

***Stenichnus collaris subseriatus* FRANZ, 1960 (Coleoptera: Staphylinidae: Scydmaeninae), a new ant-like stone beetle in the fauna of Poland, with comments on its systematic position**

*Stenichnus collaris subseriatus* FRANZ, 1960 (Coleoptera: Staphylinidae: Scydmaeninae), nowy podgatunek kusaka z podrodziny Scydmaeninae w faunie Polski z komentarzem o jego pozycji systematycznej

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**Abstract:** *Stenichnus collaris subseriatus* FRANZ, 1960 (Scydmaeninae: Stenichnini) is recorded from Poland for the first time. One male was caught in the peatbog Wielkie Błoto near Cracow (S Poland). Because of a great similarity to *Stenichnus collaris collaris* (MÜLLER & KUNZE, 1822) these two subspecies cannot be easily distinguished by external morphological characters. Photographs of the habitus of *S. c. subseriatus* and the aedeagi of both subspecies are presented, and the systematic position of the newly recorded taxon is briefly discussed.

Key words: Staphylinidae, Scydmaeninae, Stenichnini, Stenichnus.

## Introduction

*Stenichnus* THOMSON, 1859 is one of the most frequently collected genera among ant-like stone beetles (Staphylinidae: Scydmaeninae) that occur in Poland. The latest data on the distribution of *Stenichnus* are provided by JAŁOSZYŃSKI & WANAT (2018), who found *Stenichnus poweri* (FOWLER, 1884) in Leszno Górne and by BUCHHOLZ & al. (2021), who found *Stenichnus styriacus* FRANZ, 1960 in Świętokrzyski National Park. Both of them were reported as a new species in the fauna of Poland. To date, the genus *Stenichnus* is represented in Poland by eight species. The genus *Stenichnus* can be distinguished from other Central European genera by the following set of characters: body covered with thin setae, without thick bristles; eyes situated in the posterior region of the head capsule; antennae gradually thickened; mandibles falciform and slender (not subtriangular), lacking preapical teeth and setose prosthema, lacking lateral carinae, with transverse antebasal row of pits or large punctures; and each elytron with one asetose basal fovea (JAŁOSZYŃSKI 2013a). Detailed information concerning their taxonomy, biology and ecology can be found in several papers, e.g., JAŁOSZYŃSKI (2003, 2013a,

2018), and JAŁOSZYŃSKI & WANAT (2018). Of the approximately 170 described species of *Stenichnus*, larvae are known for only a few, including two that occur in Poland (JAŁOSZYŃSKI 2013b, 2016).

## Results

*Stenichnus collaris subseriatus* FRANZ, 1960

DA44 Niepołomska Forest (Polish: Puszcza Niepołomska), Wielkie Błoto peat bog (50.01224°N, 20.26925°E): 30 V 2021, 1 male, sweeping grass in the open habitat in the evening, leg. M. SAPIEJA, coll. P. JAŁOSZYŃSKI.

## Discussion

To date, three subspecies of *S. collaris* have been described: *S. collaris collaris*, *S. collaris subseriatus* and *S. collaris paganettii* FRANZ, 1960 (SCHÜLKE & SMETANA 2015). In order to identify these subspecies, examination of aedeagus is necessary, because external features do not seem to be reliable, and also *S. collaris* is one of the most externally variable species of the genus. Attention should be paid to the shape of the apex of the dorsal wall of the aedeagus. *Stenichnus collaris subseriatus* has the apical portion of the dorsal wall elongate and the apex is narrowly

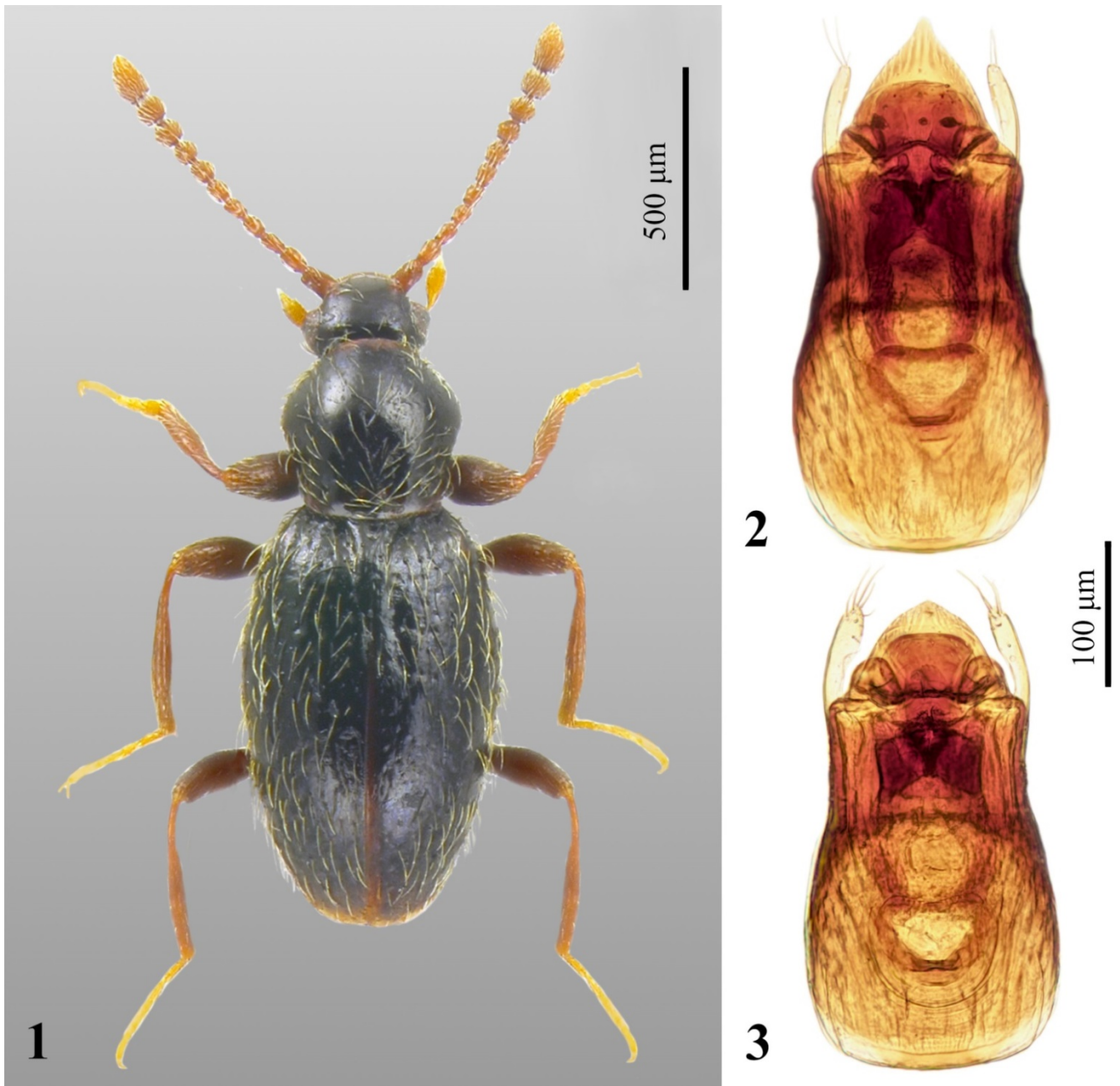


Fig. 1-3. Habitus of *Stenichnus collaris subseriatus*, male (1) (phot. P. JAŁOSZYŃSKI). Ventral view of aedeagi: *Stenichnus collaris subseriatus* (2), *Stenichnus collaris collaris* (3) (orig.).

Ryc. 1-3. Habitus samca *Stenichnus collaris subseriatus* (1) (fot. P. JAŁOSZYŃSKI). Widok edeagusów od strony brzusznej: *Stenichnus collaris subseriatus* (2), *Stenichnus collaris collaris* (3) (oryg.).

subtriangular (Fig. 2). Moreover, the parameral apices do not reach the apex of the median lobe. In *S. c. collaris*, the aedeagal apex is much shorter, broadly subtriangular, and the parameral apices reach or almost reach the level of the apex of the median lobe (Fig. 3). Based on FRANZ (1960), the aedeagus of the Italian subspecies *S. c. paganettii* in dorsal view resembles that of *S. c. subseriatus*, but the sides of the distal region of the median lobe are not sinuate but straight. Female diagnostic characters remain unknown, and for this reason only males can be unambiguously identified.

*Stenichnus collaris collaris* commonly occurs in the whole of Europe, in contrast to the other two subspecies. *Stenichnus collaris paganettii* is known to occur only in Italy, and *S. c. subseriatus* (besides the locus typicus in the Caucasus region) in the recent years has been found in several European countries: England, Finland, Germany and Sweden (BELLMAN & al. 2020, BRUNK & al. 2020, CLAYHILLS 2020, ESSER 2019, HARTMANN & al. 2020, SCHÜLKE 2020, LUNDKVIST & FÄGERSTRÖM 2021), and in two Transcaucasian countries: Armenia and Azerbaijan

(ASSING & SCHÜLKE 2019). Regarding the English record, it is worth mentioning that Heinrich MEYBOHM and Mark TELFER have not finished their investigation and published their findings, but CLAYHILLS (2020) published *S. subseriatus* as an addition to the Finnish beetle list, as well as noting its discovery in the UK by TELFER (Mark TELFER's pers. comm.).

The name *Stenichnus subseriatus* as a species nomen was used for the first time by ASSING & SCHÜLKE (2019), who stated that „Previously regarded as subspecies of *S. collaris* (MÜLLER & KUNZE, 1822)”. It is worth mentioning that all of the modern authors who recorded this taxon to occur in various Eurasian countries cited in the previous paragraph, treated *S. c. subseriatus* as a species. However, none of them, including ASSING & SCHÜLKE (2019), explained why they have been using the combination *S. subseriatus*, and certainly none of them have carried out any taxonomic study in order to change the original status of the subspecies. This issue might have been caused by the website Käfer Europas (<http://coleonet.de/coleo/texte/stenichnus.htm>), where *Stenichnus subseriatus* is listed as a species. The author of that key based his data on a lecture that Heinrich MEYBOHM gave in 2019 in Hamburg, as a preliminary report on his ongoing revision of *Stenichnus collaris*. This source of information is confirmed in BRUNK & al. (2020). The MEYBOHM'S manuscript remains unpublished, and consequently the status of *Stenichnus collaris subseriatus* as a subspecies has not been formally changed.

All previously recorded specimens of *Stenichnus collaris* from its entire range, including Poland, should be revised in order to clarify the distribution of both Central and North European subspecies. BELLMAN & al. (2020) and ESSER (2019) found out that *S. c. subseriatus* was collected in Germany already in the 1990s; some previous records of *S. collaris* from Poland may also belong to this poorly known subspecies.

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#### STRESZCZENIE

Praca dostarcza informacji o pierwszym stwierdzeniu *Stenichnus collaris subseriatus* FRANZ, 1960 (Coleoptera: Staphylinidae: Scydmaeninae) w Polsce. Odłowiony został jeden samiec na torfowisku Wielkie Błoto położonym w Puszczy Niepołomickiej, na wschód od Krakowa. Z powodu dużego zewnętrznego podobieństwa do *Stenichnus collaris collaris* MÜLLER & KUNZE, 1822,

podgatunki te mogą być ze sobą mylone i tylko dzięki zbadaniu edeagusa można je poprawnie oznaczyć.

Na przestrzeni ostatnich lat *S. c. subseriatus* zaczęto wykazywać w publikacjach jako *Stenichnus subseriatus*, jednak żaden z autorów używających tej nazwy nie przedstawił taksonomicznych badań, które pozwoliłyby traktować *S. c. subseriatus* jako osobny gatunek. Niektórzy autorzy, odwołując się do nazwy *Stenichnus subseriatus*, wskazują jako jej źródło wykład Heinricha MEYBOHMA, podczas którego przedstawił wstępne wyniki rewizji *Stenichnus collaris*. Jego badania sugerują konieczność podniesienia *S. c. subseriatus* do rangi gatunku. Zapowiadana rewizja *Stenichnus collaris* MEYBOHMA nie ukazała się do dzisiaj, więc formalnie status *S. c. subseriatus* nie został zmieniony.

Wszystkie okazy oznaczane w przeszłości jako *Stenichnus collaris* powinny zostać zrewidowane z powodu możliwości znalezienia wśród nich obydwu podgatunków. Pozwoli to również na ustalenie rzeczywistego zasięgu tych taksonów, gdyż *S. collaris subseriatus*, pierwotnie opisany z Kaukazu, ma w rzeczywistości znacznie szersze rozmieszczenie.

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