

Confirmation of the occurrence of *Isomira murina* (LINNEUS, 1758) in Poland

Potwierdzenie występowania *Isomira murina* (LINNEUS, 1758) w Polsce

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ABSTRACT: Examination of the new specimens of *Isomira* MULSANT from Gryżyna in Western Poland, revealed occurrence of *I. murina* LINNAEUS. Investigation of the literature data lead to the conclusion that it was previously reported by BURAKOWSKI, however, under the name *I. semiflava* KÜSTER. The identification key to Polish *Isomira* species is provided.

KEY WORDS: Coleoptera, Tenebrionidae, Alleculinae, *Isomira*, Poland.

Introduction

There is some confusion in identification of European species of *Isomira* MULSANT, 1856. The diversity of Polish fauna of this genus is insufficiently studied. BURAKOWSKI in his key for identification of Polish Alleculini (1976) described and illustrated two species: *I. murina* (LINNAEUS, 1758) and *I. semiflava* (KÜSTER, 1852). However, subsequent authors recognized *I. semiflava* as a synonym of *I. murina* (BOUYON 2002), which led to the statement that only one species inhabits territory of Poland (IWAN et al. 2012). Recent investigation of *Isomira* specimens from several regions of Poland revealed that they belong to the species *I. thoracica* (FABRICIUS, 1792) (SZAWARYN 2020), and correspond to those that have been erroneously named by BURAKOWSKI (1976) as *I. murina*. That discovery raised a hypothesis that all specimens previously named in Polish literature as *I. murina* in fact belong to *I. thoracica*.

The previous study (SZAWARYN 2020) provoked further investigation of *Isomira* specimens collected from the territory of Poland, which revealed the second species which is presented below.

Material

The following material was examined:

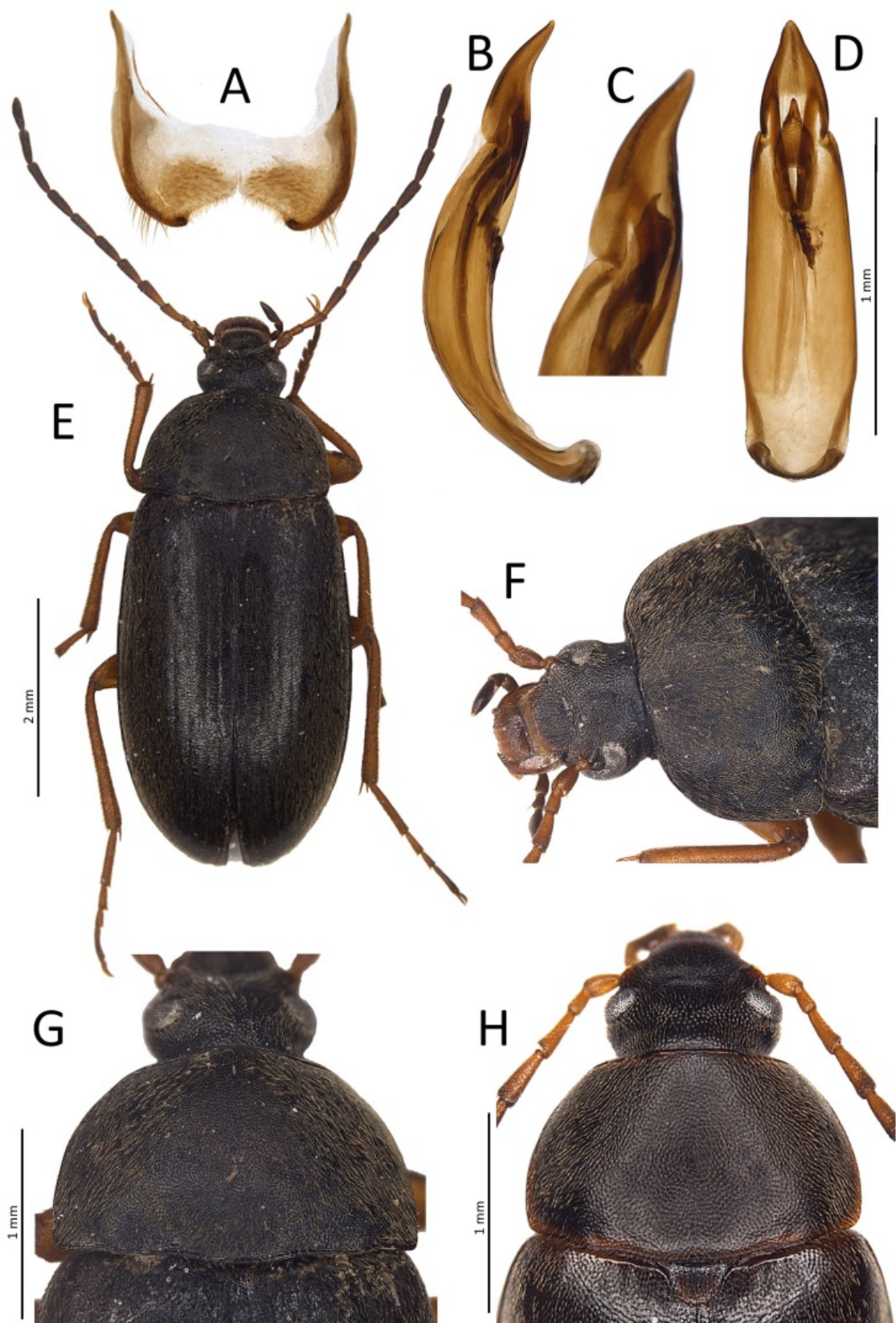
- Wielkopolska-Kujawy Lowland: WT18 Gryżyna, near lake Kałek, forest and forest meadows, 4 VI 2016, 2 exx., leg. K. Komosiński.

The specimens are deposited at the University of Warmia and Mazury in Olsztyn.

Results and discussion

After examination of male (Fig. 1A-D) genitalia, specimens were identified as those corresponding to *I. semiflava* (KÜSTER, 1852) drawn by BURAKOWSKI (1976). However, BOUYON (2002) investigated the holotype of *I. murina*, and synonymized *I. semiflava* with *I. murina*. The male genitalia of *I. murina*, although quite roughly presented by BOUYON (2002), fits well to those of *I. semiflava* drawn by BURAKOWSKI (1976). That suggests that here presented specimens belong to the true *I. murina*. The discovery proves that BURAKOWSKI (1976) correctly recognized two species from the territory of Poland, however, he named them erroneously. Specimens named by BURAKOWSKI (1976) as *I. murina* in fact belong to *I. thoracica*, whereas those named as *I. semiflava* are true *I. murina*.

According to the Catalogue of Polish Fauna by BURAKOWSKI et al. (1987) *I. murina* inhabits mostly Western part of Poland and probably reaches here its Eastern distribution range in Europe. Historical records were collected in the following regions: Pomeranian Lake District (Klucz ad Szczecin, Bielinek), Lower Silesia, Trzebnickie Hills, Western Sudeten Mts. (Góry Wałbrzyskie, Zagórze Śląskie), and Pieniny Mts. Interestingly specimens of *I. murina* presented in this paper were collected in the same locality as *I. thoracica* which was reported by RUTA et al. (2016).



Ryc. 1. *Isomira murina*: A – sternit VIII odwłoka samca, B–D – aparat kopulacyjny samca, E – pokrój ciała, F – głowa i przedplecze, G – przedplecze oraz tarczka. *Isomira thoracica*: H – przedplecze oraz tarczka.

Fig. 1. *Isomira murina*: A – male abdominal sternite VIII, B–D – aedeagus, E – habitus, E – head and pronotum, F – head and pronotum, G – pronotum and scutellar shield. *Isomira thoracica*: H – pronotum and scutellar shield.

That also leaves an open question should *I. murina* be listed on the Polish Red List (PAWŁOWSKI et al. 2002), as it was previously under the name *I. semiflava*.

A key to Polish species of *Isomira*:

1. Pronotum about 1,7 times broader than its length (Fig. 1G), with anterior part of pronotum wider; punctation of pronotum very fine and dense; scutellar shield comparatively small, sub-triangular; male abdominal sternite VIII with posterior corners ended with two small hooks

Isomira murina (LINNAEUS, 1758)

- Pronotum about 1,5 times broader than its length (Fig. 1H), with anterior part of pronotum more narrow; punctation of pronotum with punctures larger and more sparsely distributed; scutellar shield larger, well visible, sub-hemispherical; male abdominal sternite VIII with posterior corners rounded, without hooks

Isomira thoracica (FABRICIUS, 1792)

STRESZCZENIE

Nomenklatura w obrębie rodzaju *Isomira* nastręcza dużo problemów. W ostatnim czasie ugruntował się pogląd, iż na terenie Polski występuje jeden przedstawiciel należący do tego rodzaju – *I. murina*. Jednak jak wykazano we wcześniejszej pracy (SZAWARYN 2020) większość wykazywanych z obszaru Polski okazów *Isomira* oznaczanych dotychczas jako *I. murina* należy tak na prawdę do gatunku *I. thoracica*. Jednak BURAKOWSKI (1976) w swoim kluczu do Alleculidae Polski rozrysował dwa gatunki. Analiza nowych okazów z rodzaju *Isomira* pochodzących z Gryżyny (Nizina Wielkopolsko-Kujawska) dowodzi występowania na terenie Polski i drugiego gatunku – *I. murina* (= *I. semiflava*).

REFERENCES

- BOUYON H. 2002: Etude de quelques espèces paléarctiques du genre *Isomira* MULSANT (Coleoptera, Alleculidae). Bulletin de la Société Entomologique de France, **107** (5): 503-508.
- BURAKOWSKI B. 1976: Rozmiazgowate – Pythidae, Omiękowate – Lagriidae, Cisawkowate – Alleculidae. Klucze do Oznaczania Owadów Polski, **91** (88-90): 1-76.
- BURAKOWSKI B., MROZKOWSKI M., STEFAŃSKA J. 1987: Cucujoidea, cz. 3. Katalog Fauny Polski, **23** (14): 1-309.
- IWAN D., KUBISZ D., TYKARSKI P. 2012: Tenebrionoidea: Tenebrionidae, Boridae. Critical checklist, distribution in Poland and meta-analysis. Coleoptera Poloniae, **1**: 1-480.
- KLASIŃSKI J. 2007: Chrząszcze (Coleoptera) rezerwatu Sokole Góry w Jurajskim Parku Krajobrazowym. Biuletyn Częstochowskiego Koła Entomologicznego, **6**: 3-6.
- MULSANT E. 1856: Histoire Naturelle des Coléoptères de France. Pectinipèdes. L. Maisson, Paris. 96 pp.
- PAWŁOWSKI J., KUBISZ D., MAZUR M. 2002: Coleoptera chrząszcze (pp. 88-110) [In:] Z. GŁOWAŃSKI (ed.): Czerwona lista zwierząt ginących i zagrożonych. Instytut Ochrony Przyrody PAN, Kraków. 155 pp.
- RUTA R., ORZECZOWSKI R., ALEKSANDROWICZ O. BOROWSKI J., BUCHHOLZ L., KOMOSIŃSKI K., LUBECKI K., PRZEWOŻNY M. 2016: Chrząszcze (Insecta: Coleoptera) Gryżyńskiego Parku Krajobrazowego. Przegląd Przyrodniczy, **26** (2): 28-62.
- SZAWARYN K. 2020: On the occurrence of *Isomira thoracica* (FABRICIUS, 1792) in Poland. Wiadomości Entomologiczne, **39** (3): 31-33.
- SZYMCZAKOWSKI W. 1973: Dalsze materiały do znajomości chrząszczy (Coleoptera) biotopów kserotermicznych Polski. Acta Zoologica Cracoviensia, **18**: 183-216.

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