

New data on the occurrence of *Leiestes seminiger* (GYLLENHAL, 1808) (Coleoptera: Endomychidae) in western Poland

Nowe dane o występowaniu *Leiestes seminiger* (GYLLENHAL, 1808) (Coleoptera: Endomychidae)
w zachodniej Polsce

Rafał RUTA¹, Ryszard ORZECOWSKI², Dominik BANACH³

¹Department of Biodiversity and Evolutionary Taxonomy, University of Wrocław,
Przybyszewskiego 65, 51-148 Wrocław, Poland, e-mail: rafal.ruta@uwr.edu.pl, ORCID: 0000-0001-8515-2385;

²Orthoptera of Poland Project, e-mail: rysiaty@wp.pl;

³e-mail: domiwroc@gmail.com

ABSTRACT. *Leiestes seminiger* is a very rare saproxylic beetle and is considered to be a primeval forest relict in Central Europe. Most localities in Poland are situated to the east of the River Vistula, and the only record in western Poland is Międzyzdroje on Wolin Island, where a single specimen was collected 170 years ago. Two new records in western Poland are reported: in the Żurawno nature reserve (Wielkopolska-Kujawy Lowland) and in the Las Pilezycki forest (Lower Silesia).

KEY WORDS: saproxylic beetles, mycophages, primeval forest relicts, Coccinelloidea.

Leiestes seminiger (Fig. 1) is a saproxylic beetle associated with various trees, both deciduous and coniferous, like beech, birch, poplar, willow, fir and pine. It is collected on trees bearing fruiting bodies of *Piptoporus betulinus* (BULL. ex FR.) P. KARST. and *Fomes fomentarius* (L. ex FR.) KICKX., and often co-occurs with ants *Lasius brunneus* (LATR.) (BURAKOWSKI et al. 1986, BOUGET et al. 2019). Numerous specimens of *L. seminiger* were recently collected in Slovakia on the fungus *Mycoacia fuscoatra* (FR.) DONK growing on a white poplar *Populus alba* L. (WIEZIK et al. 2015). In central Europe, *L. seminiger* is a very rare species and is considered to be a primeval forest relict (HORION 1961, ECKELT et al. 2018). On the Polish red list of beetles, the species is placed in the category NT (PAWŁOWSKI et al. 2002).

The geographical range of *L. seminiger* includes Europe from the Balkans and Italian Peninsula in the south to the Arctic Circle in the north. The easternmost known localities are in the Caucasus Mts. (BURAKOWSKI et al. 1986), but it has also been reported from Iran and Japan (LÖBL & SMETANA 2007). It is more common in eastern Europe, but in western Europe it is rarely collected. Most localities in Poland are situated to the east of the River Vistula: in the Biebrza National Park (GUTOWSKI et al. 2006),



Fig. 1. *Leiestes seminiger* in the Żurawno nature reserve, 9 IX 2020 (photo R. ORZECOWSKI)

Ryc. 1. *Leiestes seminiger* na stanowisku w rezerwacie Żurawno, 9 IX 2020 (fot. R. ORZECOWSKI)

the Białowieża Primeval Forest (BURAKOWSKI et al. 1986, BYK & MOKRZYCKI 2007), the Knyszyn Forest (PLEWA et al. 2014, MARCZAK et al. 2023), the Pisz Forest (GUTOWSKI et al. 2022), the Roztocze region (PAPIS & MOKRZYCKI 2015), the Bieszczady Mts. (KOSIBOWICZ & JACHYM 2021) and the projected Turnicki National Park (BUCHHOLZ & MELKE 2018). It has also been recorded in the Kampinos Forest

(MARCZAK 2020) and the Świętokrzyskie Mts. (MOKRZYCKI 2011, BUCHHOLZ et al. 2021). There is one historical record from Dąbrowa Górnicza in Upper Silesia (STEFEK 1939), and its presence in this region was recently confirmed by the late H. SZOŁTYŚ, who collected a single specimen in Stare Tarnowice (UTM: CA48, 30 IV 2016, coll. Upper Silesian Museum, Bytom). The only locality in western Poland is Międzyzdroje on Wolin Island, where a single specimen was collected from under the bark of an old beech tree 170 years ago (HABELMANN 1854).

Two recent findings in western Poland are reported below.

Wielkopolska-Kujawy Lowland: VT93 Żurawno nature reserve, Nowa Rola ad Lubsko, 9 IX 2020, >10 exx. under the bark of a log, obs. R. ORZECZOWSKI.

Lower Silesia: XS37 Wrocław, Las Pilczycki forest, 7 VI 2023, 2 exx., 29 VI 2023, 1 ex., 5 III 2024, 1 ex., in a hollow of a horse chestnut *Aesculus hippocastanum* L. (Fig. 2), together with *Allecula morio* (FABRICIUS, 1787), *Paromalus flavicornis* (HERBST, 1791), *Quedius* sp., *Scaphisoma boleti* (PANZER, 1793), *Scydmaenus hellwigi* (HERBST, 1792) and *Trinodes hirtus* (FABRICIUS, 1781), leg. D. BANACH and R. RUTA.



Fig. 2. A hollow horse chestnut *Aesculus hippocastanum* in the Las Pilczycki forest in Wrocław, a microhabitat of *L. seminiger*, 29 VI 2023 (photo R. RUTA)

Ryc. 2. Dziuplasty kasztanowiec *Aesculus hippocastanum* w Lesie Pilczyckim we Wrocławiu, mikrośrodowisko *L. seminiger*, 29 VI 2023 (fot. R. RUTA)

Both these sites are isolated from other known localities of this species in Poland. Localities in eastern Germany (Saxony), where the species was

recorded in the vicinity of Dresden, are situated closer (LORENZ 2007).

This is the first record of *Leiestes seminiger* in Wrocław, despite extensive studies on the beetles of the city, carried out mostly by German entomologists in the second half of the nineteenth century and the first half of the twentieth. This suggests that this locality is either a newly established one or that the species was previously not detected owing to its distinctive habitat preferences and low population density.

Prostomis mandibularis (FABRICIUS, 1801), another relict of natural forests, was also recorded in the Żurawno nature reserve (JERMACZEK et al. 2002). The presence of such species in this locality suggests that it is a naturally valuable area of forest with a long ecological continuity.

Acknowledgements

We thank Roland DOBOSZ for his help with obtaining a copy of the paper by STEFEK. We also thank Janusz GRZYWOCZ for sharing information on specimens of *Leiestes seminiger* in the collection of the Upper Silesian Museum, Bytom (Poland).

REFERENCES

- BOUGET CH., BRUSTEL H., NOBLECOURT T., ZAGATTI P. 2019. Les Coléoptères saproxyliques de France. Catalogue écologique illustré. Muséum national d'histoire naturelle, Paris. 744 pp.
- BUCHHOLZ L., KOMOSIŃSKI K., MELKE A., SIKORA-MARZEC P. 2021. Chrzążce (Coleoptera) Świętokrzyskiego Parku Narodowego. Wiadomości Entomologiczne, **40** (Supl.): 1-273.
- BUCHHOLZ L., MELKE A. 2018. Owady – chrząszcze Coleoptera. (pp. 314-377) [In:] BOĆKOWSKI M.D., BARA I., MICHALSKI R. (ed.): Projektowany Turnicki Park Narodowy. Fundacja Dziedzictwo Przyrodnicze. 400 pp.
- BURAKOWSKI B., MROCZKOWSKI M., STEFAŃSKA J. 1986. Chrzążce Coleoptera – Cucujoidea, część 2. Katalog fauny Polski, **23**, 13: 1-278.
- BYK A., MOKRZYCKI T. 2007. Chrzążce saproksyliczne jako wskaźnik antropogenicznych odkształceń Puszczy Białowieskiej. Studia i Materiały Centrum Edukacji Przyrodniczo-Leśnej, **9** (2-3): 475-509.
- ECKELT A., MÜLLER J., BENSE U., BRUSTEL H., BUBLER H., CHITTARO Y., CIZEK L., FREI A., HOLZER E., KADEJ M., KAHLER M., KÖHLER F., MÖLLER G., MÜHLE H., SANCHEZ A., SCHAFFRATH U., SCHMIDL J., SMOLIS A., SZALLIES A., NÉMETH T., WURST C., THORN S., CHRISTENSEN R.H.B., SEIBOLD S. 2018. "Primeval forest relict beetles" of Central Europe: a set of 168 umbrella species for the protection of primeval forest remnants. Journal of Insect Conservation, **22**: 15-28.
- GUTOWSKI J. M., BUCHHOLZ L., KUBISZ D., OSSOWSKA M., SUĆKO K. 2006. Chrzążce saproksyliczne jako wskaźnik odkształceń ekosystemów leśnych borów sosnowych. Leśne Prace Badawcze, 2006 (4): 101-144.
- GUTOWSKI J. M., KUBISZ D., SUĆKO K., BOROWSKI J., BYK A., KRÓLIK R., LASOŃ A., MAZUR M. A., MELKE A., MOKRZYCKI T., PLEWA R. 2022. Interesujące gatunki chrząszczy

- (Coleoptera) z Puszczy Piskiej. Acta Scientiarum Polonorum Silvarum Colendarum Ratio et Industria Lignaria, **21** (4): 301-321.
- HABELMANN P. 1854. Eine neue Art der Käfergattung *Teredus* Dej. Stettiner Entomologische Zeitung, **15**: 27-29.
- HORION A. 1961. Faunistik der mitteleuropäischen Käfer. Band VIII: Clavicornia 2. Teil (Thorictidae bis Cisidae). Terebrantia. Coccinellidae. Überlingen-Bodensee. XVI + 375 pp.
- JERMACZEK A., RYBACZYK E., ZIELIŃSKI S. 2002. Dokumentacja projektowa rezerwatu przyrody „Żurawno“. Klub Przyrodników, Świebodzin. Maszynopis. 33 pp.
- KOSIBOWICZ M., JACHYM M. 2021. Wynurt lśniący *Ceruchus chrysolinus* (Hochenwarth, 1785) w bieszczadzkich lasach. Wszechświat, **122** (1): 84-87.
- LÖBL I., SMETANA A. 2007. Catalogue of Palaearctic Coleoptera. Volume 4. Elateroidea – Derodontoidea – Bostrichoidea – Lymexyloidea – Cleroidea – Cucujoidea. Apollo Books, Stenstrup. 935 pp.
- LORENZ J. 2007. *Leiesthes seminigra* (GYLLENHAL, 1808) in Sachsen gefunden (Coleoptera, Endomychidae). Entomologische Nachrichten und Berichte, **51**: 48.
- MARCZAK D. 2020. Chrząszcze saproksyliczne głównych typów siedliskowych Puszczy Kampinoskiej – studium faunistyczno-ekologiczne. Prace Instytutu Badawczego Leśnictwa, Rozprawy i Monografie: 1-286.
- MARCZAK D., KWIATKOWSKI A., LASOŃ A., KRÓLIK R., BOROWSKI J., MROCYŃSKI R. 2023. Chrząszcze (Insecta: Coleoptera) rezerwatów Budzisk i Jesionowe Góry w Puszczy Knyszyńskiej. Rocznik Muzeum Górnośląskiego w Bytomiu, Przyroda, **29** (online 018): 1-21.
- MOKRZYCKI T. 2011. Saproxylic beetle assemblages (Coleoptera) of stumps of chosen tree species – comparative study. Wydawnictwo SGGW. [in Polish]
- PAPIS M., MOKRZYCKI T. 2015. Saproxylic beetles (Coleoptera) of the strictly protected area Bukowa Góra in the Roztoczański National Park. Leśne Prace Badawcze, **76** (3): 229-239.
- PAWŁOWSKI J., KUBISZ D., MAZUR M. 2002. Coleoptera chrząszcze. (pp. 88-110) [In:] GŁOWACIŃSKI Z. (ed.): Czerwona lista zwierząt ginących i zagrożonych w Polsce. IOP PAN, Kraków. 155 pp.
- PLEWA R., HILSZCZAŃSKI J., JAWORSKI T., SIERPIŃSKI A. 2014. Nowe i rzadko spotykane chrząszcze (Coleoptera) saproksyliczne wschodniej Polski. Wiadomości Entomologiczne, **33** (2): 85-96.
- STEFEK K. 1939. Przyczynek do fauny tęgopokrywych (Coleoptera) ze Śląska i okolic sąsiednich. Prace Oddziału Przyrodniczego Muzeum Śląskiego, **1**: 125-174.
- WIEZIK M., KUNCA V., WIEZIKOVÁ A. 2015. Mass occurrence of relict beetle species *Endecatomus reticulatus* (Herbst, 1973) and *Leiesthes seminiger* (GYLLENHAL, 1808) associated with rare saproxylic fungi. Matthis Belivs University Proceedings, **5** (Suppl. 2): 83-91.

Wpłynęło: 10 czerwca 2024
Zaakceptowano: 12 września 2024