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***Chrysodeixis chalcites* (ESPER, 1789) (Lepidoptera: Noctuidae): the first imago recorded in the natural environment in Poland**

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Abstract: *Chrysodeixis chalcites* (ESPER, 1789) was recorded for the first time in Poland in a natural environment, during its periodic migration, in Jelenia Góra-Sobieszów (Karkonosze region).

Key words: noctuid moth, Karkonosze Mts., new record, biodiversity, migration.

To date, three species from the genus *Chrysodeixis* (Noctuidae) have been recorded in Europe: *Chrysodeixis acuta* (WALKER, 1857), *Ch. chalcites* (ESPER, 1789) and *Ch. eriosoma* (DOUBLEDAY, 1843) (BEHOUNEK, RONKAY & RONKAY 2010). Only one of these – *Ch. chalcites* – has ever been recorded in Poland (BUSZKO & NOWACKI 2017). In nature, it is a highly migratory species. The first Polish record concerned caterpillars accidentally introduced on specimens of *Zebrina pendula* (SCHNIZL., 1849) (ŁABANOWSKI & CHAŁAŃSKA 2002) imported from the Netherlands, while the second one resulted from the discovery of caterpillars on the leaves and fruit of tomatoes *Lycopersicon esculentum* (MILL., 1754) (NAPIÓRKOWSKA-KOWALIK & SEKULA 2007). Unfortunately, these latter authors did not state how the caterpillars came to be on those tomato plants, but as in the earlier case, they presumably turned up on imported plant seedlings.

This moth is common in North Africa and in the southern Mediterranean region, i.e. Portugal, Spain, France, Corsica, Italy, Sardinia, Malta and the Balkans, both as a migrant and as a resident of these areas (GOATER *et al.* 2003). It has also been recorded in southern Ukraine and Russia (KOSTROWICKI 1961) and recently in Slovakia (PASTORÁLIS *et al.* 2018). It is much rarer in central and northern Europe, although there are records from the British Isles, Germany, Switzerland, Austria, Denmark, Holland, Hungary, Romania (GOATER *et al.* 2003) and Sweden (JANZON 1998). The species' appearance in these countries could have been a result of periodic migration, but it is just as likely to have turned up there as an accidental introduction in imported seedlings of its host plant, as has been the case in Poland so far.

During studies of noctuid biodiversity in Poland, this species was caught not far from the headquarters of the Karkonosze National Park (SW Poland):

***Chrysodeixis chalcites* (ESPER, 1789)**

– Jelenia Góra–Sobieszów (UTM WS43), 22 VIII 2020, 1 ex., leg. Łukasz Matuszewski.

It was attracted to a white screen by the light from a 250 W mercury vapour lamp with an auxiliary UV lamp immediately after the passage of a strong westerly storm front.

The circumstances suggest that this individual could have been a long-distance migrant, especially as a few specimens of *Palpita vitrealis* (ROSSI, 1794) (Lepidoptera: Crambidae), also a migrant (BUSZKO 2020), were attracted to the screen at the same time. This second record of an imago of *Ch. chalcites* in Poland is a noteworthy occurrence, especially as it is the first one obtained in the field, probably during its periodic migration. The first imago recorded in Poland was a result of the discovery of caterpillars on the leaves and fruit of tomatoes being grown in greenhouses near Lublin, which subsequently developed into imagines under these artificial conditions (NAPIÓRKOWSKA-KOWALIK & SEKULA 2007).

It is impossible to discern, however, whether this *Chrysodeixis chalcites* from Jelenia Góra–Sobieszów was an individual from the southern European or African population, developing under natural conditions, or whether the imago emerged in a greenhouse in some central European country and began migrating from there. The dark brown form of this specimen (see Fig. 1.), though much less common, can be identified from its morphological features by comparing it to the similar species *Ch. eriosoma* (BEHOUNEK, RONKAY & RONKAY 2010).

Its appearance in this locality could have been a result of climate warming, which has been responsible for the more frequent appearance of other species from the far south of Europe, never before recorded in Poland or only very rarely as migrants.



Fig. 1. *Chrysodeixis chalcites* (ESPER, 1789), recorded in Jelenia Góra-Sobieszów, SW Poland, on 22 August 2020, leg. Łukasz Matuszewski (photo Ł. Matuszewski).

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REFERENCES

- BEHOUNEK G., RONKAY L., RONKAY G. 2010. The Witt Catalogue. A Taxonomic Atlas of the Eurasian and North African Noctuidea, Plusiinae II, Heterocera Press, Vol. 4: 78–80.
- BUSZKO J., NOWACKI J. (Eds.) 2017. A Distributional Checklist of the Lepidoptera of Poland. *Polish Entomological Monographs* 13: 1–178.
- BUSZKO J. 2020. Crambidae i Thyrididae Polski. Wydawnictwo Koliber, Nowy Sącz. Cz. I: 89–90.
- GOATER B., RONKAY L., FIBIGER M. 2003. Noctuidae Europeaea, Catocalinae & Plusiinae, Entomological Press Sorø, 452 pp.
- JANZON L.-A. 1998. Första fyndet av tvillingfläckat metallfly, *Chrysodeixis chalcites* (Lepidoptera: Noctuidae) i Sverige. *Entomologisk Tidskrift* 119: 131–134.
- KOSTROWICKI A.S. 1961. Studies of the Palaearctic species of the subfamily Plusiinae (Lepidoptera, Phalaenidae). *Acta zoologica cracoviensia* 6: 367–472.
- ŁABANOWSKI G., CHAŁAŃSKA A. 2002. Nowe i mniej znane szkodniki roślin szklarniowych. Poland. *Hasło ogrodnicze, Kraków* 5: 86–90.
- NAPIÓRKOWSKA-KOWALIK J., SEKULA W. 2007. Błyszczka *Chrysodeixis chalcites* (ESPER, 1789) (Noctuidae: Plusiinae: Lepidoptera) znalezione w szklarniach na terenie Polski. *Wiadomości entomologiczne* 26(1): 23–25.
- PASTORÁLIS G., KOSORIN F., TOKÁR Z., RICHTER I., ŠUMPICH J., LIŠKA J., LAŠTŮVKA A., LAŠTŮVKA Z., ENDEL B. 2018. Šestnášť druhov motýľov (Lepidoptera) nových pre faunu slovenska. — *Entomofauna carpathica* 30(2): 1–24.

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