

Naturalista sicil., S. IV, XLIX (1), 2025, pp. 69-72

DOI: <https://doi.org/10.5281/zenodo.15714590>

JONATHAN AGIUS & ARNOLD SCIBERRAS

RHESALA MOESTALIS (WALKER, 1866)
AN INTRODUCED NOCTUIDAE SPECIES NEW TO
EUROPE AND THE MALTESE ISLANDS
(*Lepidoptera Erebidae Erebiniae*)

SUMMARY

Rhesala moestalis (Walker, 1866) is reported for the first time from Europe and the Maltese Islands. Notes on the distribution and habitat of the adult and larval foodplants are included.

Keywords: Lepidoptera, Erebidae, Erebiniae, *Rhesala moestalis*, new record, Maltese Islands.

RIASSUNTO

Rhesala moestalis (Walker, 1866) viene segnalata per la prima volta in Europa e nelle Isole Maltesi. Sono incluse note sulla distribuzione e l'habitat delle piante alimentari adulte e larvali.

Parole chiave: Lepidoptera, Erebidae, Erebiniae, *Rhesala moestalis*, nuova segnalazione, Isole Maltesi.

INTRODUCTION

Rhesala moestalis (Walker, 1866), a moth with a broad global distribution, was recently discovered in a pet shop on the island of Gozo, Malta. This finding may represent a new record for Europe. The specimen was found indoors and was likely introduced through the importation of rabbit food from Italy by the same pet shop. No further specimens were discovered in the same pet shop following the initial detection, suggesting that this was an isolated occurrence rather than an established population.

MATERIAL & METHODS

Specimens were searched for within the shop using only visual observations, relying entirely on what could be seen with the naked eye. Despite the presence of several individuals, A. Sciberras noted that they were incredibly fast fliers, making them challenging to capture. Their rapid flight patterns and evasive behaviour contributed to the difficulty in collecting specimens during the search.

RESULTS & DISCUSSION

MALTA, Gozo, Victoria, 6.IV.2024, A. Sciberras (1♂, 2♀♀).

Rhesala moestalis (Walker, 1866), has been recorded in tropical and subtropical regions, particularly in Africa, stretching from Sierra Leone in West Africa straight into East Africa, including Madagascar (LEE & BYUN, in press) and South Africa (STAUDE, 2015), Asia, and the Middle East (https://lepiforum.org/wiki/page/Rhesala_moestalis). The species has adapted to various climatic conditions but is primarily associated with warmer environments. Its presence in Malta, a Mediterranean island with hot summers and mild winters, suggests the need for further investigation into its potential to establish in similar climates beyond its known range. However, given that no additional specimens were found after the initial discovery, there is no evidence to suggest an ongoing presence or reproduction in the area.

Globally, *R. moestalis* is known to feed on several species of *Acacia*, *Valchellia* and *Albizia*, including *Acacia mellifera*, *Acacia tortilis*, *Albizia lebbeck*, *Albizia odoratissima*, and *Albizia procera* (PAUNIKAR *et al.*, 2023), but has also been reared on other Fabaceae like *Faidherbia albida* and *Senegalia caffra* (EZEJI *et al.*, 2023). In contrast, the *Acacia* and *Albizia* species present in Malta include *Albizia julibrissin*, *Acacia cyclops*, *Acacia saligna*, *Acacia salicina*, *Vachellia farnesiana*, and *Vachellia karoo*. None of these are native to Malta, and their suitability as host plants for *R. moestalis* remains uncertain. The absence of its primary larval food plants in the wild may have further limited its ability to establish a self-sustaining population. It is a well-known defoliator of its host plant in certain countries. (FRANCY *et al.*, 2006) and can also be a pest of *Albizia* which is used as shade tree in tea plantations (DAS & SEN GUPTA, 1960).

Externally, this species is a small moth with a wingspan varying between 14 and 20 millimetres. The forewings are chiefly dark brown, marked with a distinct white central pattern that extends into a 'Y'-shaped or arrowhead-like form. This white marking serves as a key diagnostic feature of the species.

The hindwings have a similar colour like the forewings, usually a continuation of the same brown colour. The legs display alternating dark and light banding, while the antennae are slender and thread-like, a characteristic typical of many moth species.

The discovery of *R. moestalis* within the pet shop strongly suggests that it arrived through imported goods rather than natural dispersal, potentially rabbit feed. The controlled indoor environment may have temporarily supported the moth, but with no additional specimens detected, it is likely that this was an isolated event. As part of the work that was being done in the pet shop but also as a precautionary measure, fogging was applied in situ to eliminate all insects within the facility, ensuring that no residual populations remained following the discovery. Continued monitoring would be beneficial to confirm that no further introductions occur through similar import pathways.

CONCLUSION

The discovery of *Rhesala moestalis* in a pet shop on Gozo represents an interesting case of accidental introduction. Although the species is widespread and associated with several *Acacia* and *Albizia* species globally, the non-indigenous host plants in Malta may not support its development in the wild. Moreover, the absence of further specimens following the initial detection suggests that this was a one-off event linked to imported pet food rather than an established presence. Continued vigilance in monitoring accidental introductions can help ensure early detection and prevent the spread of non-native species through commercial trade routes. The authors propose the Maltese name “Resala” after a transliteration of the genus.

Acknowledgments - The authors would like to thank Bruno Massa for his insights and comments and are also grateful to Jeffrey Sciberras for reviewing the paper and confirming the *Acacia* and *Albizia* species present in Malta.

REFERENCES

- DAS G.M. & SEN GUPTA M., 1960. On the biology of *Rhesala moestalis* Walker (Lepidoptera: Noctuidae), a serious pest of nursery and young shade trees in tea of North-East India. *Indian Agriculturist*, 4(2), 95-103.
- EZEJI L. A., ADEDIJI A.O., NKERE C.K., OGBE O.C., ONYEKA J.T. & ATIRI G.I., 2023. Viruses associated with cassava mosaic disease and their alternative hosts along Nigeria-Cameroon border. *African Crop Sc. J.*, 31(3): 263-277.

- FRANCY C.F. & MATHEW G., 2006. The noctuid fauna (*Lepidoptera: Noctuidae*) of Kerala (India). *Zool. Soc. Kerala*, 11(1&2): 36-50.
- LEE J.-Y. & BYUN B.-K., in press. An annotated checklist of the subfamily Boletobiinae (Lepidoptera, Erebidae) from Korea. *J. Asia-Pacific Biodiv.*, <https://doi.org/10.1016/j.japb.2024.11.003>.
- LEPIFORUM, no date. *Rhesala moestalis*. Lepiforum. Retrieved February 10, 2025, from https://lepiforum.org/wiki/page/Rhesala_moestalis
- PAUNIKAR S., KULKARNI N. & BARVE S.K., 2023. Moth diversity (Lepidoptera: Heterocera) in the forest ecosystem of tropical forest research institute (TFRI), campus, Jabalpur, Madhya Pradesh. *Int. J. Ent. Res.*, 8(9): 25-32.
- STAUDE H.S., 2015. A comparison between two moth surveys on the farm Zandrivier 559, Lephalale, Limpopo, South Africa. *Metamorphosis*, 26: 50–59.

Address of the authors –AGIUS J., 166 'Infinity', Vjal ix-Xarolla, Zurrieq, ZRQ1617, Malta; jonagius@msn.com; SCIBERRAS A., 136 Animal Kingdom LTD, Ditch Street, Paola, PLA1234, Malta; bioislets@gmail.com.

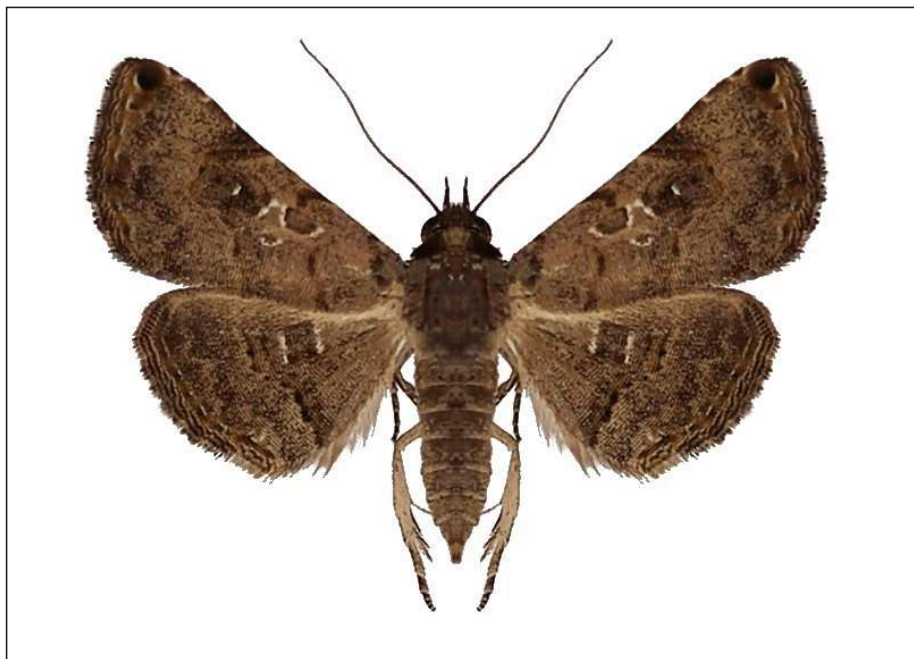


Fig. 1 — One of the *Rhesala moestalis* (Walker, 1866) specimens collected from Gozo during 2024.