

***Erpobdella verrucosa* (Örley, 1886), the valid name for
Erpobdella vilnensis (Liskiewicz, 1925)
(Annelida, Hirudinea)**

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KOŠEL V. 2020: *Erpobdella verrucosa* (Örley, 1886), the valid name for *Erpobdella vilnensis* (Liskiewicz, 1925) (Annelida, Hirudinea). *Acta Musei Moraviae, Scientiae biologicae* **105(1): 1–5**. – The leech *Erpobdella vilnensis* (Liskiewicz, 1925) (described in *Herpobdella*) was found to be synonymous with *E. verrucosa* (Örley, 1886) (described in *Nepheleis*). A field observation in the surroundings of the original type locality “Aquincum” revealed three more extant leech species: *Dina lineata* (O. F. Müller, 1774), *Erpobdella verrucosa* (Örley, 1886), *Glossiphonia concolor* (Apáthy, 1888), and *Haemopsis sanguisuga* (Linnaeus, 1758). The distribution of leeches in the vicinity of Budapest is briefly discussed.

Key words. Hirudinea, *Erpobdella verrucosa*, *Erpobdella vilnensis*, new synonym, distribution

Introduction

Over 130 years ago, a new species in Hirudinea was found by ÖRLEY (1886) in the vicinity of Budapest and described as *Nepheleis verrucosa*. As its validity was soon rejected by APÁTHY (1888), it was not cited in the literature and the name was forgotten. Later, the taxon revived under *Herpobdella atomaria* var. *monostriata* Gedroyc, 1916 and *Herpobdella octoculata* subsp. *vilnensis* Liskiewicz, 1925. In 2019, 133 years since the description by Örley, the author looked for this species in a wider area of the locus typicus – “Acquincum” in vicinity of Budapest. More specimens of the species described by Örley were found in the submontane brooks of the town of Solymár. For this reason, and since the description of Örley’s taxon is sufficiently characteristic, the valid name for it should be *Erpobdella verrucosa* (Örley, 1886). Other more recent names are synonyms.

Material and methods

As the type locality – “*termis ad Acquincum prope Budapestinum*” – probably no longer exists, the author investigated the existence of this taxon in the wider area of this site (now Aquincum).

The most likely territory for the occurrence of the leeches in question, the northern slopes of the Budai-hegység Hills (highest point 528 m asl) around the urban village of Solymár was chosen for investigation. The town lies approx. 10 km west of Budapest–Aquincum and there are several small brooks in the surrounding area in which the leeches were expected to be found (Fig. 1).

The leeches were sought in the Káposztás-patak Brook at two sites (1 and 2), in the Paprikás-patak Brook (site 3) and the Aranyhegyi-patak Brook (site 4), all in the vicinity

of Solymár. The Káposztás-patak Brook is a left-side tributary of Paprikás Brook, a right-side tributary of the Aranyhegyi-patak Brook (site 5), which flows into the Danube to the north of Aquincum. Leeches were collected by hand picking with tweezers over a period of 15–20 minutes. After narcotisation in a diluted alcohol they were preserved in 4% formaldehyde.

Results of field observation

Altogether four leech species were found:

<i>Dina lineata</i> (O. F. Müller, 1774)	1 specimen
<i>Erpobdella verrucosa</i> (Örley, 1886)	23 specimens
<i>Glossiphonia concolor</i> (Apáthy, 1888)	32 specimens
<i>Haemopsis sanguisuga</i> (Linnaeus, 1758)	2 specimens

Occurrence of leeches at particular sites

Site 1. The Káposztás-patak Brook beside Patak utca Street, about 300 m below the spring, 185 m asl, riverbed 30–50 cm wide, sandy bottom with small stones and construction waste, 27.8.2019, water 21°C at 1:00 p.m.

Erpobdella verrucosa (Örley, 1886) 3 specimens (2 adult, 30–32 mm long)

Site 2. As previous, brook approx. 500 m below site 1. 175 m asl, 27.8.2019, water 21°C at 12:30 p.m.

Erpobdella verrucosa (Örley, 1886) 9 specimens (juv. and subadult)
Haemopsis sanguisuga (Linnaeus, 1758) 2 specimens (juv.)

Site 3. The Paprikás-patak Brook below its confluence with the Káposztás-patak Brook, below Solymári vár Castle. 150 m asl, riverbed approx. 1 m wide with bed of sand and stones, 27.8.2019, water 21.5°C at 4 p.m.

Erpobdella verrucosa (Örley, 1886) 9 specimens (juv.)

Site 4. Aranyhegyi-patak Brook, 300 m above its confluence with Paprikás-patak Brook, by the Solymár railway station, 145 m asl, 12.9.2019, 15.4°C at 12:30 p.m. Riverbed with clayey bottom, densely overgrown with *Phragmites*. Leeches were collected on a short torrential stretch with various waste materials.

Erpobdella verrucosa (Örley, 1886) 2 specimens (subad., juv.)
Dina lineata (O.F. Müller, 1774) 1 specimen (subad.)
Glossiphonia concolor (Apáthy, 1888) 32 specimens (juv.)

Site 5. Aranyhegyi-patak Brook at Aquincum, 115 m asl. Riverbed regulated, about 1 m wide, clayey bottom and banks without vegetation. Not a suitable bed for leeches. No leeches found.

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***Erpobdella verrucosa* (Örley, 1886)**

Nepheleis verrucosa Örley, 1886: 94 [rejected by APÁTHY 1888: 761.]
Erpobdella atomaria f. *monostriata* Gedroyć, 1916: 95.
Erpobdella octoculata subsp. *vilnensis* Liskiewicz, 1925: 279.
Erpobdella octoculata f. *monostriata* (Gedroyć, 1916): PAWLOWSKI 1936: 355.
Nepheleis verrucosa: Soós 1939: 45.
Erpobdella monostriata (Gedroyć) PAWLOWSKI: PAWLOWSKI 1948: 49
Erpobdella monostriata (Gedroyć, 1916): LUKIN 1962: 160.
Erpobdella monostriata (Gedroyć, 1916): Soós 1966: 390.
Erpobdella monostriata (Gedroyć, 1916) PAWLOWSKI, 1948; Soós, 1968: 144.
Erpobdella (Erpobdella) monostriata (Gedroyć, 1916): LUKIN 1976: 410.
Erpobdella vilnensis (Liskiewicz, 1925): NESEMANN & NEUBERT 1999: 112, SCHENKOVÁ *et al.* 1999: 46, UTEVSKY *et al.* 2012. **syn. nov.**

Comment. ÖRLEY (1886) was the author of the first monograph on the leeches of the historical territory of Hungary, written in Hungarian and Latin. He described several new species. One of them was “*Nepheleis verrucosa*”. ÖRLEY (1886: 94) distinguished *N. verrucosa* from *N. octoculata*. As a specific feature to discriminate between these species, he included the papillae (*corpore fortiter verrucoso*) on the dorsal side of the body in *N. verrucosa*. The dorsal side of “*N. octoculata*“ he considered smooth (“*integumento laevi*”). The differences between the two species were also included in a determination key for the genus *Nepheleis* (ÖRLEY 1886: 92).

The original description was: “*Nepheleis verrucosa* n. sp.: Corpore antice posticeque vix angustato; annulis bene distinctis, verrucis in singulo annulo; 12–15 magnitudine alternantibus; marginibus annulorum posteriorum in laminam reflexis; acetabulo ad corporis axim obliquo carinis circiter decem radiosis. Corpore atro, ventre paulo dilutiori, labio albicanti. Longitudo in speciminibus spirituosis quattor cm. Corpore gracili, cylindrico et fortiter verrucoso, species h?c a congeneribus optime distinguenda. Habitat in terminis ad Acquincum prope Budapestinum.”

The validity of this species was soon rejected by APÁTHY (1888: 761) on the grounds of an unclear description of the papillae and the name *Nepheleis verrucosa* was forgotten for many years. The name *Nepheleis verrucosa* was later used only once for this species, by Soós (1939) from Slovakia. Örley’s taxon was later rediscovered and described under new names: *Erpobdella atomaria* f. *monostriata* Gedroyć, 1916 = *Erpobdella monostriata* (Gedroyć, 1916) and *Erpobdella octoculata* subsp. *vilnensis* Liskiewicz, 1925 = *Erpobdella vilnensis* (Liskiewicz, 1925). The latter name was considered valid until very recently, e. g. NESEMANN & NEUBERT & (1999), SCHENKOVÁ *et al.* (1999), UTEVSKY *et al.* (2012), KOŠEL (2014). It would now be right and fair to Örley to consider the name for his species as the only correct and thus valid one. *Erpobdella vilnensis* (Liskiewicz, 1925) is therefore a new synonym of *Erpobdella verrucosa* (Örley, 1886).

Discussion

There is no doubt that, during Örley’s lifetime, *Erpobdella verrucosa* lived in the neighbourhood of Acquincum, i.e. in the Aranyhegyi-patak Brook. When the author of the

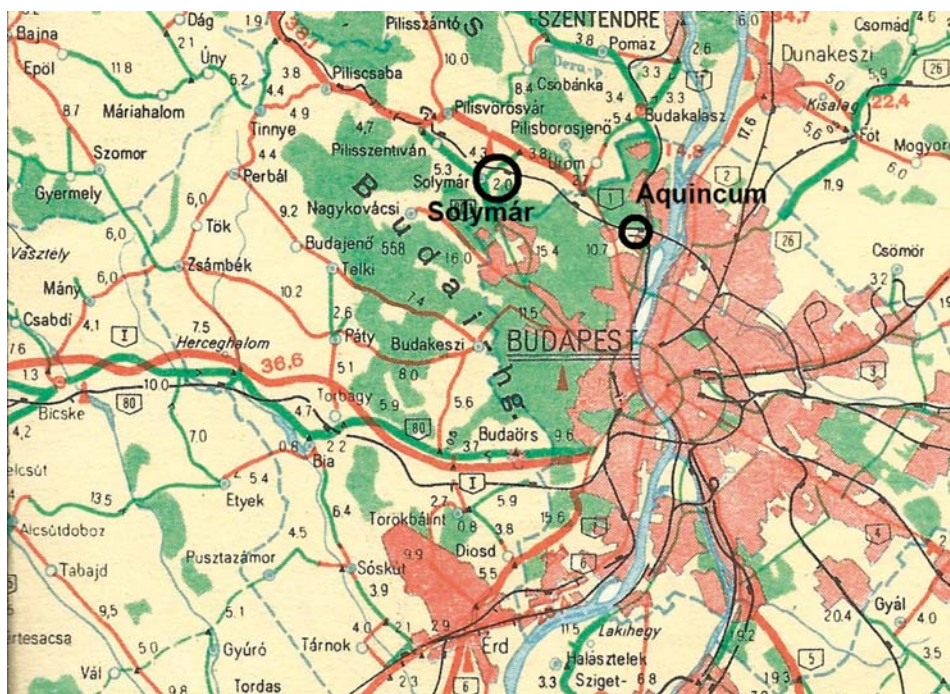


Fig. 1. The sites with the occurrence of *Erpobdella verrucosa* (Örley, 1886). Aquincum – historical record, Solymár – actual records. The distance between the both sites is about 10 km.

current contribution visited Á. Soós in Budapest in 1972, Soós expressed the conviction that Örley's taxon and its name "*Nephelis verrucosa*" should be valid. It cannot be excluded that he may have seen Örley's leech material in the Hungarian National Museum before the zoological collection was destroyed by a fire in 1956. Soós (1939) published several records of this species from the river Hron in Slovakia under the name *Herpobdella verrucosa* Örley, (E. Dudich leg.).

Erpobdella verrucosa is a typical species of upland and submontane brooks, where appropriate conditions for its survival prevail, and in the surroundings of Budapest (Budai hegység Hills and Pilis hegység Mts) as well, although the altitude of the brooks there is relatively low, around 150 m asl.

The geographical distribution of *E. verrucosa* consists largely of central Europe from eastern France and Germany to Ukraine. It is not known from southern Europe (Spain, Italy, Greece), Scandinavia or the British Isles (NESEMANN & NEUBERT 1999, UTEVSKY *et al.* 2012).

Considering the species spectrum of the leeches at particular sites, the absence of *Erpobdella octoculata* (Linnaeus, 1758) and *Dina punctata* Johansson, 1927 is

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surprising. *D. punctata* is an invasive and common species in the Danube and has a tendency to penetrate into small streams, i.e. tributaries of the Danube (SCHENKOVÁ *et al.* 1999, BERACKO & KOŠEL 2011).

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References

- APÁTHY S. 1888: Süßwasser – Hirudineen. Ein systematischer Essay. *Zoologischer Jahrbücher* **3**: 725–794.
- BERACKO P. & KOŠEL V. 2011: Life cycle and feeding habits of *Dina punctata* Johansson, 1927 (Erpobdellidae, Hirudinea) in a small Carpathian stream. *International Revue of Hydrobiology* **96(1)**: 39–47.
- KOŠEL V. 2014: Checklist of Hirudinea of the Czech Republic. *Acta Musei Moraviae, Scientiae biologicae* (Brno) **99(1)**: 1–14.
- LISKIEWICZ S. 1925: Die Hirudeneen des nord-östlichen Polens. *Archiv für Naturgeschichte*, Ser. A **91(12)**: 277–280.
- LUKIN E. I. 1962: *Fauna Ukrainy T. 30. Pyavki*. Vid. Akademii nauk Ukrainskoy RSR, Kiiiv, 196 pp. (in Ukrainian).
- LUKIN E. I. 1976: *Fauna SSSR. Piyavki. T. I. Piyavki presnykh i solonovatykh vod*. Nauka, Leningrad, 484 pp. (in Russian).
- NESEMANN H. & NEUBERT E. 1999: *Annelida, Clitellata: Branchiobdellida, Acanthobdellea, Hirudinea. Süßwasserfauna von Mitteleuropas Bd. 6*. Spektrum Akademischer Verlag GmbH Heidelberg, Berlin, 178 pp.
- ÖRLEY L. 1886: A magyarországi pinczák faunája. *Mathematikai és természettudományi közlemények* (Budapest) **22**: 61–115. (in Hungary and Latin).
- PAWLOWSKI L. K. 1936: Über die äussere Morphologie und systematische Stellung des Egels *Blanchardia bykowskii* (Gedroyć), nebst Bemerkungen über einige Arten der Gattung *Herpobdella* Blainv. *Annales Musei Zoologici Polonici* (Warszawa) **11(19)**: 347–358.
- PAWLOWSKI L. K. 1948: Contribution à la systématique des sangsues du genre *Erpobdella* de Blainville. *Łódzkie Towarzystwo Naukowe* III, **8**: 1–55.
- SCHENKOVÁ J. SYCHRA J. KOŠEL V. KUBOVÁ N. & HORECKÝ J. 1999: Freshwater leeches (Annelida, Clitellata: Hirudinida) of the Czech Republic (Central Europe): check-list, new records, and remarks on species distribution. *Zootaxa* **2227**: 32–52.
- SOÓS Á. 1939: Hirudineen aus der Komitat Bars. *Fragmenta faunistica hungarica* **2**: 44–46.
- SOÓS Á. 1966: Identification key to the leech (Hirudinoidea) genera of the world, with a catalogue of the species. III. Family: Erpobdellidae. *Acta Zoologica Academiae Scientiarum Hungaricae* **12(3–4)**: 371–407.
- SOÓS Á. 1968: Identification key to the species of the genus *Erpobdella* de Blainville, 1818 (Hirudinoidea: Erpobdellidae). *Annales Historico-naturales Musei Nationalis Hungarici, Zoologica* **60**: 141–145.
- UTEVSKY S. Y., SON M. O., DYADICHKO V. G. & KAYGORODOVA I. A. 2012: New information on the geographical distribution of *Erpobdella vilnensis* (Liskiewicz, 1925) (Hirudinida, Erpobdellidae) in Ukraine. *Lauterbornia* **75**: 75–78.