

On type specimens of Myriapoda (Chilopoda, Diplopoda) in the collection of the National Museum of Natural History in Sofia

О типовых экземплярах Myriapoda (Chilopoda, Diplopoda) в коллекции Национального музея естественной истории, София

Pavel Stoev & Petar Beron

П. Стоев, П. Берон

National Museum of Natural History, 1 Tsar Osvoboditel, Sofia 1000 Bulgaria.

Национален природонаучен музей, булевард Цар Освободител 1, София 1000 България.

KEY WORDS: Chilopoda, Diplopoda, type material, museum, Sofia, Bulgaria.

КЛЮЧЕВЫЕ СЛОВА: Chilopoda, Diplopoda, типовой материал, музей, София, Болгария.

ABSTRACT: The collection of the National Museum of Natural History in Sofia contains type material of 38 species or subspecies of Chilopoda, and 65 of Diplopoda. These materials were collected by Iv. Buresch, P. Beron, G. Ribarov, V. Golemansky, P. Stoev and their collaborators, and identified by K. Verhoeff, K. Strasser, W. Shear, R. Hoffman, H. Enghoff, E.H. Eason, J.-P. Mauriès, A. Heymer, Z. Matic, G. Stavropoulos, E. Mikhajlova, J.P. Kim, S. Golovatch, P. Stoev, and V. Golemansky. These types derive from Bulgaria, Greece, Albania, Turkey, Papua New Guinea, Nepal, China, North Korea, Indonesia, Burma, Thailand, Uganda, Crimea, and Turkmenistan.

РЕЗЮМЕ: Коллекция Национального естественного-исторического музея в Софии содержит типовой материал 38 видов и подвидов Chilopoda и 64 видов Diplopoda. Этот материал собирали Ив. Буреш, П. Берон, Г. Рибаров, В. Големански, П. Стоев и их сотрудники, а определяли К. Ферхефф, К. Штрассер, У. Шир, Р. Хоффман, Х. Энгхофф, Э. Изон, Ж.-П. Морьес, А. Хаймер, З. Матик, Г. Ставропулос, Е. Михалева, Дж. Ким, С. Головач, П. Стоев и В. Големански. Этот типовой материал был собран в Болгарии, Греции, Албании, Турции, Папуа Новой Гвинеи, Непале, Китае, Северной Корее, Индонезии, Бирме, Таиланде, Уганде, Крыму и Туркменистане.

Introduction

The National Museum of Natural History in Sofia (NMNH), established 1889, contains a rather rich collection of Myriapoda (Diplopoda and Chilopoda). The type specimens in this collection come from the following collectors:

1. Material from Bulgaria and Greece (Chilopoda and Diplopoda), collected by Dr Iv. Buresch and his collaborators (N. Radew, D. Adzharov, P. Drenski) from 1914 to 1936, identified by K. Verhoeff.

2. Chilopoda from Bulgaria, collected by Prof. V. Golemansky from 1960 to 1965 and deposited in the

NMNH. Descriptions by Z. Matic and V. Golemansky.

3. Chilopoda and Diplopoda from Bulgaria, Greece, Albania, Turkey, Papua New Guinea, Nepal, China, North Korea, Indonesia, Burma, Thailand, Uganda, collected by P. Beron and his collaborators (Ph. Chapman, V. Beshkov, S. Andreev, B. Petrov, etc.) and identified by Z. Matic, G. Stavropoulos, E. Mikhajlova, Kim J. Pil, K. Strasser, W. Shear, R. Hoffman, H. Enghoff, E.H. Eason, J.-P. Mauriès, A. Heymer and S. Golovatch. The bulk of the collections of P. Beron are still under study. Many more new taxa have been described, but much of the material is still kept by specialists on loan.

4. Diplopoda from Albania, collected by S. Golovatch, P. Stoev, B. Petrov and P. Beron, and identified by S. Golovatch, P. Stoev and J.-P. Mauriès.

5. Diplopoda from the Crimea and Turkmenistan, donated by Dr S. Golovatch and described by himself.

6. Chilopoda from Bulgaria, collected and described by G. Ribarov.

The myriapod collection of the Museum counts hundreds of species, although no special database has been prepared yet. Despite the great number of taxa already being objects of research, there is still a lot of undetermined material originating from New Guinea, the Himalaya, Africa and other exotic regions, taken by one of us (P.B.). Enthusiasts for study of these collections are welcome.

All myriapods in the Museum have been re-examined by P.S. The material not studied yet was sorted out in a way to be easily accessible to specialists willing to work on it. In the process of the work we faced some problems of identification of Verhoeff's and Strasser's types. The specimens determined by Karl Verhoeff were not always designated/labeled as types. Only after a study of the original descriptions, selection of some types was possible. Another problem concerning Verhoeff's types we found was, many labels reading "types" actually represented species published in later papers, i.e., they do not belong to the original type series. In this

case, we selected only those where the label coincided with the one originally published by the author.

Following Verhoeff, Karl Strasser is ranking the second most prolific author dealing with Bulgarian diplopods. He published six papers devoted to Bulgarian millipedes, with about forty new taxa erected. In addition, some of his other papers are partly based on millipede material taken by Bulgarian zoologists from Greece, Turkey and the Caucasus. Most of the types established by Strasser were purchased after his death in 1979 by the Geneva Museum. Now at the NMNH we find one-third at best of the material which he published from Bulgaria, and just two jars of what he described from Greece. Only a few of all his tubes re-examined were labeled "types", while the rest looked undetermined. So we had ca. 100 tubes with a label referring to a locality, date and collector but not a single word on the species inside the tube, although we were pretty sure that the material was studied and published by Strasser. In this case we proceeded by writing down all labels found in the tubes and then comparing them with what Strasser published from a certain locality. Only then we could attribute the specimens to the species found there. In the case when more than one species had been published from a certain locality we attributed material to the species concerned only when we were absolutely sure of the identification.

To put the very complicated myriapod taxonomy to some order, several of the older taxa were restudied and, in case of having no type material selected, formal lectotype designations were made. We did so for thirteen centipede and eight millipede taxa, even for those which had already proved to be junior synonyms of taxa described earlier. Types of some infrasubspecific categories (forms, varieties) were also designated, although none is of any taxonomic value at the moment.

As most of the types described by Strasser are in the Geneva Museum (see above), although some syntypes appear to be present in Sofia, no lectotype designation was attempted for the Sofia share of material.

All *loci typici* were translated into English, although originally published in German or French. We think it better to have them transliterated, as some names have been misspelt or contain information which is wrong to some extent.

ACKNOWLEDGEMENTS

We are deeply indebted to Fani Bozarova for her technical assistance in discovering, identifying and labeling the type specimens as well as to Dr. Alexi Popov for valuable comments on the manuscript. For editing the English we extend our best thanks to Mrs Claudine Dee Justine-Beron and Dr. Sergei I. Golovatch.

SPECIES LIST

CHILOPODA

Lithobiomorpha

Family Lithobiidae

Eupolybothrus andreevi Matic

Eupolybothrus andreevi Matic, 1964: 507.

LOCALITY: Bulgaria, v. Cerovo, Vodnata peshtera Cave, 28.09.1962, S. Andreev leg.

TYPE: one adult female [Holotype], by monotypy.

Lithobius (Australobius) tenuinguis Eason

Lithobius (Australobius) tenuinguis Eason, 1980: 41.

Now: *Australobius tenuinguis* (Eason)

LOCALITY: Papua New Guinea, Western Province: The Sting, 150 m deep shaft, Finim Tel Plateau, 35 km WSW of Telefomin, 1975, P. Beron leg.

TYPE: one female [Holotype].

REMARKS: Originally described in *Lithobius* Leach. In his last papers, however, Eason resurrected *Australobius* Chamberlin to full generic status.

Lithobius (L.) balcanicus Matic

Lithobius balcanicus Matic, 1973a: 249.

LOCALITY: Bulgaria, Rhodope Mt., Smoljan, 21.06.1965, V. Golemansky leg.

TYPE: one male specimen [Lectotype], by present designation.

REMARKS: Matic failed to designate a holotype in the original description of *L. balcanicus* which was based on two males, one adult and one juvenile female. In the NMNH collection, we found two tubes labeled *L. balcanicus*, both seemingly determined by Matic but only one that appeared to derive from the *locus typicus* as published by the author. Along with a male of *L. balcanicus* the tube contained further two undetermined geophilomorphs, which were transferred to another tube. This male specimen of *L. balcanicus* is herewith designated as lectotype. As far as the species has never been found since its original description, its taxonomic status still remains uncertain.

Lithobius (L.) beschkovi Matic et Golemansky

Lithobius beschkovi Matic & Golemansky, 1967: 126.

Now: *Lithobius (L.) rushovenski* Matic, 1967 [fide Stoev, in press].

LOCALITY: Bulgaria, Lovetch Distr., v. Goljama Zheljazna, "Toplja" Cave, 14.07.1960, V. Beshkov leg.

TYPES: one adult male [Lectotype], three pseudoadult males and one larval stadium IV [Paralectotypes], by present designation.

REMARKS: In 1967, Matic described two cave lithobiids from "Rushova" Cave; the first was named *L. rushovenski* Matic, 1967, the second, *L. beschkovi*, was published in collaboration with V. Golemansky. There is no any doubt now that *beschkovi*, being described in a later volume of the Bull. Inst. Zool., Sofia, is a junior synonym of *rushovenski*. Here-with an adult female is designated as lectotype, the remaining material as paralectotypes.

Lithobius (L.) borisi Verhoeff

Lithobius borisi Verhoeff, 1928: 116.

LOCALITY: Bulgaria, Pirin Mt., Kameniti Vrah (Peak), 2750 m, under stones, 04.07.1924, King Boris and Iv. Buresch leg.

TYPES: five specimens [Paralectotypes]. The Lectotype is deposited in the collection of the British Museum (Natural History) [Eason, 1983: 133].

REMARKS: Both Eason [1983] and Ribarov [1989] considered *L. borisi* either as a subspecies of or identical to *L. erythrocephalus* C.L. Koch, 1847. Eason was the first to designate the lectotype, a female from the Verhoeff collection in the British Museum (Natural History). Later on, in 1989, when revising some chilopod samples deposited in the

NMNH, Ribarov recovered further five specimens from the Verhoeff series of syntypes and, though being familiar with Eason's work, he did designate this material as paralectotypes.

According to the recommendations of the Code, lectotypes are better to be designated from the museum collections where most of the type specimens are preserved or where the author of the taxon worked. As Eason supported his lectotype designation with a profound analysis and species redescription, his designation is considered as absolutely correct.

The *Lithobius erythrocephalus* group, which is composed of medium-sized species with 2+2 prosternal teeth and coxolateral ventral spines on the 15th pair of legs, presently contains scores of species, subspecies and varieties and is widely distributed all over the Palaearctic. At least seven taxa from this group have hitherto been reported from Bulgaria, but only a more profound analysis is bound to finally assess their true number.

Lithobius (L.) borisi rylaicus Verhoeff

Lithobius borisi rylaicus Verhoeff, 1928: 118.

LOCALITY: Bulgaria, Ryla Mt., near Sara-Gyol Lake, 2500 m, under stones, 20.06.1926, Iv. Buresch leg.

TYPES: one male [Lectotype], four males [Paralectotypes], by present designation.

REMARKS: Ribarov [1989], while revising some material at NMNH, determined the specimens from the Verhoeff series of syntypes as belonging to *L. erythrocephalus* C.L. Koch, 1847, yet without lectotype designation. Herewith we designate one male as lectotype and the others as paralectotypes. We tend to believe that *rylaicus* rather belongs to *L. schuleri* Verhoeff, 1925, a species widespread in the mountains of Southeast Europe. Additional studies only are bound to clarify the issue.

Lithobius (L.) christovici Matic et Golemansky

Lithobius christovici Matic & Golemansky, 1964: 101.

LOCALITY: Bulgaria, Rhodopes, Bachkovsky Monastery, 420–500 m alt., *Carpinus betulus*, *Ostrya carpinifolia*, *Fagus sylvaticus*, 29.04.1961.

TYPES: one adult male [Lectotype], one male, one specimen with missing gonopods [Paralectotypes], by present designation.

REMARKS: Having examined a specimen determined by Matic as *L. christovici*, Stoev [1997] proposed its synonymy with the Turkish species *L. ergus* (Chamberlin, 1952). The whole *Lithobius lakatnicensis* group, where *L. lakatnicensis* Verhoeff, 1926, *L. thracicus* Matic et Golemansky, 1967, *L. hrissiae* Stavropoulos et Matic, 1990 and *L. christovici* are known to belong, badly needs a revision. Herewith one of the adult males of *L. christovici* is designated as lectotype, the other two specimens as paralectotypes.

Lithobius (L.) cretaicus Matic

Lithobius cretaicus Matic, 1980b: 100.

LOCALITY: Greece, Crete, Kamilari Cave, 13.01.1968, P. Beron leg.

TYPES: one adult female with broken legs and antennae [Lectotype], one adult male, two adult females and two juvenile males [Paralectotypes], by present designation.

REMARKS: Although Eason [1990] believed that *L. cretaicus* is a junior synonym of *L. sitianus* Chamberlin, 1956, Zapparoli [1994], following his study of topotypic material, demonstrated that *cretaicus* is a "good" species restricted to the Kamilari Cave on Crete.

Lithobius (L.) diampolisi Ribarov

Lithobius diampolisi Ribarov, 1987a: 45.

LOCALITY: Bulgaria, "Ormana" near Jambol, under logs, 4.11.1981, G. Ribarov leg.

TYPE: male [Holotype].

LOCALITY: Bulgaria, Strandzha Mt., between the villages Goljamo Sharkovo and Malko Sharkovo, humid foliage, 14.04.1982, G. Ribarov leg.

TYPE: one juvenile female [Paratype].

Lithobius (L.) glaciei Verhoeff

Lithobius glaciei Verhoeff, 1928: 119.

LOCALITY: Bulgaria, Ossogovo Mt., Ruen Peak, 2200 m, 21.06.1926, N. Radew leg.

TYPES: one male [Lectotype], one juvenile [Paralectotype], all in tube N1; one damaged male (tube N2) [Paralectotype], by present designation.

REMARKS: The status of *L. glaciei* has never been revised. Eason [1983] stated that it might belong to *L. erythrocephalus* C.L. Koch, 1847. In tube N1, we found a label reading "*L. crassipes*" and in tube N2 "*L. (Monotarsobius)* sp.", both determined so by G. Ribarov. Time to comment on these identifications has not come yet. Herewith the male in tube 1 is designated as lectotype.

Lithobius (L.) golemanskyi Ribarov

Lithobius golemanskyi Ribarov, 1987a: 46.

LOCALITY: Bulgaria, Zaichi Vrach, near Jambol, 150 m, under stones, 26.08.1980, G. Ribarov leg.

TYPES: female [Holotype], two males [Paratypes].

LOCALITY: Bulgaria, Strandzha Mt., near v. G. Sharkovo, 14.04.1982, under stones, G. Ribarov leg.

Lithobius (L.) hrissiae Stavropoulos et Matic

Lithobius hrissiae Stavropoulos & Matic, 1990: 43.

LOCALITY: Greece, Samothraki I., v. Chora, 20.05.1984, P. Beron leg.

TYPE: one male [Holotype].

REMARKS: Four species, *Lithobius hrissiae*, *L. seresensis*, *Hessebius matsakisi* and *Cryptops diana*, all representing type specimens named by Matic & Stavropoulos, were found mixed with other lithobiids and cryptopid species (also from Greece), not in tubes but in a common jar. After a careful re-examination by one of us (P.S.), the types were selected among the other specimens, all clearly labeled and placed in separate tubes.

Lithobius (L.) oglednicus Ribarov

Lithobius oglednicus Ribarov, 1987a: 47.

LOCALITY: Bulgaria, Strandzha Mt., near v. Vizitza, 200 m, under stones, 25.08.1982, G. Ribarov leg.

TYPES: one male [Holotype], one male [Paratype].

Lithobius (L.) pamukkalensis Matic

Lithobius pamukkalensis Matic, 1980a: 94.

LOCALITY: Turkey, Pamukkale, 23 km from Denizli, 18.12.1972, P. Beron leg.

TYPES: one female [Lectotype], one male [Paralectotype], by present designation.

REMARKS: As Matic [1980a] failed to designate a holotype, herewith the female is designated as lectotype.

Lithobius (L.) rushovensensis Matic

Lithobius rushovensensis Matic, 1967: 239.

LOCALITY: Bulgaria, Lovetch Distr., v. Gradeshnitsa, "Rushova" Cave, 6.05.1964, V. Georgiev leg.

TYPES: one adult male [Lectotype] along with one larval stadium IV [Paralectotype], by present designation.

Lithobius (L.) seresensis Matic et Stavropoulos

Lithobius seresensis Matic & Stavropoulos, 1990: 27.

Now: *Lithobius (L.) erythrocephalus* C.L. Koch, 1847 [fide Zapparoli, 1994]

LOCALITY: Greece, Seres District, Strimon Station, 19.05.1987, P. Beron leg.

TYPE: one female [Holotype], by monotypy.

REMARKS: see remarks under *L. hrissiae*.

Lithobius (L.) tiasnatensis Matic

Lithobius tiasnatensis Matic, 1973b: 255.

LOCALITY: Bulgaria, v. Mramor, "Tiasnata propast" Pot hole, 4.08.1970, P. Beron & Vl. Beshkov leg.

TYPE: one male [Holotype].

Lithobius (L.) uniunguis Matic et Golemansky

Lithobius uniunguis Matic & Golemansky, 1967: 18.

LOCALITY: Bulgaria, Chepinsko defile (Gorge), v. Banite, 27.04.1960.

TYPES: one adult female [Lectotype], one pseudoadult male [Paralectotype], by present designation.

REMARKS: Although the original description is based on two females, the Sofia collection was found to harbour an adult female along with a pseudoadult male, so probably the sex of the latter specimen was misidentified by the authors of the species. As in the original paper no holotype was designated, herewith the female is designated as lectotype, and the male as paralectotype. Since its original description, the status of *L. uniunguis* has never been revised.

Lithobius (Monotarsobius) anapurnensis Eason

Lithobius (Monotarsobius) anaopurnensis [lapsus calami] Eason, 1993: 188 (and also *L. anapurnensis*)

LOCALITY: Nepal, Anapurna trek, from Hinku to Tada-pani, 17.10.1984, 2500–3000 m, P. Beron leg.

TYPES: one female [Holotype]; one male, one juvenile male, one juvenile female (fragment) [Paratypes].

REMARKS: The spelling *Lithobius anaopurnensis* must be considered as a lapsus calami and not used further, for in the same paper Eason correctly referred to this name as *anapurnensis*, too.

Monotarsobius bifidus Matic

Monotarsobius bifidus Matic, 1973: 260.

Now: *Lithobius (Monotarsobius) bifidus* (Matic)

LOCALITY: Bulgaria, Strandzha Mt., v. Mladezhko, Izvornata peshtera Cave, 9.08.1970, P. Beron & Vl. Beshkov leg.

TYPES: one adult female, one adult male and a juvenile male [Paratypes].

Lithobius (Monotarsobius) jurinici Matic et Golemansky, 1965

Lithobius (Monotarsobius) jurinici Matic & Golemansky, 1965: 22.

LOCALITY: Bulgaria, Assenovgrad, "Kourou-dere", 370 m alt., 30.04.1961, *Corylus avellana*, collection of the Institute of Zoology, Bulgarian Academy of Science.

TYPES: one female [Lectotype], three males [Paralectotypes], by present designation.

REMARKS: No holotype has been designated by the authors in their original description of *L. jurinici*. Herewith we designate the female as lectotype and the male specimens

as paralectotypes. Since the original description the status of *L. jurinici* has never been revised.

Lithobius (Monotarsobius) lakatnicensis Verhoeff

Lithobius (Monotarsobius) lakatnicensis Verhoeff, 1926d: 295.

Now: *Lithobius (L.) lakatnicensis* Verhoeff

LOCALITY: Bulgaria, Sofia District, Lakatnik Station, Temnata dupka Cave, 04.04.1925, I. Buresch leg.

TYPES: two females [Syntypes].

Lithobius (Monotarsobius) proximus Matic et Golemansky

Lithobius (Monotarsobius) proximus Matic & Golemansky, 1967a: 43

LOCALITY: Bulgaria, Chepinsko defile (Gorge), v. Banite, 27.04.1960, 18.7.1960, *Juglans regia*, *Tilia* sp., *Clematis* sp., under stones and tree bark.

REMARKS: Unfortunately, the tube labeled *L. proximus* was found broken together with some other tubes, so all the specimens in the jar were mixed up, dried and badly damaged. We tried to recognise and select the respective morphospecies but, due to the very bad condition of some of the material, our attempt failed. All the specimens are still preserved in a common tube for a later, more profound study. One of the fragmented specimens looked very similar to *proximus* indeed.

Lithobius (Monotarsobius) strandzhanicus Ribarov

Lithobius (Monotarsobius) strandzhanicus Ribarov, 1987a: 50.

LOCALITY: Bulgaria, Strandzha Mt., near v. Krushevetz, 350 m, mixed broadleaved forest, under logs and stones, 24.08.1982, G. Ribarov leg.

TYPES: male [Holotype], one male [Paratype].

Lithobius (Monotarsobius) taschevi Matic et Golemansky

Lithobius (Monotarsobius) taschevi Matic & Golemansky, 1965: 19.

LOCALITY: Bulgaria, Assenovgrad, "Kourou-dere", 360 m alt., *Fraxinus excelsior*, *Prunus cerasifera*, *Syringa vulgaris*, *Corylus avellana*, *Evonimus* sp., 30.04.1961.

TYPE: one specimen [Syntype].

REMARKS: In their original paper, the authors designated the Bachkovsky Monastery as the type locality of *L. taschevi* (p. 19). On a later page (p. 22) they stated that the species was also found at "Kourou-dere" near Assenovgrad. Revising the NMNH collections we found a tube with one specimen labeled *L. taschevi* — Kourou dere, Assenovgrad, which undoubtedly belongs to the type series of the species. At present, *L. taschevi* is considered as a junior synonym of *Lithobius (Monotarsobius) beroni* Negrea, 1965 [Negrea, 1971].

Monotarsobius visicae Ribarov

Monotarsobius visicae Ribarov, 1987a: 49.

Now: *Lithobius (Sigibius) visicae* (Ribarov)

LOCALITY: Bulgaria, Strandzha Mt., near v. Vizica, 250 m, *Quercetum*, under stones, 25.08.1982, G. Ribarov leg.

TYPE: female [Holotype].

LOCALITY: Bulgaria, Strandzha Mt., near v. Krushevetz, 350 m, under logs and stones, 24.08.1982, G. Ribarov leg.

TYPES: two males, one female [Paratypes].

Lithobius (Ezembius) quadricalcaratus Eason

Lithobius (Ezembius) quadricalcaratus Eason, 1993: 182.

LOCALITY: Burma, Maymyo, B.E. Falls, 1500 m, 2.11.1984, P. Beron & S. Andreev leg.

TYPES: one female [Holotype]; four males, one female, two juvenile females [Paratypes].

Pleuroolithobius bartsiakasi Matic et Stavropoulos

Pleuroolithobius bartsiakasi Matic & Stavropoulos, 1990: 29
Now: *Pleuroolithobius patriarchalis* (Berlese, 1894) [fide Zapparoli & Minelli, 1993].

LOCALITY: Greece, Evros Distr., v. Essimi, 18.05.1987, P. Beron leg.

TYPES: one female [Lectotype], one male [Paralectotype], by present designation.

Harpolithobius andreevi Matic et Stavropoulos

Harpolithobius andreevi Matic & Stavropoulos, 1988: 39

LOCALITY: Greece, Euboea, v. Tharunia, Skotini Cave, 26.12.1982, P. Beron & St. Andreev leg.

TYPES: one female [Lectotype], one male [Paralectotype], by present designation.

REMARKS: *Harpolithobius andreevi* has been erected based on two specimens (a male and a female) taken from the same locality where *Harpolithobius beroni* was found. Undoubtedly, it is identical to *beroni* and, as being described on a later page, it becomes its junior synonym. Furthermore, Zapparoli [1994] believes that both these species are indistinguishable from *Harpolithobius anodus* (Latzel, 1880).

Harpolithobius beroni Matic et Stavropoulos

Harpolithobius beroni Matic & Stavropoulos, 1988: 37.

LOCALITY: Greece, Euboea, v. Tharunia, Skotini Cave, 26.12.1982, P. Beron & St. Andreev leg.

TYPE: one male [Holotype], by monotypy.

REMARKS: *Harpolithobius beroni* has been synonymised by Zapparoli [1994] under *Harpolithobius anodus* (Latzel, 1880). With the type available, the validity of the taxon can be reconsidered, as the entire genus *Harpolithobius* badly needs a revision. It is only then that the status of *beroni* could ultimately be settled.

Harpolithobius samothraciensis Stavropoulos et Matic

Harpolithobius samothraciensis Stavropoulos & Matic, 1990: 42.

LOCALITY: Greece, Samothraki I., v. Chora, 20.05.1984, P. Beron leg.

TYPE: one specimen [Holotype], by monotypy.

REMARKS: Like in the case of *H. beroni*, only after a revision of *Harpolithobius* and a re-evaluation of the characters presently used in the systematics of harpolithobiids can the status of *H. samothraciensis* be justified. According to Zapparoli [1994], this is a junior synonym of *H. anodus* (Latzel, 1880).

Hessebius matsakisi Matic et Stavropoulos

Hessebius matsakisi Matic & Stavropoulos, 1990: 32.

LOCALITY: Greece, Rhodes, Lindos, 30.04.1984, P. Beron leg.

TYPES: one male [Lectotype], two adult females and two adult males [Paralectotypes], by present designation.

REMARKS: Eason [1992] treated *H. matsakisi* as a Rhodian subspecies of *H. barpipes* (Porat, 1893). Zapparoli [1994] believes that it is indistinguishable from *Hessebius barpipes* and proposed their synonymy (see also the remarks under *L. hrissiae*).

Geophilomorpha

Family Dignathodontidae

Henia angelovi Ribarov

Henia angelovi Ribarov, 1987b: 86.

LOCALITY: Bulgaria, Sakar Mt., near v. Sakartzi, 300 m, *Quercetum*, under stones, 5.04.1983, G. Ribarov leg.

TYPES: one female 44 mm long with 95 pairs of legs [Holotype], one female 25 mm long with 93 pairs of legs [Paratype].

Family Himantariidae

Thracophilus chiosensis Stavropoulos et Matic

Thracophilus chiosensis Stavropoulos & Matic, 1990: 37.

LOCALITY: Greece, Chios I., Nea Moni, 13.05.1987, P. Beron leg.

TYPE: one female [Holotype].

Scolopendromorpha

Family Cryptopidae

Cryptops beroni Matic et Stavropoulos

Cryptops beroni Matic & Stavropoulos, 1988: 34.

LOCALITY: Greece, Crete, Akrotiri, Mon. Gouverneto, Katholiko Cave, 22.09.1974, P. Beron & V. Beshkov leg.

TYPE: one specimen [Holotype], by monotypy.

Cryptops beshkovi Matic et Stavropoulos

Cryptops beshkovi Matic & Stavropoulos, 1988: 36.

LOCALITY: Greece, Rhodes I., Lindos, 31.04.1984; v. Archangelos, 2.05.1984, P. Beron leg.

TYPES: one specimen [Lectotype], one specimen [Paralectotype], respectively, by present designation.

REMARKS: As far as no holotype has been designated by Matic & Stavropoulos, herewith one of the specimens from the syntype series is designated as lectotype, the other as paralectotype.

Cryptops diana Stavropoulos et Matic

Cryptops diana Stavropoulos & Matic, 1990: 38.

LOCALITY: Greece, Thassos I., Dracotrypa Cave, 28.12.1982, P. Beron & St. Andreev leg.

TYPES: three specimens [Holotype and two Paratypes].

REMARKS: Type material *C. diana* was found mixed up with other lithobiomorph and scolopendromorph species in a common jar. One of us (P.S.) selected the types but, unfortunately, we could not discriminate between the holotype and the paratypes.

Family Scolopendridae

Scolopendra cingulata thracia Verhoeff

Scolopendra cingulata thracia Verhoeff, 1928: 123.

LOCALITY: Western Thrace (Greece), Badoma near Dede Agach, 20.04.1914, I. Buresch leg.

TYPE: one specimen [Holotype], by monotypy.

REMARKS: Ribarov [1989] treated *thracia* as a junior synonym of *Scolopendra cingulata* Latreille, 1829.

DIPLOPODA

Glomerida

Family Glomeridae

Glomeris bureschi Verhoeff

Glomeris (Eurypleuromeris) bureschi Verhoeff, 1926c: 193.

LOCALITY: Bulgaria, Strandzha Mt., near Malko Tarnovo, 3.05.1921, I. Buresch leg.

TYPES: one specimen [Lectotype], two specimens [Paralectotypes] by present designation.

LOCALITY: South Thrace (North Greece), near Xanthi, 26.04.1914, Iv. Buresch leg.

TYPE: two specimens [Paralectotypes], by present designation.

REMARKS: *G. bureschi* has long been treated as a junior synonym of *G. balcanica* Verhoeff, 1906 [Strasser, 1969].

Glomeris bureschi var. *olympiaca* Verhoeff

Glomeris bureschi var. *olympiaca* Verhoeff, 1937: 100.

LOCALITY: Greece, Olympus, 2600 m, near snow-drifts, 05.07.1936, D. Papazov leg.

TYPES: one specimen (male?, telopods missing) [Lectotype], one female [Paralectotype], by present designation.

REMARKS: In his numerous papers devoted to Greek diplopods, Strasser did not mention *olympiaca* but, although no formal synonymy has ever been proposed, it seems a junior synonym of *G. balcanica* Verhoeff, 1906.

Glomeris bureschi var. *sakarensis* Verhoeff

Glomeris bureschi var. *sakarensis* Verhoeff, 1937: 100.

LOCALITY: Bulgaria, Sakar Mt., Manda-tash, 2.05.1926, N. Radew leg.

TYPE: one specimen labeled "type" [Holotype], by monotypy, along with a specimen of terrestrial Isopoda.

REMARKS: Strasser [1969] considered this variety as a junior synonym of *G. balcanica* Verhoeff, 1906.

Glomeris norica var. *vodnatensis* Verhoeff

Glomeris norica var. *vodnatensis* Verhoeff, 1926c: 195.

Now: *Glomeris pustulata* Latreille

LOCALITY: Bulgaria, Iskar Gorge, v. Tzerovo, Vodnata peshtera Cave, 1.03.1925, I. Buresch leg. On the back of the label: "No 8 Der Trockene Gang" [The dry gallery].

TYPE: one specimen labeled "type" [Holotype], by monotypy.

REMARKS: Although Strasser treated *vodnatensis* as a distinct species, Mauriès et al. [1997] have shown it to be nothing else but a junior synonym of *G. pustulata* Latreille, 1804.

Glomeris rhodopina Verhoeff

Glomeris rhodopina Verhoeff, 1937: 101.

Now: *Glomeris balcanica* Verhoeff, 1906

LOCALITY: Bulgaria, Central Rhodope, near Shiroka Laka, 26.06.1924, P. Drensky leg.

TYPES: one specimen [Lectotype], one specimen [Paralectotype], by present designation.

REMARKS: *G. rhodopina* is currently considered as a junior synonym of *G. balcanica* Verhoeff, 1906 [Strasser, 1969].

Hyleoglomeris beroni Mauriès

Hyleoglomeris beroni Mauriès, 1984: 39.

LOCALITY: Greece, Naxos, Cave of Zeus, 17.09.1981, P. Beron leg.

TYPES: one male [Holotype], six males and fourteen females [Paratypes].

Chordeumatida

Family Anthroleucosomatidae

Anamastigona albanensis Mauriès, Golovatch et Stoev

Anamastigona albanensis Mauriès, Golovatch & Stoev, 1997: 266.

LOCALITY: Albania, Mount Petrela, ca. 15 km. SE of Tirana, alt. 350 m, under stones, ruins, shrub, 9.05.1995, Golovatch, Stoev & Petrov leg.

TYPE: one male [Holotype], two males and one female [Paratypes].

Prodicus (Antrodicus) delcevi Strasser

Prodicus (Antrodicus) delcevi Strasser, 1973: 424.

Now: *Anamastigona delcevi* (Strasser)

LOCALITY: Bulgaria, Slavyanka Mt., Gallery near the village Paril, 15.07.1971, Ch. Delchev leg.

TYPES: one specimen in a separate microvial labeled "Holotype" [Holotype], several specimens labeled "Paratypes" [Paratypes].

REMARKS: In his original description of *A. delcevi*, Strasser did not designate a holotype. However, the NMNH collection contains several specimens of *A. delcevi*, one of them kept separate from the others and labeled "Holotype", this obviously being the specimen upon which the author based his description.

Prodicus (Antrodicus) lepenicae Strasser

Prodicus (Antrodicus) lepenicae Strasser, 1975: 72.

Now: *Anamastigona lepenicae* (Strasser)

LOCALITY: Bulgaria, Velingrad Distr., Lepenitza Cave 7.04.1974, P. Beron leg.

TYPE: isolated parts of a specimen (in a separate microvial) along with numerous specimens of the same species [Syntypes].

Bulgarosoma superficiei Strasser

Bulgarosoma superficiei Strasser, 1975: 70.

LOCALITY: Bulgaria, Vitosha Mt., Aleko Hut, 1950 m, 9.05.1973, P. Beron leg.

TYPE: one specimen [Holotype], by monotypy.

Family Craspedosomatidae

Craspedosoma transsilvanicum var. *ledenitzense* Verhoeff

Craspedosoma transsilvanica var. *ledenitzense* Verhoeff, 1926b: 73.

LOCALITY: Bulgaria, Kotel Distr., Ledenitza Cave, 29.09.1924, N. Radew leg.

TYPE: one specimen [Lectotype], two specimens [Paralectotypes], by present designation.

REMARKS: Herewith, a fragmented male with missing gonopods is designated as lectotype, two immature specimens as paralectotypes.

Craspedosoma transsilvanicum madidum var. *adzharovii* Verhoeff

Craspedosoma transsilvanicum madidum var. *adzharovii* Verhoeff, 1937: 98.

LOCALITY: Bulgaria, Mt. Vitosha, above v. Dragalevci, 1100 m, 3.10.1926, D. Adzharov leg.

TYPE: one specimen [Holotype], by monotypy.

Family Haaseidae

Orobainosoma (Histrosoma) vidinense Strasser

Orobainosoma (Histrosoma) vidinense Strasser, 1973: 419.

Now: *Haasea (Histrosoma) vidinensis* (Strasser)

LOCALITY: Bulgaria, Vidin District, v. Bela, Džamiite Pot hole, 19.10.1969, P. Beron leg.

TYPES: one male specimen [Holotype], several specimens [Paratypes].

REMARKS: Although Strasser [1973] did not designate a holotype in the original description, one specimen in a microvial, with a label reading "holotype", and several others labeled "paratypes" are in the NMNH collection.

Family Heterochordeumatidae

Heterochordeuma petarberoni Shear, 2000

Heterochordeuma petarberoni Shear, 2000: 368.

LOCALITY: Indonesia, Mentawai Islands, Siberut Is., Muarasiberut, 15–20.08.1995, P. Beron & T. Ivanova leg.

TYPES: one male [Holotype], two males and one female [Paratypes].

Family Metopidiotrichidae

Malayothrix papuana Shear, 1980

Malayothrix papuana Shear, 1980: 35.

LOCALITY: Papua New Guinea, Western Province, Mt. Fugilil, about 32 km. WSW of Telefomin, at the Camp, 2980 m, 29.09.1975, P. Beron leg.

TYPE: one male [Holotype].

Callipodida

Family Schizopetalidae

Acanthopetalum subpatens Mauriès, Golovatch et Stoev

Acanthopetalum subpatens Mauriès, Golovatch & Stoev, 1997: 264.

LOCALITY: Albania, Leskoviku Distr., cave on the road Permet to Leskoviku, 5 km before Leskoviku, alt. 900 m, 12.05.1995, P. Stoev & B. Petrov leg.

TYPE: one male [Holotype].

Same locality, 1.06.1994, T. Ivanova leg.

TYPES: males (three adults and one juvenile) [Paratypes].

Balkanopetalum armatum Verhoeff

Balkanopetalum armatum Verhoeff, 1926a: 58.

LOCALITY: Bulgaria, Iskar Gorge, Tcherepish Monastery, Studenata peshtera Cave, 4.12.1924, I. Buresch leg.

TYPE: one fragmented specimen with head and gonopods missing [Holotype], by monotypy.

Balkanopetalum beskovi Strasser

Balkanopetalum beskovi Strasser, 1973: 427.

LOCALITY: Bulgaria, Central Rhodopes, v. Dobrostan, Topchika Cave, 27.05.1968, Vl. Beshkov leg.

TYPES: several specimens, one of them fragmented [Syntypes].

Same locality, 24.08.1970, Ch. Delchev leg.

TYPES: one female, one juvenile [Syntypes].

Balkanopetalum rhodopinum Verhoeff

Balkanopetalum rhodopinum Verhoeff, 1937: 95.

LOCALITY: Bulgaria, Central Rhodopes, "Novata" Cave near Peshtera, 15.10.1932, D. Papazov & N. Atanassov leg.

TYPES: one male [Lectotype], one female? [Paralectotype], by present designation.

REMARKS: As Verhoeff did not designate a holotype, a lectotype is selected herewith.

Broelemannia (Bulgaropetalum) bulgaricum [recte: -ca] Verhoeff

Brölemannia (Bulgaropetalum) bulgaricum Verhoeff, 1926c: 197.

Now: *Eurygyrus ochraceus* C.L. Koch, 1847

LOCALITY: Bulgaria, Evxinograd near Varna, 10.10.1925, King Boris III leg.

TYPES: one adult female [Lectotype], one fragmented specimen (male?) [Paralectotype], by present designation.

REMARKS: The status of *B. bulgarica* has already been discussed by Hoffman [1972], with the result that it is a junior synonym of *Eurygyrus ochraceus* C.L. Koch, 1847. As Verhoeff did not select a holotype, herewith a formal lectotype designation is made.

Polydesmida

Family Doratodesmidae

Scolopopyge pholeter Hoffman

Scolopopyge pholeter Hoffman, 1978: 301.

LOCALITY: Papua New Guinea, Western Province: Finim Tel Plateau, Bitip Cave, Upper west chamber 11.10.1975, P. Chapman leg.

TYPES: one male [Holotype], one female [Paratype].

Selminarchus hispidus Hoffman

Selminarchus hispidus Hoffman, 1978: 304.

LOCALITY: Papua New Guinea, Western Province: Finim Tel Plateau, Selminum Tem Cave, 18.10.1975, P. Chapman leg.

TYPES: one male [Holotype], several males and females [Paratypes].

Family Fuhrmannodesmidae

Sphaeroparia (Sphaeroparia) petarberoni Mauriès et Heymer

Sphaeroparia (Sphaeroparia) petarberoni Mauriès & Heymer, 1996: 174.

LOCALITY: Uganda, Ruwenzori, Stony slope below Elena Hut, 4100–4200 m, 28.02.1993, P. Beron & Vl. Beshkov leg.

TYPES: one male [Holotype], one male, three females, one juvenile [Paratypes].

Uganda, Ruwenzori, Nyamuleju-John Mate, 3000–3300 m, 4.03.1993, P. Beron & Vl. Beshkov leg.

TYPES: one female, one juvenile (from the type series).

Sphaeroparia (Sphaeroparia) violantennae Mauriès et Heymer

Sphaeroparia (Sphaeroparis) violantennae Mauriès & Heymer, 1996: 172

LOCALITY: Uganda, Ruwenzori, between Yeoman Hut and Nyabitaba Hut, 3200 m, 4.03.1993, P. Beron & Vl. Beshkov leg.

TYPES: one male [Holotype], four females and two juveniles [Paratypes].

Sphaeroparia (Sphaeroparia) beshkovi Mauriès et Heymer

Sphaeroparia (Sphaeroparia) beshkovi Mauriès & Heymer, 1996: 168

LOCALITY: Uganda, Ruwenzori, between Yeoman Hut and Nyabitaba Hut, 3200 m, 4.03.1993, P. Beron & Vl. Beshkov leg.

TYPE: one male [Holotype].

Sphaeroparia (Physetoparia) nyabitabae Mauriès et Heymer

Sphaeroparia (Physetoparia) nyabitabae Mauriès & Heymer, 1996: 179.

LOCALITY: Uganda, Ruwenzori, Nyabitaba Hut, 2650–2800 m, 4.03.1993, P. Beron & Vl. Beshkov leg.

TYPES: one male [Holotype] and three females [Paratypes].

Family Paradoxosomatidae

Astromontosoma jeekeli Hoffman

Astromontosoma jeekeli Hoffman, 1978: 288.

LOCALITY: Papua New Guinea: Western Province: Finim Tel Plateau, Upper Bitip Cave, West chamber, 11.10.1975, British Speleological Expedition FT-11

TYPE: one male [Holotype].

Cawjeekelia pyongana Mikhajlova et Kim

Cawjeekelia pyongana Mikhajlova & Kim, 1993: 34.

LOCALITY: North Korea, N. Pyongan Prov., Mt. Myohyang, 10–12.06.1987, P. Beron leg.

TYPES: one male [Holotype], prep. N 341, one juvenile [Paratype].

Cleptomorpha sumatrana Golovatch

Cleptomorpha sumatrana Golovatch, 1996: 134.

LOCALITY: Indonesia, Sumatra, Mt. Kerinci, Kerinci-Seblat Nat. Park, ca. 1400–2600 m, 25.05.1994, P. Beron & Vl. Beshkov leg.

TYPES: one male [Holotype], six females [Paratypes].

Eustrongylosoma exiguum Hoffman

Eustrongylosoma exiguum Hoffman, 1978: 285.

LOCALITY: Papua New Guinea: Western Province: Finim Tel Plateau, Selminum Tem Cave, 18.10.1975, P. Chapman leg.

TYPE: one male [Holotype].

Metonomastus petrelensis Mauriès, Golovatch et Stoev

Metonomastus petrelensis Mauriès, Golovatch & Stoev, 1997: 271.

LOCALITY: Albania, Mount Petrela, ca. 15 km SE of Tirana, 300 m, artificial galleries near the road, 9.05.1995, P. Stoev & B. Petrov leg.

TYPE: one male [Holotype], six females [Paratypes].

Nothrosoma beroni Hoffman

Nothrosoma beroni Hoffman, 1978: 296.

LOCALITY: Papua New Guinea: Western Province: Finim Tel Plateau, Selminum Tem Cave, 18.10.1975, British Speleological Expedition.

TYPE: one female [Holotype].

Orthomorpha beroni Golovatch

Orthomorpha beroni Golovatch, 1997: 76.

LOCALITY: Indonesia, Java, Puncak Pass, 34 km from Bogor, 1500–1600 m, 6.07.1994, P. Beron & Vl. Beshkov leg.

TYPES: one male [Holotype], two males and one female [Paratypes].

Selminosoma chapmani Hoffman

Selminosoma chapmani Hoffman, 1978: 291.

LOCALITY: Papua New Guinea: Western Province: Finim Tel Plateau, Selminum Tem Cave, 15.10.1975, P. Chapman leg.

TYPES: one male [Holotype], one female [Paratype].

Same locality 18.10.1975, P. Chapman leg.

TYPES: numerous males and females [Paratypes].

Tectoporus aberrans Golovatch

Tectoporus aberrans Golovatch, 1996: 137.

LOCALITY: Indonesia, Sumatra, Mt. Kerinci, Kerinci-Seblat Nat. Park, ca. 1400–2600 m, 25.05.1994, P. Beron & Vl. Beshkov leg.

TYPE: one male [Holotype].

Tectoporus beroni Golovatch

Tectoporus beroni Golovatch, 1996: 137.

LOCALITY: Indonesia, Sumatra, Mt. Kerinci, Kerinci-Seblat Nat. Park, ca. 1400–2600 m, 25.05.1994, P. Beron & Vl. Beshkov leg.

TYPE: one male [Holotype].

Tectoporus beshkovi Golovatch

Tectoporus beshkovi Golovatch, 1996: 139.

LOCALITY: Indonesia, Sumatra, Mt. Kerinci, Kerinci-Seblat Nat. Park, ca. 1400–2600 m, 25.05.1994, P. Beron & Vl. Beshkov leg.

TYPE: one male [Holotype].

Tectoporus lombokensis Golovatch

Tectoporus lombokensis Golovatch, 1995: 95.

LOCALITY: Indonesia, Lombok, Rinjani, rainforest above Satip, 500–800 m, 10.06.1994, P. Beron & Vl. Beshkov leg.

TYPE: one male [Holotype].

Tylopus sinensis Golovatch

Tylopus sinensis Golovatch, 1995: 90.

LOCALITY: China, Yunnan, Menzi County, Pot hole N2 (Ha Fa Tiao Dong), 6.01.1989, P. Beron leg.

TYPE: one male [Holotype].

Vaulogerodesmus beroni Golovatch

Vaulogerodesmus beroni Golovatch, 1995: 92.

LOCALITY: China, Nanjing, Zijin (Purple) Mt., 350–450 m, 9.10.1988, P. Beron leg.

TYPES: one male [Holotype], two males and three females [Paratypes].

Vaulogerodesmus picturatus Golovatch

Vaulogerodesmus picturatus Golovatch, 1995: 92.

LOCALITY: China, Guanxi Zhuangxi County, Zhizhigu Guilin, 6.10.1988, P. Beron leg.

TYPES: one male [Holotype], one female [Paratype].

Family Polydesmidae

Brachydesmus herzogowinensis reflexus Strasser

Brachydesmus herzogowinensis reflexus Strasser, 1975: 74.

LOCALITY: Bulgaria, Sofia District, v. Breze, Marina dupka Cave, 2.05.1974, P. Beron & Vl. Beshkov leg.

TYPE: several specimens [Syntypes].

REMARKS: As the original species name *herzogowinensis* Verhoeff has since been frequently misspelt as *herzegowinensis* or *hercegovinensis*, we use the correct name in the heading [cf. Mauriès et al., 1997]. The same concerns the next heading as well.

Brachydesmus herzogowinensis trifidus Strasser

Brachydesmus herzegowinensis trifidus Strasser, 1973: 415

LOCALITY: Bulgaria, Kjustendil District, v. Stradalovo, Mecha dupka Cave, 27.02.1969, P. Beron & Vl. Beshkov leg.

TYPES: one specimen in a separate microvial labeled "Holotype" [Holotype] and two specimens labeled "Paratypes" [Paratypes].

REMARKS: Though Strasser [1973] did not designate a holotype in his paper, the underlying material, in the NMNH, was properly labeled and designated, obviously being the one upon which the author based his description.

Brachydesmus radewi Verhoeff

Brachydesmus radewi Verhoeff, 1926b: 73.

LOCALITY: Bulgaria, Vratza Distr., v. Dolna Beschovitz, Promakinjalo Cave, 6.02.1925, N. Radew leg.

TYPE: one fragmented specimen [Holotype], by monotypy.

Epanerchodus beroni Mikhajlova et Kim

Epanerchodus beroni Mikhajlova & Kim, 1993: 31.

LOCALITY: North Korea, Kangwon Province, Kumgang-san, 400–900 m, 4.06.1987, P. Beron leg.

TYPES: one male [Holotype] prep. N 235, 337 (antennae), 338; two females, prep. N 339 (vulva) and 1 juvenile [Paratypes] (numbers of the authors).

Polydesmus bureschi Verhoeff

Polydesmus bureschi Verhoeff, 1928: 31.

LOCALITY: Bulgaria, Tarnovo Distr., Kaltschowa dupka Cave, 3.04.1926, D. I. Buresch leg.

TYPE: one specimen [Syntype].

Family Xystodesmidae

Leptodesmus vestitus thracicus Verhoeff

Leptodesmus vestitus thracicus Verhoeff, 1926c: 200.

Now: *Melaphe vestita thracia* (Verhoeff)

LOCALITY: European Turkey, Thracia, Kuru-Dagh, 600 m, 1.05.1913, I. Buresch leg.

TYPES: several specimens of both sexes [Paralectotypes].

REMARKS: The lectotype of *M. vestita* has already been designated by Hoffman [1962] from the Verhoeff collection in Munich. The subspecific status of *thracia* is still uncertain. Moreover, this taxon might very readily prove to represent a junior synonym of *Melaphe thrax* (Brandt, 1839).

Julida

Family Julidae

Anaulaciulus koreanus salebrosus Mikhajlova et Kim

Anaulaciulus koreanus salebrosus Mikhajlova & Kim, 1993: 35.

LOCALITY: North Korea, N. Pyongan Province, Mt. Myohyang, 10–12.06.1987, P. Beron leg.

TYPES: one male [Holotype]; three males and one female, prep. N 340 (1, 2 leg pairs, antennae), prep. N 342 (vulva).

Apfelbeckiella (Rhodopiella) beroni saetigera Strasser

Apfelbeckiella (Rhodopiella) beroni saetigera Strasser, 1973: 448.

LOCALITY: Bulgaria, Bourgas Distr., v. Mladezhko, Kaletto Cave, 9.08.1970, P. Beron & Vl. Beshkov leg.

TYPE: one specimen labeled "Paratype" [Paratype] along with a *Trachysphaera* sp. and other Julida.

REMARKS: The specimen labeled "paratype" undoubtedly belongs to Strasser's original series, although he did not designate a holotype in the paper.

Cylindroiulus (Crenatoiulus) kuschensis Golovatch

Cylindroiulus (Crenatoiulus) kuschensis Golovatch, 1978a: 299.

Now: *Cylindroiulus kuschensis* Golovatch

LOCALITY: Central Asia, Turkmenistan, Kushka, near v. Morgunovka, *Pistacia* shrub, 11.04.1976, S. Golovatch leg.

TYPE: one female [Paratype].

Cylindroiulus ponticus Golovatch

Cylindroiulus ponticus Golovatch, 1978b: 456.

Now: *Cylindroiulus horvathi* (Verhoeff, 1897)

LOCALITY: Ukraine, Crimea, near village Krasnolesye, shrub, litter, 10.08.1976, S. Golovatch leg.

TYPE: one female [Paratype].

REMARKS: *C. ponticus* is now considered as a synonym of *Cylindroiulus horvathi* (Verhoeff, 1897) [Korsós & Read, 1994].

Leptoiulus (Oroiulus) borisi Verhoeff

Leptoiulus (Oroiulus) borisi Verhoeff, 1926c: 205.

LOCALITY: Bulgaria, Pirin Mt., Kameniti vrach (Peak), 2750 m, under stones, 4.07.1924, King Boris III leg.

TYPES: one specimen [Lectotype], one specimen [Paralectotype], by present designation.

REMARKS: We have found two specimens labeled *L. borisi*, both preserved in a glass cylinder prepared for the Museum's exhibition. It appears quite complicated to remove the specimens but herewith the larger is formally designated as lectotype and the smaller as paralectotype.

Leptoiulus trilineatus bureschi Verhoeff

Leptoiulus trilineatus bureschi Verhoeff, 1928: 37.

LOCALITY: Bulgaria, Vitosha Mt., above Knjazhewo, 1400 m, 24.10.1926, Iv. Buresch leg.

TYPES: one fragmented specimen [Lectotype], two fragmented specimens [Paralectotypes], by present designation.

Chromatoiulus (Ch.) beroni Strasser

Chromatoiulus (Ch.) beroni Strasser, 1973: 444.

Now: *Megaphyllum beroni* (Strasser)

LOCALITY: Bulgaria, Rhodope Mt., v. Trigrad, Djavolsko garlo Cave, 10.07.1969, P. Beron leg.

TYPE: one specimen in microvial [Holotype?], several specimens along with a *Bulgarosoma?* sp. [Paratypes?].

Megaphyllum brachyurum thassensis Mauriès

Megaphyllum brachyurum thassensis Mauriès, 1985: 53.

LOCALITY: Greece, Thassos I., v. Panagia, Drakotrypa Cave, 28.12.1982, P. Beron & St. Andreev leg.

TYPES: one male [Holotype], four males, one female, two juveniles [Paratypes].

Chromatoiulus (Italoilulus) margaritatus var. *cretica* Strasser

Chromatoiulus (Italoilulus) margaritatus var. *cretica* Strasser, 1976: 620.

Now: *Megaphyllum margaritatum* var. *cretica* (Strasser)

LOCALITY: Greece, Crete, Levka Ori, 2200 m, 25.09.1974, P. Beron & St. Andreev leg.

TYPE: one male [Holotype], by monotypy.

Brachyiulus rhodopinus Verhoeff

Brachyiulus rhodopinus Verhoeff, 1928: 33.

Now: *Megaphyllum rhodopinum* (Verhoeff)

LOCALITY: Bulgaria, Central Rhodope, Batak, 20.06.1926, Iv. Buresch leg.

TYPE: one specimen [Syntype].

Syrioilulus andreevi Mauriès*Syrioilulus andreevi* Mauriès, 1984: 44.

LOCALITY: Greece, Paros Isl., v. Marathi, "Grotte-Carrière de Marbre" (Marble Cave — quarry), 23.12.1982, P. Beron & St. Andreev leg.

TYPES: one male [Holotype], one female [Paratype].

Telsonius nycteridonis Strasser*Telsonius nycteridonis* Strasser, 1976: 622

LOCALITY: Greece, Chalkidiki Peninsula, Spilja Nycteridon Cave near Petralona, 10.10.1974, P. Beron & V. Beshkov leg.

TYPE: one male specimen, prep. N 2291 (gnathochilarium, 1, 2, 3, 7 pairs of legs), one female specimen, prep. N 2291 (antenna) [Syntypes].

Typhloiulus beroni Mauriès, Golovatch et Stoev*Typhloiulus beroni* Mauriès, Golovatch & Stoev, 1997: 273.

LOCALITY: Albania, Korca Distr., Pustec (Liquena), artificial gallery, 5.10.1994, P. Beron leg.

TYPES: one male [Holotype]; two males, two females, two juveniles [Paratypes]; male [Paratype] prep. N 35.

Typhloiulus longipes Strasser*Typhloiulus (Inversotyphlus) longipes* Strasser, 1973: 434.

LOCALITY: Bulgaria, Vraca Distr., Beljar Cave, 7.10.1968, P. Beron leg.

TYPES: one adult female, one juvenile female [Syntypes]. Bulgaria, Vratza Distr., v. Chiren, Zvankova dupka Cave, 2.10.1968, P. Beron leg.

TYPE: one juvenile specimen [Syntype].

REMARKS: The specimens from Cave Beljar have been sent for study to Dr. Henrik Enghoff, who identified them as being paratypes of *T. longipes*.*Typhloiulus staregai* Strasser*Typhloiulus (?) staregai* Strasser, 1973: 438.

LOCALITY: Bulgaria, Vidin Distr., v. Salash, grotte Rushkovica, 21.10.1969, P. Beron leg.

TYPES: [Syntypes].

Family Blaniulidae

Thassoblaniulus simplarius Mauriès*Thassoblaniulus simplarius* Mauriès, 1985: 53.

LOCALITY: Greece, Thassos I., v. Panagia, Drakotrypa Cave, 28.12.1982, P. Beron & St. Andreev leg.

TYPES: one male [Holotype], four males, seven females [Paratypes].

Nepalmatoiulus generalis Enghoff*Nepalmatoiulus generalis* Enghoff, 1987: 269.

LOCALITY: Nepal, Langtang Valley, Kyongjin Gompa, forest, 3800–4000 m, 23.09.1984, P. Beron leg.

TYPES: eight males, two females, seven juvenile males, three juvenile females, one asex. [Paratypes].

Nepal, Anapurna region, Trekking from New Dobhan Lodge to Hinku, 2500–3000 m, 12.10.1984, P. Beron leg.

TYPES: eleven males, five females, one juvenile female [Paratypes].

Nepal, Anapurna trek, from Hinku to Tadapani, 17.10.1984, 2500–3000 m, P. Beron leg.

TYPES: six males, seven females [Paratypes].

Nepal, Anapurna region, Machhapuchhre Base Camp to Hinku, 3400–3800 m, 13.10.1984, P. Beron leg.

TYPES: one male, one female [Paratypes].

Nepal, Anapurna Base Camp, 3800–4300 m, 14.10.1984, P. Beron leg.

TYPES: two males, one female [Paratypes].

Nepalmatoiulus pygmaeus Enghoff*Nepalmatoiulus pygmaeus* Enghoff, 1987: 311.

LOCALITY: Thailand, Doi Inthanon Nat. Park, 2000–2540 m, 13.11.1984, P. Beron & St. Andreev leg.

TYPES: two males, two females [Paratypes].

Conclusions

CHILOPODA

The chilopod types kept at the Sofia Museum were treated by Verhoeff [1926d, 1928], Matic [1973a, b, 1980a, b], Matic & Stavropoulos [1988, 1990], Stavropoulos & Matic [1990], Eason [1993] and Ribarov [1987a, b]. Altogether, 38 taxa belonging to five families, Lithobiidae (32), Scolopendridae (1), Cryptopidae (3), Dignathodontidae (1), and Himantariidae (1), are deposited in the Museum; of these, 31 taxa have been described from Bulgaria, 13 from Greece, and one each from Turkey, Nepal, Burma and New Guinea. Approximately one-third of these are now considered synonyms of species named earlier, some of the remaining taxa are of uncertain identity. The Museum keeps also some specimens of *Lithobius lakatnicensis* Verhoeff, 1926, *Lithobius beschkovi* Matic & Golemansky, 1967, *Lithobius popovi* Matic, 1973, etc. which have been collected from the *loci typici*, i.e. topotypes.

DIPLOPODA

The diplopod types preserved at the NMNH in Sofia are more numerous compared to these of centipedes. Also, the type localities cover as many as fourteen countries. The type materials were treated by Verhoeff [1926a, b, c, 1928, 1937], Strasser [1969, 1973, 1975, 1976], Shear [1980, 2000], Hoffman [1977/78], Mauriès [1984, 1985], Mauriès & Heymer [1996], Mauriès et al. [1997], Mikhajlova & Kim [1993], Enghoff [1987] and Golovatch [1978a, b, 1995, 1996, 1997]. In total, types of 65 millipede taxa representing 14 families have been deposited in the Museum: 25 from Bulgaria, eight from Greece, seven each from Papua New Guinea and from Indonesia, four each from Albania and Uganda, three each from North Korea and China, and one each from European Turkey, the Ukraine, Turkmenistan, Thailand, and Nepal. In addition, specimens of several species such as *Bulgarosoma bureschi* Verhoeff, 1926, *Anamastigona alba* (Strasser, 1960), *Typhloiulus burenschi* Verhoeff, 1926, *Szechuanella grandis* Golovatch, 1984, etc. taken from their type localities, i.e. topotypes, are also in the collection of the Museum, thus reinforcing its importance as a repository.

In conclusion, at present the NMNH in Sofia houses type material of 103 taxa of Myriapoda originating from fifteen countries in Europe, Asia, Africa, and Australasia. Although samples from the Americas kept in the Museum are fairly numerous as well, no type specimens have been described/designated among them yet.

References

- Eason E.H. 1980. Zoological Results of the British Speleological Expedition to Papua New Guinea, 1975. A new species of the subgenus *Australobius*, genus *Lithobius* (Chilopoda: Lithobiomorpha) from Papua New Guinea // *Myriapodologica*. T.1. No.6. P.41–46.
- Eason E.H. 1983. The identity of the European and Mediterranean species of Lithobiidae (Chilopoda) described by K.W. Verhoeff and now represented by material preserved in the British Museum (Natural History) // *Zoological Journal of Linnean Society*. Vol.77. P.111–144.
- Eason E. H. 1993 (for 1990). Descriptions of four new species of *Lithobius* from the Oriental region and a redescription of *Australobius pabnis* (Eason, 1973) from Sri Lanka // *Bull. Mus. Civ. Storia nat. Verona*. T.17. P.181–200.
- Engelhoff H. 1987. Revision of *Nepalmatoiulus* Mauriès 1983 — a Southeast Asiatic genus of millipedes (Diplopoda: Julida: Julidae) // *Courier Forsch.-Inst. Senckenberg*. T.93. P.241–331.
- Golovatch S. 1978a. [A new species of the genus *Cylindroiulus* (Diplopoda, Julida) from South Turkmenia] // *Zool. Zhurnal*. T.57. No.2. P.299–301 [in Russian, with English summary].
- Golovatch S. 1978b. [New or poorly known species of the Diplopoda from the European part of the USSR] // *Ibid.* T.57. No.3. P.453–457 [in Russian, with English summary].
- Golovatch S. 1995. On several new or poorly-known Oriental Paradoxosomatidae (Diplopoda Polydesmida), III // *Arthropoda Selecta*. T.4. No.2. P.89–97.
- Golovatch S. 1996. On several new or poorly-known Oriental Paradoxosomatidae (Diplopoda Polydesmida), V // *Ibid.* T.5. Nos 3–4. P.131–141.
- Golovatch S. 1997. Review of the Sunda *weberi*-group of *Orthomorpha* Bollman, 1893, with the description of two new species (Diplopoda, Polydesmida, Paradoxosomatidae) // *Miscellanea Zoologica*. T.20. No.1. P.73–80.
- Hoffman R.L. 1978 (for 1977/78). Diplopoda from Papuan caves (Zoological Results of the British Speleological Expedition to Papua-New Guinea, 1975,4) // *Int. J. Speleol.* Vol.9. P.281–307.
- Korsós Z., Read H. 1994. Revision of the *horvathi* group and description of a new species of *Cylindroiulus* (Diplopoda: Julidae) // *Journal of Natural History*. Vol.28. P.841–852.
- Matic Z. 1964. Description d'un nouveau lithobiide cavernicole de Bulgarie (Chilopoda) // *Ann. Spéléol.* T.9. No.3. P.507–510.
- Matic Z. 1967. Contributions à la connaissance des chilopodes cavernicoles de Bulgarie // *Bull. Zool. Inst. Museum, Sofia*. T.23. P.235–242.
- Matic Z. 1973a. *Lithobius balcanicus* n.sp. — une nouvelle lithobiide (Chilopoda, Lithobiomorpha) de Bulgarie // *Ibid.* T.38. P.249–251.
- Matic Z. 1973b. Nouvelles contributions à la connaissance des chilopodes cavernicoles de Bulgarie // *Ibid.* T.38. P.253–263.
- Matic Z. 1980a. Chilopodes recueillis en Turquie, Liban et Iran // *Acta zoologica bulgarica*. T.15. T.93–98.
- Matic Z. 1980b. Chilopodes recueillis dans l'île Crète // *Ibid.* T.15. P.100–101.
- Matic Z., Golemansky V. 1964. Contribution à la connaissance des Lithobiidae (Chilopoda, Lithobiomorpha) en Bulgarie // *Annuaire de l'Université de Sofia, Fac. Biol.* T.57. P.99–106.
- Matic Z., Golemansky V. 1965. Nouvelle contribution à la connaissance des Lithobiidae (Chilopoda, Lithobiomorpha) en Bulgarie // *Ibid.* T.58. P.13–28.
- Matic Z., Golemansky V. 1967a. Recherches sur les espèces et l'écologie des Lithobiidae (Chilopoda, Lithobiomorpha) en Bulgarie // *Bull. Zool. Inst. Museum, Sofia*. T.24. P.121–132.
- Matic Z., Golemansky V. 1967b. Le sous-genre *Monotarsobius* (Chilopoda, Lithobius) en Bulgarie // *Ibid.* T.24. P.39–50.
- Matic Z., Golemansky V. 1967c. Matériaux sur la faune des Lithobiidae (Chilopoda, Lithobiomorpha) en Bulgarie // *Ibid.* T.25. P.17–21.
- Matic Z., Stavropoulos G. 1988. Contribution à la connaissance des chilopodes de Grèce // *Biologia Gallo-hellenica*. T.14. No.1. P.33–46.
- Matic Z., Stavropoulos G. 1990. Nouvelles contributions à l'étude de la faune de chilopodes (Chilopoda) de Grèce. I. // *Ibid.* T.17. No.1. P.27–35.
- Mauriès J.P. 1984. Deux espèces nouvelles de Diplopodes cavernicoles des Cyclades: *Hyleoglomeris beroni* (Glomerida) et *Syrioiulus andreevi* (Julida) // *Ibid.* T.11. No.1. P.37–49.
- Mauriès J.-P. 1985. Les Diplopodes récoltés en 1982 par P. Beron et S. Andreev dans l'île de Thasos (Grèce). *Thassoblaniulus*, nouveau genre de Blaniulidae (Blaniulinae) // *Acta zoologica bulgarica*. T.28. P.52–59.
- Mauriès J.-P., Heymer A. 1996. Nouveaux micropolydesmides d'Afrique centrale: essai de ressemblance pour une révision du genre *Sphaeroparia* (Diplopoda, Polydesmida, Fuhrmannodesmidae) // *Bull. Mus. natn. Hist. Nat., 4^e série*. T.18, Sect.A. Nos 1–2. P.165–184.
- Mauriès J.-P., Golovatch S., Stoev P. 1997. The millipedes of Albania: recent data, new taxa; systematical, nomenclatural and faunistic review (Myriapoda, Diplopoda) // *Zoosystema*. T.19. Nos 2–3. P.255–292.
- Mikhailova E., Kim Pil-Jong 1993. Contribution to the millipede fauna of Korea (Diplopoda) // *Korean Arachnol.* Vol.9. Nos 1–2. P.31–42.
- Negrea S. 1971. *Lithobius* (*Monotarsobius*) *taschevi* Matic et Golemansky est un synonyme de *Lithobius* (*Monotarsobius*) *beroni* Negrea (Chilopoda, Lithobiomorpha) // *Trav. Inst. Spéol.* "Emile Racovitza" T.10. P.231–233.
- Ribarov G. 1987a. Five new species of Lithobiomorpha (Chilopoda) from Southeastern Bulgaria // *Acta zoologica bulgarica*. T.34. P.45–52.
- Ribarov G. 1987b. *Henia angelovi* sp. n. (Chilopoda, Geophilidae) — eine neue *Henia*-Art aus Südostbulgarien // *Ibid.* T.35. P.86–89.
- Ribarov G. 1989. On some Chilopoda species (Myriapoda) published by S. Jurinich and K. Verhoeff // *Historia naturalis bulgarica*. T.1. P.34–35.
- Shear W.A. 1980. Zoological Results of the British Speleological Expedition to Papua New Guinea, 1975. *Malayothrix papuana* n.sp., the first chordeumid millipede from New Guinea (Chordeumida, Metopidiotrichidae) // *Myriapodologica*. T.1. No.5. P.35–40.
- Shear W.A. 2000. On the millipede family Heterochordeumatidae, with comments on the higher classification of the order Chordeumatida (Diplopoda) // *Invertebrate Taxonomy*. Vol.14. P.363–376.
- Stavropoulos G., Matic Z. 1990. Nouvelles contributions à l'étude de la faune de chilopodes (Chilopoda) de Grèce. II. // *Biologia Gallo-hellenica*. T.17. No.1. P.37–47.
- Strasser K. 1969. Über Diplopoden Bulgariens, II. // *Ann. Zoologici PAN.* T.27. No.7. P.133–168.
- Strasser K. 1973. Über Diplopoden Bulgariens, III. // *Ibid.* T.30. No.15. P.411–469.
- Strasser K. 1975. Weiterer Beitrag zur Kenntnis der bulgarischen Diplopoden // *Acta zoologica bulgarica*. T.3. P.70–77.
- Strasser K. 1976. Über Diplopoda-Chilognatha Griechenlands, II // *Revue suisse Zool.* T.83. Fasc.3. P.579–645.
- Stoev P. 1997. *Lithobius christovici* Matic et Golemansky, 1964, a junior synonym of *Lithobius ergus* (Chamberlin, 1952) (Chilopoda: Lithobiomorpha) // *Annuaire de l'Université de Sofia "St. Kliment Ohridski"* T.88. No.4. P.111–113.
- Stoev P. (in prep). Review of the Bulgarian cave Chilopoda.
- Verhoeff K. 1926a. Chilognathen-Beiträge (103. Diplopoden-Aufsatz) // *Zool. Anz.* Bd.68. H.1–2. S.57–71.
- Verhoeff K. 1926b. Über einige von Dr. I. Buresch in Bulgarien gesammelte Diplopoden. I. Aufsatz // *Trav. Soc. bulg. Sci. nat.* Sofia. T.12. P.67–78.
- Verhoeff K. 1926c. Über einige von Dr. I. Buresch in Bulgarien gesammelte Diplopoden. II. Aufsatz // *Mitt. bulg. ent. Ges.* Sofia. Bd.3. S.193–210.
- Verhoeff K. 1926d. Zwei neue Höhlen-Myriapoden aus Bulgarien // *Zool. Anz.* Bd.65. S.294–296.

- Verhoeff K. 1927. Über Chilopoden aus Bulgarien gesammelt von Herrn Dr. Iw. Buresch. (I. Aufsatz) // Mitt. bulg. ent. Ges. Sofia. Bd.4. S.115–124.
- Verhoeff K. 1928. Über Diplopoden aus Bulgarien, gesammelt von Dr. I. Buresch. III. Aufsatz // Mitt. Naturwiss. Inst. Sofia. Bd.1. S.28–44.
- Verhoeff K. 1937. Über Diplopoden aus Bulgarien, gesammelt von Dr. I. Buresch und seinen Mitarbeitern. IV. Aufsatz // Ibid. Bd.10. S.93–120.
- Zapparoli M. 1994. Note tassonomiche e faunistiche su chilopodi della Grecia (Chilopoda) // Fragm. Entomol. T.26. No.1. P.11–66.