Karlabsolonia mirabilis ATTEMS, 1951 (130/257), 1959 (138/376, Abb. 161-168)

Current status: uncertain, preliminary *Apfelbeckia mirabilis* (ATTEMS, 1951), see HOFFMAN (1972)

Family: Schizopetalidae

Syntypes: male gonopods in microtube; two slides of leg-pairs 1-4, 7-8, one female cyphopod and "Gonopodentarsus" [Croatia, pot-hole below Malim Kraljevica (Jama pod Malim Kraljevcom), Lok. 338, 29.02.1914, coll. K. Absolon, don. K. Absolon].

Inventory number: 2303

Notes: Attems provided a brief description of the new genus and species in a paper published in 1951, while the main description supplied with figures appeared nearly seven years after his death in a publication edited by Hans Strouhal. The taxonomic status of this species will be considered in a forthcoming revision of the tribe Apfelbeckiini (STOEV, ENGHOFF & HOFFMAN in progress).

***miraculosa* ATTEMS**

Apfelbeckia lendenfeldi [*sic!*] *miraculosa* ATTEMS, 1951 (130/256), 1959 (138/371, Abb. 147-155)

Current status: uncertain

Family: Schizopetalidae

Syntypes: a) 1 adult ♂ with undissected gonopods, gonopods in separate microtube [Bosnia and Herzegovina, Visocica, coll. don. K. Absolon]; b) 1 adult ♂ and ♀, gonopods of second male [Bosnia and Herzegovina, Mrcine, 4.8.1912, coll. K. Absolon No: 87, don. K. Absolon]; - c) numerous ♂♂ and ♀♀ [Bosnia and Herzegovina, Mrcine, 4.8.1913, coll. K. Absolon No: 87, don. K. Absolon]; - d) 1 adult intact ♂ [Dalmatia, Krivošije, upper cave near Dvršnik (obere Höhle am Dvršnik), 6.8.1912, coll. K. Absolon No: 668, don. K. Absolon]

Inventory numbers: a) 2408; - b) 4425; - c) 4426; - d) 4427

Notes: the collection date for locality No. 87 (Mrcine) was erroneously published as being 4.8.1912 (see ATTEMS, 1959). Attems provided a brief description of the new subspecies in a paper published in 1951, while the main description supplied with figures appeared about seven years after his death in a publication edited by Hans Strouhal. The taxonomic status of this subspecies will be considered in a forthcoming revision of the tribe Apfelbeckiini (STOEV, ENGHOFF & HOFFMAN in progress).

***mostarensis* VERHOEFF**

Lysipetalum (*Callipodella*) *mostarensis* VERHOEFF, 1901 (190/224, Taf. X, Abb. 9-10)

Current status: valid, now *Callipodella mostarensis* (VERHOEFF, 1901)

Family: Schizopetalidae

Syntypes: adult intact ♂ and ♀ [Bosnia and Herzegovina, coll. don. Verhoeff]

Inventory number: 2109

Notes: the type status is not quite clear because the type locality (Mostar) is not indicated on the label. It is also unknown when exactly the NHMW got the specimens from Verhoeff. In the original description, Verhoeff did not specify the exact number and sex of the specimens available to him. Syntypes of two other males and one female along with two slides are preserved in the ZMB (MORITZ & FISCHER 1974).

nematogonum ATTEMS

Iranopetalum nematogonum ATTEMS, 1951 (127/417, Abb. 34-38)

Current status: valid species, now *Bollmania nematogona* (ATTEMS, 1951), see HOFFMAN (1980)

Family: Caspiopetalidae

Syntypes: 51 specimens of both sexes; four slides of male gonopods and leg-pairs 1-9 [Iran, Kuh-räng Gebirge, 2500 m, (westl. Isfahan), coll. H. Löffler & "Genossen" 1949/50, don. Löffler]

Inventory number: 2306

olevanensis VERHOEFF

Callipus sorrentinus var. *olevanensis* VERHOEFF, 1910 (263/374, 383, Taf. VIII, Abb. 153, Textabb. 34)

Current status: junior synonym of *Callipus foetidissimus* (SAVI, 1819), see STRASSER & MINELLI (1984)

Family: Callipodidae

Syntypes: 1 intact ♂ [Mittelitalien (probably Marino, Colli Albani), coll.? (probably K.W Verhoeff), don. Verhoeff]

Inventory number: 4375 [Acquisition 1908.XIII]

Notes: this species was described from Marino, Colli Albani (2 ♂♂, coll. Verhoeff) and from Olevano (3 ♂♂, 4 ♀♀, coll. Jickeli). We assume the type status of the male specimen determined by Verhoeff, which the Museum received in 1908 – two years before the publication of the original description. The locality indicated on the label is "Mittelitalien". Another female syntype from "Sabiner Geb. (Olevano)" is preserved in the ZMB (MORITZ & FISCHER 1974).

pamphylina ATTEMS

Brölemannia pamphylina ATTEMS, 1927 (64/111, Fig. 114-117)

Current status: valid species, now *Eurygyrus pamphylinus* (ATTEMS, 1927), see HOFFMAN & LOHMANDER (1964)

Family: Schizopetalidae

Syntypes: intact adult ♂ and juv., 1 adult ♂ broken into three pieces, legs in separate microtube; slide of gonopods and legs [Turkey, Asia Minoris, Aspendos, Pamphylina, collector unknown, 1885, Hofmuseum collection]

Inventory number: 2301

wernerii ATTEMS

Brölemannia byzantina Wernerii ATTEMS, 1927 (64/112, Fig. 118-119)

Current status: uncertain, now *Eurygyrus rufolineatus wernerii* (ATTEMS, 1927), see HOFFMAN & LOHMANDER (1964)

Family: Schizopetalidae

Syntypes: a) 1 ♂, 10 ♀♀; slide of gonopods and legs [Turkey, Asia Minor, coll. don. F. Werner]; - b) 1 ♂, 2 ♀♀ [Turkey Asia Minor, on the railway "Anatolische Bahn" to Konia, coll. E. Bodemeyer, don. probably F. Werner or E. Bodemeyer]

Inventory numbers: a) 4365; - b) 4366

Notes: in the original description, Attems mentioned only "Kleinasien" and Franz Werner as collector. The Attems' drawing of the gonopod (1927: Fig. 118) corresponds exactly to the Bodemeyer specimen (4366), where the locality, although difficult to read, is specified as "Anatolische Bahn n. Konya" (Anatolian train to Konia). The material clearly comes from Bodemeyer's trip to the Turkish city of Konia, described in detail in his paper (BODEMEYER 1900). It is still unclear where exactly the material came from, but we can at least clarify that it was somewhere in southern Turkey. Apparently, *wernerii* is related more closely to *E. asiaeminoris* (VERHOEFF, 1898) than to *E. rufolineatus* (C.L. KOCH, 1847). The taxonomic status of the former along with several new distributional records will be discussed elsewhere.

wohlberedti VERHOEFF

Apfelbeckia wohlberedti VERHOEFF, 1909 (256/717, Abb. 1-6)

Current status: uncertain

Family: Schizopetalidae

Syntype: 1 intact subad. ♂ with undeveloped gonopods [Albania, coll. Dr. Wohlberedt?, don. K.W. Verhoeff]

Inventory number: 4372

Notes: in the original description, Verhoeff specified the type locality as Taubenhöhle near Reçi, and although the Viennese material is labeled only "Albania", it is probably part of the type series comprising one male and three females. As in the case with the type of *A. lendenfeldii*, Verhoeff misidentified the subadult male with undeveloped gonopods as a female. Another syntype of one female specimen is preserved in the ZMB (cf. MORITZ & FISCHER 1974). The taxonomic status of this species will be considered in a forthcoming revision of the tribe Apfelbeckiini (STOEV, ENGHOFF & HOFFMAN in progress).

Further material of *Callipodida* in the collection of the Vienna Museum

businum ATTEMS

Acanthopetalum businum ATTEMS, unpublished manuscript name

Current status: identical with *Acanthopetalum carinatum* (BRANDT, 1840)

Family: Schizopetalidae

Material: 1 adult ♂, gonopods in separate microtube; slide of legs 6-9 [Dalmatia, Bisevo Island (Busi), coll. A. Ginzberger, 20.05.1911, don. A. Ginzberger]

Inventory number: 4377

Notes: Attems marked the label with "type", but in fact he never described the species. Re-examination of the male gonopods revealed that it is identical with *Acanthopetalum carinatum* (BRANDT, 1840).

hellenicum STRASSER

Balkanopetalum hellenicum STRASSER, unpublished manuscript name

Current status: identical with *Balkanopetalum bulgaricum* STOEV & ENGHOFF, 2003

Family: Schizopetalidae

Material: 1 ♂ [Greece-N, Spilea (cave) Agios Georgius near Alistrati, 10.07.1979, coll. don. U. Passauer]

Inventory number: 2105 [Acquisition 1980.XIX.1]

Notes: the name *Balkanopetalum hellenicum* has never published in the scientific literature, thus representing only a collection name. We have examined the specimen and it is identical to *B. bulgaricum* – a species recently described from the mountains Pirin and Slavyanka in SW Bulgaria (STOEV & ENGHOFF 2003). There are certain differences between the Bulgarian and Greek specimens in the shape of the posterior coxal process, but this could be due to infraspecific variation. More material from the region will be required to answer the question. The NHMW houses additional material of this species also collected in Greece from the following locality: Alistrati, Levadista, surroundings of caves I-IV, 30.08.2003 leg. don. Sattmann, Acq. Nr. 2004. V.6. (M, 2 ♀♀, 4 juv.). The village of Alistrati is situated only 50-60 km south of the Bulgarian localities and is the first record of this species in Greece.

The Vienna Museum also houses material of the following species:

Acanthopetalum albidicolle aetolicum (VERHOEFF, 1903)

Acanthopetalum carinatum (BRANDT, 1840)

Acanthopetalum comma (VERHOEFF, 1932)

Acanthopetalum comma janinense (VERHOEFF, 1932)

Acanthopetalum furculigerum (VERHOEFF, 1901)

- Acanthopetalum macedonicum* (VERHOEFF, 1923)
Acanthopetalum minotauri (ATTEMS, 1902)
Acanthopetalum sicanum (BERLESE, 1883)
Antropetalum brazzanum ATTEMS, 1927
Apfelbeckia albosignata VERHOEFF, 1901
Apfelbeckia enderleinii VERHOEFF, 1901
Apfelbeckia lendenfeldii VERHOEFF, 1901
Apfelbeckia hessei VERHOEFF, 1929
Apfelbeckia wohlberedti VERHOEFF, 1909
Bollmania orientalis (SILVESTRI, 1895)
Callipodella camaldulense (ATTEMS, 1903)
Callipodella dorsovittata (VERHOEFF, 1900)
Callipodella fasciata (LATZEL, 1883)
Callipodella herzogowinensis (VERHOEFF, 1897)
Callipodella mostarensis (VERHOEFF, 1901)
Callipodella vinciguerrae (SILVESTRI, 1894)
Callipus foetidissimus (SAVI, 1819)
Callipus sorrentinus VERHOEFF, 1910
Callipus spezianus VERHOEFF, 1902
Cyphocallipus excavatus VERHOEFF, 1909
Dorypetalum degenerans (LATZEL, 1884)
Dorypetalum degenerans bosniense (VERHOEFF, 1897)
Dorypetalum trispiculigerum VERHOEFF, 1900
Eurygyrus asiaeminoris (VERHOEFF, 1898)
Eurygyrus bilselii (VERHOEFF, 1940)
Eurygyrus pamphylinus (ATTEMS, 1927)
Eurygyrus perphrygia HOFFMAN, 1972
Eurygyrus phoeniceus (VERHOEFF, 1900)
"Eurygyrus" *seriale* C.L. KOCH, 1847
Eurygyrus turcicus (VERHOEFF, 1898)
Himatiopetalum ictericum (L. KOCH, 1867)
"Lysiopetalum" *insculptum* (L. KOCH, 1867)
Prolysiopetalum scabratum peloponnesiacum (VERHOEFF, 1900)
Prolysiopetalum sorrentinum VERHOEFF, 1909
Schizopetalum koelbeli (VERHOEFF, 1895)

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References

- ATTEMS C., 1894: *Aulocosoma compactile*. – In: SCHNEIDER, O. San Remo und seine Thierwelt im Winter. – Sitzungsberichte und Abhandlungen der Naturwissenschaftlichen Gesellschaft "Isis" in Dresden, 1893: 62 pp.
- ATTEMS C., 1895 (5): Die Myriopoden Steiermarks. – Sitzungsberichte der kaiserlichen Akademie der Wissenschaften in Wien, Mathematisch-naturwissenschaftliche Classe 104 (1): 117-238, 7 t.
- ATTEMS C., 1902 (23): Myriopoden von Kreta, nebst Beiträgen zur allgemeinen Kenntnis einiger Gattungen. – Sitzungsberichte der kaiserlichen Akademie der Wissenschaften Wien, mathematisch-naturwissenschaftliche Classe 111 (I): 527-614; 3 t.
- ATTEMS C., 1903 (24): Beiträge zur Myriopodenkunde. – Zoologisches Jahrbuch Abtheilung für Systematik 18: 63-154, t. 5-11.
- ATTEMS C., 1911 (45): Description de Myriopodes nouveaux recueillis par M. Henri Gadeau de Kerville pendant son voyage zoologique en Syrie. – Bulletin de la Société des Amis des Sciences naturelles de Rouen, 5, 46 (1910): 61-67.
- ATTEMS C., 1926 (62): Étude sur les Myriopodes recueillis par M. Henri Gadeau de Kerville pendant son voyage zoologique en Syrie (Avril-Juin 1908). – In: Voyage zoologique d'Henri Gadeau de Kerville en Syrie, Rouen, 1: 221-266, Pl. 27-30.
- ATTEMS C., 1927 (64): Über paläarktische Diplopoden. – Archiv für Naturgeschichte 92 (1926), A, fasc. 1-2: 1-256; 358 f.
- ATTEMS C., 1929 (73): Die Myriopodenfauna von Albanien und Jugoslawien. – Zoologische Jahrbücher Abteilung Systematik 56 (1928/29): 269-356; 15 fig., Taf. 7-9.
- ATTEMS C., 1935 (97): Myriopoden von Epirus. – Zoologischer Anzeiger 110: 141-153; 13 fig.
- ATTEMS C., 1936 (100): Diplopoda of India. – Memoirs of the Indian Museum, Calcutta 11 (4): 133-323; 94 fig.
- ATTEMS C., 1951 (127): Ergebnisse der Österreichischen Iran Expedition 1949/50. Myriopoden vom Iran, gesammelt von der Expedition Heinz Löffler und Genossen 1949/50. – Sitzungsberichte der kaiserlichen Akademie der Wissenschaften Wien, mathematisch-naturwissenschaftliche Klasse 160, I: 387-426; 47f.
- ATTEMS C., 1951 (130): Neue Höhlen-Myriopoden, gesammelt von Professor Absolon. – Anzeiger der mathematisch-naturwissenschaftlichen Klasse der österreichischen Akademie der Wissenschaften, Wien 10: 253-257.
- ATTEMS C., 1959 (138): Die Myriopoden der Höhlen der Balkanhalbinsel. Nach dem Material der "Biospeologica balcanica" – Annalen des Naturhistorischen Museums in Wien 63: 281-406; 212 f., 2 t.

- BODEMEYER E. Hauptmann v., 1900: Quer durch Klein-Asien in den Bulghar-Dagh. Eine naturwissenschaftliche Studienreise. Druck und Verlag: Die Druck- und Verlags-Aktiengesellschaft vormals Dölter, Emmendingen. 1900: 169 pp.
- GOLOVATCH S., 1983: A contribution to the millipede fauna of Iran (Diplopoda). – *Annalen des Naturhistorischen Museums in Wien* 85/B: 157-169.
- HOFFMAN R., 1972: Studies on Anatolian callipodoid Diplopoda. – *Mitteilungen aus dem hamburgischen zoologischen Museum und Institut* 69: 81-108.
- HOFFMAN R., 1980 (1979): Classification of the Diplopoda. *Muséum d'Histoire Naturelle, Genève*, 1-237.
- HOFFMAN R. & LOHMANDER H., 1964: The Diplopoda of Turkey. – *Mitteilungen aus dem hamburgischen zoologischen Museum und Institut* 62: 101-151.
- JECKEL C.A.W., 1955: Milliped Miscellany II. – *Entomologische Berichten* 15: 412-417.
- JECKEL C.A.W., 1971 (1970): Nomenclator generum and familiarum Diplopodorum: A list of the genus and family-group names in the Class Diplopoda from the 10th edition of Linnaeus, 1758, to the end of 1957. – *Monografieën van de Nederlandse Entomologische Vereniging* 5: I-XII, 1-412.
- JECKEL C.A.W., 2000a: Errata to Jeckel, (1970) 1971, Nomenclator Generum and Familiarum Diplopodorum. – *Myriapod Memoranda* 2: 15-21.
- JECKEL C.A.W., 2000b: On some millipedes from the island of Malta. – *Myriapod Memoranda* 2: 49-54.
- KOCH L., 1867: Zur Arachniden- und Myriapoden-Fauna Süd-Europa's. – *Verhandlungen der kaiserlich königlichen zoologisch-botanischen Gesellschaft in Wien* 17: 891-900.
- KOTSCHY O., 1868: Biographische Skizze Theodor Kotschys. – In: G. Schweinfurth (Hg), *Reliquiae Kotschyanae, Beschreibung und Abbildung einer Anzahl unbeschriebener oder wenig gekannter Pflanzenarten*. Berlin. VIII–XL.
- LATZEL R., 1883: Beitrag zur Myriopoden-Kenntniss Österreich-Ungarns und Serbiens. – *Verhandlungen der k. k. zoologisch-botanischen Gesellschaft in Wien* 32: 281-282.
- LATZEL R., 1884: Die Myriapoden der österreichisch-ungarischen Monarchie. 2. Bd.: Die Symphylen, Pauropoden und Diplopoden. Alfred Hölder Wien, 414 pp., 16 Taf., 209 fig.
- LATZEL R., 1888: Die vom k.k. Oberarzte Herrn Dr. Justyn Karlinski im Jahre 1887 in Bosnien, der Herzegowina und in Novibazar gesammelten Myriopoden. – *Verhandlungen der k.k. zoologisch-botanischen Gesellschaft in Wien* 38: 91-94.
- MAUERMAYER G., 1962: Karl Wilhelm Verhoeff 1867-1945 Selbstarstellung eines deutschen Zoologen mit einem Verzeichnis seiner Veröffentlichungen. – *Lebensdarstellungen deutscher Naturforscher herausgegeben von der Deutschen Akademie der Naturforscher Leopoldina* 9, 50 pp.
- MAURIÈS J.-P., 1978: Myriapodes-Diplopedes de sud de l'Espagne. – *Annalen des Naturhistorischen Museums in Wien* 81: 575-588.
- MAURIÈS J.-P., GOLOVATCH S. & STOEVE P., 1997: The millipedes of Albania: recent data, new taxa; systematical, nomenclatural and faunistical review (Myriapoda, Diplopoda). – *Zoosystema* 19 (2-3): 255-292.
- MIKHALJOVA E., 2004: The millipedes of the Asian part of Russia. Pensoft, Sofia-Moscow, 292 pp.

- MINELLI A. & GOLOVATCH S., 2001: Myriapods. – In: Encyclopedia of Biodiversity 4: 291-303.
- MORITZ M. & FISCHER S.C., 1974: Die Typen der Myriapoden-Sammlung des zoologischen Museums Berlin. II. Diplopoda. – Mitteilungen aus dem zoologischen Museum in Berlin Band 50, Heft 2: 323-375.
- NGUYEN DUY-JACQUEMIN M., 1976: Contribution à l'étude du développement postembryonnaire de *Callipus foetidissimus* Savi, 1819 (Myriapode, Diplopode). – Bulletin du Muséum national d'histoire naturelle 3 sér., no. 408: 1115-1127.
- POCOCK R.I., 1893: Upon the identity of some of the types of Diplopoda contained in the collection of the British Museum, together with descriptions of a new genus and thirty-two new species. – Annals and Magazine of Natural History 13: 263-270.
- SHELLEY R., SIERWALD P., KISER S., GOLOVATCH S., 2000. Nomenclator generum et familiarum Diplopodorum II. A list of the Genus and Family-Group names in the Class Diplopoda from 1958 through 1999. Pensoft, Sofia-Moscow, 167 pp.
- STAGL V., 2001: The Myriapod collection in the Natural History Museum in Vienna with special reference to the life-work of Carl Attems. – In: Wytwer, J. & Golovatch, S. (eds), Progress in Studies on Myriapoda and Onychophora, Warszawa, XIV+396 pp. Fragmenta faunistica 43 (Supplement): 273-280.
- STAGL V. & MILDNER P., 2001: Zum Gedenken an Robert Latzel (1845-1919). – Rudolfinum. Jahrbuch des Landesmuseums für Kärnten 2000: 305-309.
- STOEV P. & ENGHOFF H., 2003: Systematics, phylogeny and biogeography of genus *Balkanopetalum* Verhoeff, 1926 (Diplopoda: Callipodida: Schizopetalidae). – Zootaxa 272: 1-26.
- STRASSER K., 1970: Diplopodi della Sicilia e della Calabria. – Memorie del Museo Civico di Storia Naturale Verona 17: 159-200, 28 fig. (for 1969).
- STRASSER K., 1971: Catalogus Faunae Jugoslaviae. Diplopoda. Consilium Academicarum Scientiarum Rei Publicae Socialisticae Foederativae Jugoslaviae. Academia Scientiarum et Artium Slovenica, Ljubljana, 48 pp.
- STRASSER K., 1976: Über Diplopoda-Chilognatha Griechenlands, II. – Revue suisse de Zoologie 83 (3): 579-645.
- STRASSER K. & MINELLI A., 1984: Elenco dei diplopodi d'Italia. – Lavori - Societa Veneziana di Scienze Naturali 9 (2): 193-212.
- STROUHAL H., 1961: Hofrat Dr. Carl Graf Attems zum Gedenken. – Annalen des Naturhistorischen Museums in Wien 64: 1-38 (for 1960).
- VERHOEFF K.W., 1893 (54): Neue Diplopoden der portugiesischen Fauna. – Zoologischer Anzeiger 16: 156-159, 161-169.
- VERHOEFF K.W., 1895 (99): Aphorismen zur Biologie, Morphologie, Gattungs- und Art-Systematik der Diplopoden. – Zoologischer Anzeiger 18: 203-211, 213-226, 237-244.
- VERHOEFF K.W., 1896 (119): Über die Copulationsorgane der Lysiopetaliden und ein *Lysiopetalum* aus Bosnien. – Zoologischer Anzeiger 19: 465-477.
- VERHOEFF K.W., 1896 (121): Zoologische Ergebnisse einer von Dr. K. Escherich unternommenen Reise nach Kleinasien. I. Theil. Bearbeitung der Myriopoden, nebst anatomischen Beiträgen. – Archiv für Naturgeschichte 62, 1: 1-25 + Taf. I-II.

- VERHOEFF K.W., 1897 (138): Über Diplopoden aus Bosnien, Herzegowina und Dalmatien. I. Theil: Polydesmidae; II. u. III. Theil: Chordeumidae und Lysiopetalidae. – Archiv für Naturgeschichte 63, 1: 139-146, 147-156, 181-204.
- VERHOEFF K.W., 1900 (170): Zur vergleichenden Morphologie, Phylogenie, Gruppen- und Artsystematik der Lysiopetaliden. (Beiträge zur Kenntniss paläarktischer Myriopoden 10). – Zoologischen Jahrbuchern Abtheilung für Systematik 13: 36-70.
- VERHOEFF K.W., 1901 (190): Diplopoden aus Herzegowina, Ungarn und Baiern. (Beiträge zur Kenntniss paläarktischer Myriopoden 19). – Archiv für Naturgeschichte 67, 1: 221-240.
- VERHOEFF K.W., 1902 (196): Über Diplopoden. 1. Aufsatz. Formen aus Tirol, Italien und Cypern. – Archiv für Naturgeschichte 68, 1: 175-198.
- VERHOEFF K.W., 1903 (209): Über Diplopoden. 2. Aufsatz: Griechische Tausendfüssler. – Archiv für Naturgeschichte 69, 1: 135-154.
- VERHOEFF K.W., 1909 (256): Über einige Isopoden und Myriapoden aus Montenegro und Albanien gesammelt durch Herrn O. Wohlberedt. – Wissenschaftliche Mitteilungen aus Bosnien und der Herzegowina 11: 716-722.
- VERHOEFF K.W., 1910 (263): Über Diplopoden. 11-15. (31-35.) Aufsatz: Beiträge zur Kenntnis der Glomeriden, Juliden, Ascospesomorpha und Lysiopetaliden, sowie zur Fauna Siziliens, Untersuchungen über Art- und Gruppensystematik, Morphologie, nachembryonale Entwicklung, Biologie und Geographie. – Nova Acta Leopoldina 92: 139-448.
- VERHOEFF K.W., 1929 (419): Zur Systematik, vergleichenden Morphologie und Geographie europäischer Diplopoden, zugleich ein zoogeographischer Beitrag (111. Diplopoden-Aufsatz). – Zoologisches Jahrbuch Abtheilung für Systematik 57: 555-659.
- VERHOEFF K.W., 1932 (448): Diplopoden-Beiträge. (124. Diplopoden-Aufsatz). – Zoologischen Jahrbuchern Abtheilung für Systematik 62: 469-524.
- VERHOEFF K.W., 1940 (590): Über Diplopoden aus der Türkei. – Revue de la Faculté des Sciences de l'Université d'Istanbul Sér. B, 5, 1/2: 1-49.
- WEIDNER H., 1960: Die entomologischen Sammlungen des Zoologischen Staatsinstituts und Zoologischen Museums Hamburg III. Teil Chilopoda und Progoneata. – Mitteilungen aus dem hamburgischen zoologischen Museum und Institut 58: 57-104.
- WIRKNER C.S., STAGL V. & TURK N., 2002: Type specimens of the Chordeumatida in the Natural History Museum in Vienna (Diplopoda). – Kataloge der wissenschaftlichen Sammlungen des Naturhistorischen Museums in Wien, Band 16, Myriapoda, Heft 1, 31 pp.

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