

Revision of the presence of *Stenus pseudoboops* PUTHZ, 1966 and *Stenus ampliventris* J. SAHLBERG, 1890 (Coleoptera; Staphylinidae) in Poland

Weryfikacja obecności *Stenus pseudoboops* Puthz, 1966
i *Stenus ampliventris* J. SAHLBERG, 1890 (Coleoptera; Staphylinidae) w Polsce

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ABSTRACT: STANIEC (2001) first recorded *Stenus pseudoboops* PUTHZ, 1966 for Poland, but the specimens belong to *Stenus ampliventris* J. SAHLBERG, 1890 as recent research showed. In this paper the mistake is corrected, an overview of how to distinguish both species is given and information about the distribution and ecological preferences of both species are presented.

KEY WORDS: Steninae, beetle, staphylinid, correction, new for Poland, rove-beetle.

Introduction

The genus *Stenus* LATREILLE, 1797 is with nearly 3000 species one of the most species-rich animal genera on Earth (BETZ et al. 2018). Most of them are very similar and it is hard to distinguish between them. For a safe determination it is often necessary to study the genitalia of both sexes. In particular the inner structure of the aedeagus is important. As PUTHZ (1991) noticed, the role of the expulsing clasp is important for a better distinction of *Stenus ampliventris* and *Stenus pseudoboops*. He also studied the genitalia of the type specimens of *Stenus wagneri* L. BENICK, 1917 and came to the conclusion, that this taxon is identical to *S. ampliventris*.

Corrections

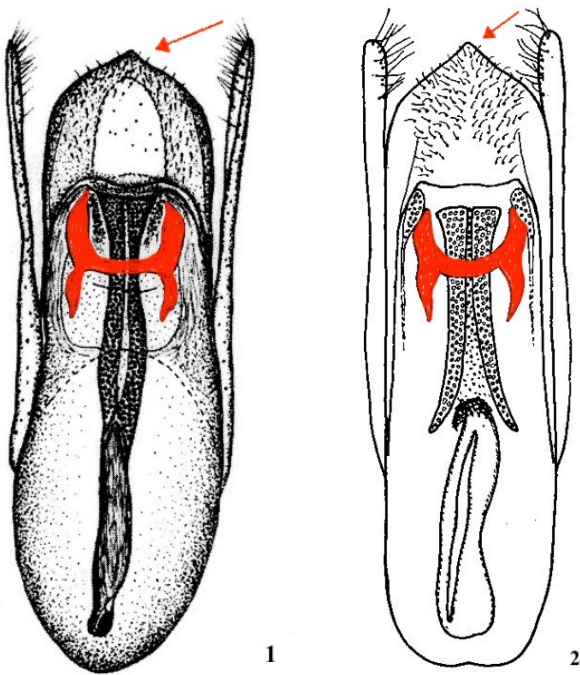
STANIEC (2001) reported *S. pseudoboops* from a bog in eastern Poland. In his paper he compared the species with *S. boops* Lj., the closest related to *S. pseudoboops* among those found in Poland and a very common species of the genus *Stenus*. He also published a drawing of an aedeagus and assumed that it belongs to *S. pseudoboops*. Based on this detailed drawing, it is easy to identify these specimens as *S. ampliventris*. Therefore STANIEC did not find *S. pseudoboops* near Góra Kowlikowa on 30.07.1998. It is clearly an aedeagus of *S. ampliventris*. But since

the second author had no knowledge of the paper by PUTHZ (1991) this mistake is not surprising.

Thus, *S. pseudoboops* PUTHZ, 1966 should be deleted in SCHÜLKE & SMETANA (2015) for Poland and *S. ampliventris* J. SAHLBERG, 1890 has to be supplemented.

Remark on distinction of *Stenus ampliventris* and *Stenus pseudoboops*

To distinguish both, *S. ampliventris* and *S. pseudoboops*, an examination of the aedeagus is necessary. The most advantageous way is to embed the aedeagus in Euparal and examine it with a transmission microscope. The most important features are the different expulsing clasps. In *S. ampliventris* the clasp looks like a „H“, with the apical part longer than the basal part (Fig. 1). In *S. pseudoboops* both parts are very similar in length and the total length of the clasp is smaller than in *S. ampliventris* (Fig. 2). Moreover, the apex of the aedeagi are also different. The apex of *S. pseudoboops* runs almost evenly into a pit. In *S. ampliventris* the apex first is rounded at the sides and then it ends up in a small tip. Furthermore, the apex in *S. ampliventris* has less setae as in *S. pseudoboops* (PUTHZ 1991, Figs. 8-21).



Figs. 1-2. Aedeagus of *S. ampliventris* (Fig. 1), Góra Kowlikowa, Poland (from STANIEC 2001, modified) and aedeagus of *S. pseudoboops* holotype (Fig. 2), Vörs, Hungary (from PUTHZ 1966, modified).

Distribution and ecology of *Stenus pseudoboops* and *Stenus ampliventris*

Stenus pseudoboops was described from the south-eastern shore of Lake Balaton in Hungary, where the species, as well as at Lake Neusiedl in Austria, inhabits reed beds. The species is known from Hungary (Budapest, Velence, Bugacz and Hortobágy), Slovenia (Maribor), Austria (Lannach) and Germany (Leipzig) (PUTHZ 1966, 1991).

Stenus ampliventris was described from the surroundings of Helsinki in Finland, where it was found under leaves of *Salix*. The species is distributed from northern Finland to southern France and greater parts of south-east Europe (SCHÜLKE & SMETANA 2015) and inhabits a remarkable range of habitats. RENKONEN (1935) reported the species from Ristiina, central Finland, where he found it in mires and swamps with *Carex* association in a forest. From Russia the species is recorded from Lake Paanajärvi in Karelia, where it is a typical species of mesotrophic, low acidic mires (PLATONOFF 1943). The second author recorded the species in a terrestrialization mire in eastern Poland. In Germany the species is only recorded from the Brandenburg area (BENICK 1917, ESSER 2014, MAINDA 2019) and can be found in mires with associations of *Carex*, *Phragmites*, *Eriophorum* and *Molinia*. From Graz (Austria) the species is recorded from a little valley of the creek Ragnitz which has been destroyed by urbanization (PUTHZ 1991). At Lake Balaton and Lake Neusiedl,

the species can be found together with *S. pseudoboops* in the reed beds. From Italy the species is known from puddles in the dunes at the Adige estuary, from the dunes of the Reno river and from Bientina (possibly former Lake Bientina) (PUTHZ 1991). All these places are more or less shaded and cooler than the surroundings.

Stenus pseudoboops is only known from reed beds. *Stenus ampliventris* can be found in different habitats but is always associated with a vegetation mosaic. In greater parts of its distribution area the species can exclusively be found in mires or other habitats with lower temperatures than those of the environment. Only the records from dunes in Italy are exceptions. In the northern parts of the distribution area, where the temperatures are lower in general, *S. ampliventris* also lives in habitats comparable to those in Central Europe. On the other hand the type locality differs completely (under shrubs of *Salix*). Due to the relationship between location and temperature PUTHZ (1991) categorized both species as western Siberian taiga species that are relicts of former cooler temperatures in Europe.

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STRESZCZENIE

Praca dotyczy obecności *Stenus pseudoboops* oraz *S. ampliventris* w Polsce. W 2001 roku STANIEC podał po raz pierwszy *Stenus pseudoboops* PUTHZ, 1966 z terenu Polski. Jednak, jak wykazały ostatnie badania, złowione wówczas okazy dowodowe należą do bliźniaczego *Stenus ampliventris* J. SAHLBERG, 1890. W artykule sprostowano pomyłkę oraz opisano i zilustrowano cechy aparatów kopulacyjnych, na których podstawie można odróżnić oba gatunki. Podano także informacje, dotyczące rozmieszczenia wyżej wymienionych myśliczków oraz ich preferencje ekologiczne. *Stenus ampliventris* okazał się też nowym gatunkiem dla fauny Polski. Jednocześnie należy skreślić *Stenus pseudoboops* z listy gatunków chrząszczy wykazanych z Polski.

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