



Bohumil Němec and his collection of centipedes (Chilopoda), symphylans (Symphyla) and isopods (Isopoda) at the National Museum of the Czech Republic

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Abstract: The present catalogue lists data from a total of 11 centipede, one symphylan and 17 isopod specimens from nine centipede, one symphylan and six isopod species of the collection by the Czech scientist Bohumil Němec (1873–1966), housed in the National Museum of the Czech Republic. The material was collected in the period from the second half of the 19th century to the beginning of the 20th century, in the modern-day Czech Republic, and contains syntypes of *Haplophthalmus elegans* Schöbl, 1860 and *Typhloniscus steinii* Schöbl, 1860.

Keywords: myriapodological and isopod collection, Josef Schöbl, type specimens, historical records, faunistics

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Introduction

Professor Bohumil Němec (Fig. 1) was a famous Czech scientist, known world-wide as a plant physiologist. He was born on March 12th, 1873, in the village of Prasek near Nový Bydžov. During his study at the secondary school in Nový Bydžov, he became interested in woodlice, influenced by the work of Josef Schöbl (1837–1902, Fig. 2) (Schöbl 1861). After graduating from secondary school in 1892, he started his studies at Charles University in Prague. As his teacher was an outstanding zoologist, professor František Vejdovský (1849–1939), Němec's first publications were also zoological (see Dostál et al. 1966).

During that time, Němec collected myriapods and isopods in the surrounding areas of both his home and Prague. Contrary to his impact on taxonomy of millipedes (Dolejš et Kocourek 2019), he did not publish any work dealing with centipedes, but he focused intensely on the



Fig. 1. Bohumil Němec, 25 years old, when he was studying isopods.



Fig. 2. Josef Schöbl, who collected most isopods now included in Němec's collection.

anatomy of woodlice (Němec 1895b, 1896a, 1896b 1896c, 1896d, 1896e), their parasites (Němec 1895a), and described even a new woodlouse species, *Trichoniscus stygius* Němec, 1897 [now valid as *Androniscus stygius* (Němec, 1897)]. Besides describing the species (Němec 1897a), he also described exploring the cave where he had found this species (Němec 1897b), and commented on the absence of eyes in this and related species (Němec 1898). His works on woodlice (Němec 1895b, 1896a) served as his dissertation.

In 1895, he became a post-graduate researcher and lecturer of plant anatomy and physiology, and in 1907, professor at Charles University, where he worked until the beginning of the Second World War (in 1921–1922 also as a rector). Němec participated in social, cultural and political events, and identified with national interests. In 1913, he became a secretary (“spiritus agens”) of the Society of the National Museum, and five years later, he saved the museum from bankruptcy by organizing a fundraiser (Krekule 2006, 2007, Němec 2020). During the years 1926–1929, he was a senator, and in 1935, Němec campaigned for the Czechoslovakian presidency, against Dr. Edvard Beneš (1884–1948) (Winters 2002). He was also a member of the Linnean Society in London and of the German Academy of Natural Sciences Leopoldiana in Halle-Saale. When Czech universities were closed under the German occupation in 1939, Němec was retired.

In 1945, immediately after the WWII, he founded the Institute for Plant Physiology at the Comenius University in Bratislava, Slovakia (Dostál et al. 1966). Eight years later, Němec became an academician at the Czechoslovak Academy of Science, where he was active until the end of his life (Krekule 2006, Němec 2020). Bohumil Němec died at the age of 93 on April 7th, 1966, in Havlíčkův Brod. Further relevant information can be found in Milovidov (1958), Havel (1966), Klášterský (1967), Kloz (1973), Loginov (2018) and Němec (2020).

Němec’s centipede collection contains 11 specimens, representing nine species from the orders Geophilomorpha, Lithobiomorpha and Scolopendromorpha. His symphylan collection is represented by a single individual and, finally, his isopod collection contains 17 specimens, representing six species, including syntypes of two species.

The National Museum of the Czech Republic also hosts some private centipede and isopod collections by the zoologists Luděk Jindřich Dobroruka (1933–2004) (Dolejš 2015), and František Miller (1902–1983) (Dolejš et Tuf 2018) and Karl Wilhelm Verhoef (1867–1945), respectively. The collection of Bohumil Němec, whose millipede collection was also catalogued (Dolejš et Kocourek 2019), is thus an important part of the series of collections that have belonged to distinguished personalities.

Material and methods

All of the centipedes, symphylan and isopods are stored in 80% ethanol. Almost all of them were sexed and identified or revised by the second author, using the keys of Frankenberger (1954), Folkmanová (1959), Malinková (2009) and Vítková (2024). Species within the orders are sorted alphabetically (no order is designated in Symphyla). Photographs of the type specimens were made using an Olympus SZX-12 stereomicroscope equipped with an Olympus E-510 camera.

The data is arranged as follows: Locality (number of mapping grid square), date of collection, number and sex of specimens (inventory number: as a combination of the collection phrase

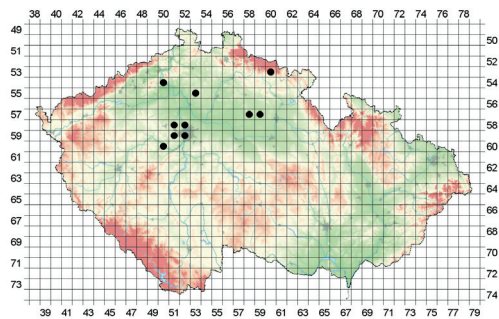


Fig. 3. Map of localities where material in Němec’s centipede, symphyla and isopod collection comes from. Created by online application BioLib (2025) website.

P6E and the specimen number) [Němec's number]. Exact collecting dates of most of the samples are unknown. The majority of the centipede material was collected by B. Němec himself during 1894–1896 (Němec 1896f), unless otherwise stated. His centipede material, along with material obtained from other collectors, was subsequently deposited in the National Museum in 1897 (accession number 652/1897). The isopod material, however, turned out to be mostly collected by Josef Schöbl, meaning it is much older, originating before the year 1861.

The geographic position of localities (Fig. 3) is defined in terms of grid squares after Buchar (1982), and in the case of Czech settlements, after Pruner et Míka (1996).

Systematic list

CLASS: SYMPHYLA

Scutigera immaculata (Newport, 1845)

CZECH REPUBLIC: Krkonoše Mts. (5360), 1 specimen (P6E 4116) [652/1], leg. B. Hellich, mentioned by Rosický (1876a, 1876b).

CLASS: CHILOPODA

Order: Geophilomorpha

Clinopodes flavidus C. L. Koch, 1847

CZECH REPUBLIC: Praha – Štvanice (5952), 1 ♀ (P6E 1358) [652/22]; Praha – Nusle (5952), 1 ♀ (P6E 1391) [652/22].

Geophilus impressus C. L. Koch, 1847

CZECH REPUBLIC: Nový Bydžov (5758–5759), 1 ♀ (P6E 4118) [652/23].

Geophilus flavus (De Geer, 1778)

CZECH REPUBLIC: Žernoseky (5450), 1 ♂ (P6E 4123) [230].

Pachymerium ferrugineum (C. L. Koch, 1835)

CZECH REPUBLIC: Nový Bydžov (5758–5759), 1 ♀ (P6E 1359) [652/21]; Žernoseky (5450), 1 ♀ (P6E 1390) [652/21].

Schendyla nemorensis (C. L. Koch, 1837)

CZECH REPUBLIC: Praha – Štvanice (5952), 1 juvenile (P6E 4120) [none].

Strigamia acuminata (Leach, 1815)

CZECH REPUBLIC: Krkonoše Mts. – Velká Úpa, Špičák Mt. (5360), 1 ♂ (P6E 4119) [652/24], leg. B. Hellich, mentioned by Rosický (1876a, 1876b).

Order: Lithobiomorpha

Lithobius mutabilis L. Koch, 1862

CZECH REPUBLIC: Nový Bydžov (5758–5759), 1 ♂ (P6E 4117) [652/20].

Lithobius muticus C. L. Koch, 1847

CZECH REPUBLIC: Kokořín (5553), 1 June 1903, 1 ♂ (P6E 4121) [none].

Order: Scolopendromorpha

Cryptops hortensis (Donovan, 1810)

UNKNOWN: presumably Bohemia, 1 specimen (P6E 4122) [225].

CLASS: MALACOSTRACA

Order: Isopoda

Asellus aquaticus (Linnaeus, 1758)

CZECH REPUBLIC: Bohemia, 2 specimens (P6E 5651) [466], leg. J. Schöbl.

Cylisticus convexus (De Geer, 1778)

UNKNOWN: presumably Bohemia, 3 ♂♂, 3 ♀♀ (P6E 5652) [652/26].

Platyarthrus hoffmannseggi Brandt, 1833 (Fig. 5a–b)

CZECH REPUBLIC: Praha – Radlice (5952), Šárka (5851–5951), centre (rampart) (5952), Košíře (5952), August 1857–1859, 4 ♀♀ (Fig. 5a) (P6E 4124) [452], leg. J. Schöbl & E. Lokaj, mentioned by Schöbl (1860a, 1861).

NOTE: The specimens are syntypes of *Typhloniscus steinii* Schöbl, 1860: 282, which is now considered a junior synonym of *Platyarthrus hoffmannseggi* Brandt, 1833 (Schmalfuss 2003). The synonymy was known already to Němec, who mentioned it on his hand-written label (Fig. 5b).

Porcellio scaber Latreille, 1804

CZECH REPUBLIC: Prague (5952) or Roztoky (5852), 1 ♂, 1 ♀ (P6E 5654) [468], leg. J. Schöbl, mentioned by Schöbl (1861).

Porcellio spinicornis Say, 1818

CZECH REPUBLIC: Praha – Cibulka (5952): 2 ♀♀ (P6E 5655) [459], leg. J. Schöbl, mentioned by Schöbl (1861; sub. *P. pictus*).

Trichoniscus sp. (Fig. 4a–b)

CZECH REPUBLIC: Svatý Jan pod Skalou – Sv. Ivan cave (6050), May 1859 or August 1860, 1 specimen (Fig. 4a) (P6E 5653) [455], leg. J. Schöbl, mentioned by Schöbl (1860b, 1861).

NOTE: The specimen is a syntype of *Haplophthalmus elegans* Schöbl, 1860: 449, which is now considered a junior synonym of *Haplophthalmus mengii* (Zaddach, 1844) (Schmalfuss 2003). The synonymy was known already to Němec, who mentioned it on his hand-written label (Fig. 4b). However, this damaged specimen belongs to the genus *Trichoniscus*. The fate of the rest of the syntypes is unknown.

Discussion

The centipede, symphylan and isopod collection of Bohumil Němec is not very rich, in comparison to his millipede collection (95 specimens from 22 species; see Dolejš et al. 2019). In the case of centipedes and symphylans, the reason is that Němec was not especially interested in these groups. We can read in the accession book that in 1897, he donated to the Museum 18 items of millipedes, but only five items of centipedes and one item of symphylan, all of which were in the collection. Concerning the isopods, Němec was planning further work on this group (the third part of the "Study about the isopods" and a monograph about them), but his isopod material was largely lost during the German occupation during WWII (Loginov 2018, Němec 2020).

It is interesting to follow how the material came to be at Němec's disposal. Most of the centipedes were collected by Němec himself, either around his home (Nový Bydžov) or place of study (Prague). Němec also owned part of material (from the Krkonoše Mts.) mentioned by Rosický

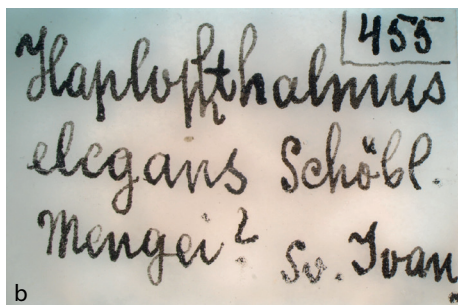


Fig. 4. "*Haplophthalmus elegans* Schöbl, 1860": a – habitus of syntype, b – label written by Němec.

(1876a, 1876b). On the other hand, almost all currently available isopod material in the Němec collection was collected by Josef Schöbl, and only inspected by Němec. Němec's own isopod material is not present in the collection (with the exception of *C. convexus*), including the type material of *Trichoniscus stygius* Němec, 1897. We are not aware that this type material is deposited somewhere else, and we thus consider this material to be lost. Similarly, *Porcellio laevis*, the one of only two isopod species that were donated by Němec to the Museum in 1897 (accession number 562/25) was also not found in the collection.

From the faunistic point of view, the record of *Geophilus impressus* [originally misidentified as *Geophilus electricus* (Linnaeus, 1758)] from Nový Bydžov is worth mentioning. *Geophilus impressus* was described from Croatia; other species were synonymized with it later and reported from the Czech Republic, like *Geophilus insculptus* (Attems, 1895), described from Austria and Germany, and *Geophilus alpinus* Meinert, 1870, described from Italy and Germany. *Geophilus impressus* was reported for the first time from the Czech Republic much later by Folkmanová (1952), but it is not an uncommon species in the Czech Republic (Dvořáková 2023).

The most important specimens from the isopod collection are the syntypes of *Haplophthalmus elegans* Schöbl, 1860 and *Typhloniscus steinii* Schöbl, 1860. Thanks to the original labels written by Němec, we conclude that Němec was well aware that these names are synonyms [of *Haplophthalmus mengii* (Zaddach, 1844) and *Platyarthrus hoffmannseggii* Brandt, 1833, respectively]. However, the preserved specimen does not correspond to the drawings in the original description. Nonetheless, the material is of nomenclatural importance.

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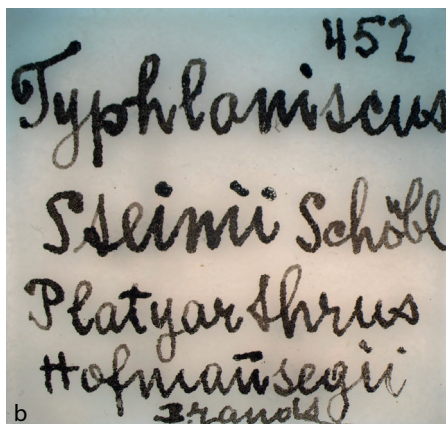


Fig. 5. "*Typhloniscus steinii* Schöbl, 1860": a – habitus of syntypes, b – label written by Němec.

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