

SHORT COMMUNICATION

First record of *Sphenophorus placidus vestitus* (Coleoptera: Curculionidae: Dryophthorinae) in Cyprus

E. Kakouris¹, C. Makris² and J. Demetriou^{3,4,5*}

Summary The Nearctic weevil *Sphenophorus placidus vestitus* Chittenden, 1904, an alien pest which is known to infest turfgrasses is reported for the first time on the island of Cyprus. A single specimen was collected from Famagusta (Ammochostos), Protaras in 2012. The species distribution and possible economic impacts are shortly discussed. A checklist for the alien Dryophthorinae of Cyprus is presented.

Additional keywords: alien species, Eastern Mediterranean, island invasions, Rhynchophorini, Sphenophorina

The subfamily Dryophthorinae consists of 1200 species in 152 genera which are widespread throughout the globe and divided in five tribes: Cryptodermatini, Dryophthorini, Orthognathini, Rhynchophorini and Stromboscerini (Oberprieler *et al.*, 2014). The tribe Rhynchophorini includes some of the most notorious alien to Europe beetles, attacking woody monocotyledons, such as *Rhynchophorus ferrugineus* (Olivier, 1790) and *Dicolandra frumenti* (Fabricius, 1801) infesting palm-trees, *Scyphophorus acupunctatus* Gyllenhal, 1838 mainly associated with agaves, and representatives of the genus *Sitophilus* Schoenherr, 1838 being common stored product pests (Sauvard *et al.*, 2010).

Only six species of the genus *Sphenophorus* Schönherr, 1838 are distributed in the Western Palearctic, namely, *S. abbreviatus* (Fabricius, 1787), *S. meridionalis* (Gyllenhal, 1838), *S. parumpunctatus* (Gyllenhal, 1838), *S. piceus* (Pallas, 1776), *S. striatopunc-*

tatus (Goeze, 1777) and the alien *S. placidus vestitus* (Chittenden, 1904) [=syn. *S. venatus vestitus* (Say, 1832)] (Alonso-Zarazaga *et al.*, 2017; Prena, 2018). Up to date, out of these species only three have been found to inhabit Cyprus (*S. abbreviatus*, *S. piceus* and *S. striatopunctatus*) (Alonso-Zarazaga *et al.*, 2017).

Native to the Nearctic zoogeographic realm, *S. placidus vestitus* has been accidentally transported outside its native range to the Palearctic, reaching Eastern Palearctic countries such as Iraq, Japan, Korea and Qatar (Aoyagi *et al.*, 1990; Yang *et al.*, 2009; Pelletier, 2005; Aletby *et al.*, 2015). In the Western Palearctic, the species has been reported in France (including Corsica) (Orousset *et al.*, 2008; INPN 2021), Greece (Korotyayev and Apt, 2018), Morocco (Pelletier, 2005; Alonso-Zarazaga and Sánchez-Ruiz, 2009), and Spain (including Canary Islands) (Alonso-Zarazaga and Sánchez-Ruiz, 2009). This is the first record for *S. placidus vestitus* in Cyprus.

A single specimen was collected alive in Cyprus, Famagusta (Ammochostos), Paralimni, Protaras (35.0205 °N, 34.0516 °E), 15.vii.2012, 0 m alt., within 10-20 m from the coast, on the surface of the sea (Fig. 1). The specimen was identified by C. Makris using the identification key of Alonso-Zarazaga and Sánchez-Ruiz (2009) and its identification was later confirmed by Mr G. Kakiopou-

¹ Department of Forests, Ministry of Agriculture, Rural Development and Environment, 26 Louki Akrita, 1414, Nicosia, Cyprus.

² Ethnikis Antistaseos 21, Lemesos, CY-3022, Cyprus.

³ Section of Ecology and Systematics, Department of Biology, National and Kapodistrian University of Athens, GR-157 84 Athens, Greece.

⁴ Joint Services Health Unit Cyprus, BFC RAF Akrotiri BFPO 57, Akrotiri, Cyprus.

⁵ Enalia Physis Environmental Research Centre, Acropoleos 2, Aglantzia 2101, Nicosia, Cyprus.

* Corresponding author: jakovosdemetriou@gmail.com

los. The specimen is deposited in the private collection of C. Makris.

This record constitutes the first report on *S. placidus vestitus* from the island. The circumstances under which the specimen was collected do not permit any identification of host-plants or other ecological parameters. However, as Protaras is a famous touristic resort situated along the coastline which maintains open areas covered by imported turfgrass, the specimen most probably originated from the coast of Protaras. As the main introduction pathway for the species has been related to the import of turfgrasses (Aletby *et al.*, 2015), an accidental introduction to the island via the horticultural pathway is hypothesised.

Sphenophorus placidus vestitus has been identified as a major pest of turfgrasses in both its native range and invaded countries, commonly found in golf courses (Hat-

sukade, 1997; Yang *et al.*, 2009; León-García *et al.*, 2012) and orchardgrass (Kuhn *et al.*, 2013). The distribution of the species within Cyprus, the presence of established populations and any adverse economic impact on the island are currently unknown, as the presented specimen stands out as the sole individual of *S. placidus vestitus* detected on the island. Nevertheless, given the extensive coverage of urban and semi-urban sites in Cyprus with turfgrass (e.g., golf courses, football fields, hotels, municipal parks and other tourist sites), *S. placidus vestitus* could potentially inflict a serious economic burden towards the maintenance of turfgrasses in the tourism industry, such as hotels and sports facilities creating yellow spots due to the drying of lawn (Alonso-Zarazaga and Sánchez-Ruiz, 2009; Aletby *et al.*, 2015).

Sphenophorus placidus vestitus raises the number of non-native weevils of the subfamily Dryophthorinae (tribe Rhynchophorini) in Cyprus to 7 species, namely: *Rhynchophorus ferrugineus* (Olivier, 1790) (Kontodimas *et al.*, 2006); *Scyphophorus acupunctatus* Gyllenhal, 1838, (Vassiliou and Kitsis, 2015); *Sitophilus granarius* (Linnaeus, 1758) (Georghiou, 1977); *Sitophilus oryzae* Schoenherr, 1838 (Georghiou, 1977); *Sitophilus sculpturatus* (Gyllenhal, 1838) (Georghiou, 1977); *Sitophilus zeamais* Motschulsky, 1855 (Gözüaçık *et al.*, 2015); *Sphenophorus venatus vestitus* Chittenden, 1904 (present study).

We would like to kindly acknowledge Mr George Kakiopoulos for validating the identification of S. placidus vestitus as well as the two anonymous Reviewers for their corrections and comments on the manuscript.

Literature cited

- Aletby, M.A.A.W., Kadhim, S. and Alhadalg, H. 2015. Two billbugs (Curculionidae; Coleoptera), first recorded from Iraq. *Journal of Purity, Utility Reaction and Environment*, 4(6): 190-193.
- Alonso-Zarazaga, M.Á. and Sánchez-Ruiz, M. 2009. Presencia de dos nuevas plagas en el Mediterráneo occidental y las Canarias y datos sobre otras



Figure 1. Habitus of *Sphenophorus placidus vestitus* Chittenden, 1904. Photo C. Makris.

- (Coleoptera: Dryophthoridae). *Boletín Sociedad Entomológica Aragonesa*, 45: 519-523.
- Alonso-Zarazaga, M.Á., Barrios, H., Borovec, R., Bouchard, P., Caldara, R., Colonnelli, E., Gültekin, L., Hlaváč, P., Korotyaev, B., Lyal, C.H.C., Machado, A., Meregalli, M., Pierotti, H., Ren, L., Sánchez-Ruiz, M., Sforzi, A., Silfverberg, H., Skuhrovec, J., Trýzna, M., Velázquez de Castro, A.J. and Yuna-kov, N.N. 2017. *Cooperative Catalogue of Palaearctic Coleoptera Curculionoidea*. Monografías electrónicas Sociedad Entomológica Aragonesa S.E.A. 8, 729 p.
- Aoyagi, M., Ishii, M., Hirowatari, T. and Yasuda, T. 1990. Record of the zoysiagrass billbug, *Sphenophorus venatus vestitus* Chittenden, from the bank of the Yamato River in Osaka and Nara Prefectures. *Japanese Journal of Applied Entomology and Zoology*, 34(3): 253-254. <https://doi.org/10.1303/jjaez.34.253>.
- Georgioui, G.P. 1977. *The Insects and Mites of Cyprus. With Emphasis on Species of Economic Importance to Agriculture, Forestry, Man and Domestic Animals*. Kiphissia, Athens: Benaki Phytopathological Institute, 347 p.
- Gözüaçık, C., Güllü, M., Konuksal, A., Yücel, A. and Hekimhan, H. 2015. Insect species of stored cereal in Northern Cyprus. In *Proceedings of 2nd International Symposium for Agriculture and Food*, Ohrid, Republic of Macedonia, 7-9 Oct. 2015, poster presentation.
- Hatsukade, M. 1997. Biology and control of the hunting billbug, *Sphenophorus venatus vestitus* Chittenden, on golf courses in Japan. *International Turfgrass Society Research Journal*, 8: 987-996.
- INPN 2021. Inventaire National du Patrimoine Naturel. Available at: https://inpn.mnhn.fr/espece/cd_nom/593184?lg=en (Accessed 18 May 2021).
- Kontodimas, D.C., Milonas, P.G., Vassiliou, V., Thymakis, N. and Economou, D. 2006. The occurrence of *Rhynchophorus ferrugineus* in Greece and Cyprus and the risk against the native greek palm tree *Phoenix theophrasti*. *ENTOMOLOGIA HELLENICA*, 16: 11-15. <https://doi.org/10.12681/eh.11621>.
- Korotyaev, B.A. and Apt, A.S. 2018. The First Record of an Invasive Nearctic Weevil *Sphenophorus placidus vestitus* Chittenden (Coleoptera, Dryophthoridae) from Greece. *Entomological Review*, 98: 1157-1158, <https://doi.org/10.1134/S0013873818080237>.
- Kuhn, W.R., Youngman, R.R., Wu, S. and Laub C.A. 2013. Ecology, Taxonomy, and Pest Management of Billbugs (Coleoptera: Curculionidae) in Orchardgrass of Virginia. *Journal of Integrated Pest Management*, 4(3): 1-5, <https://doi.org/10.1603/IPM12022>.
- León-García, I., Rodríguez-Leyva, E., Equihua-Martínez, A., Valdez, J.M. and Jones, R.W. 2012. First record of the billbug, *Sphenophorus venatus* (Say) (Coleoptera: Curculionidae: Dryophthorinae), on turfgrass in Quintana Roo, Mexico. *The Coleopterists Bulletin*, 66(1): 34-36. <https://doi.org/10.1649/072.066.0110>.
- Oberprieler, R.G., Anderson, R.S. and Marvaldi, A.E. 2014. *Curculionoidea Latreille, 1802: Introduction, Phylogeny*. In: LESCHEN, RAB and BEUTEL RG. (eds). *Handbook of Zoology, Arthropoda: Insecta; Coleoptera, Beetles, Vol. 3: Morphology and Systematics (Phytophaga)*. Walter de Gruyter, Berlin/Boston, p. 423-648.
- Orousset, J., Osella, G., Pelletier, J. and Voisin, J.F. 2008. *Sphenophorus venatus* (Say, 1831), espèce nouvelle pour la faune de Corse et de France (Coleoptera, Curculionoidea). *Coleopteriste*, 11(3): 154-156.
- Pelletier, J. 2005. *Sphenophorus venatus* (Say, 1831), espèce envahissante de la Région paléarctique (Coleoptera, Curculionoidea, Dryophthoridae). *Nouvelle Revue d'Entomologie*, 22(2): 189-190.
- Prena, J. 2018. An Annotated Inventory of the Weevils (Coleoptera: Curculionoidea) Described by Thomas Say. *Bulletin of the Museum of Comparative Zoology* 161(9): 323-401. <https://doi.org/10.3099/MCZ161-09.1>.
- Sauvard, D., Branco, M., Lakatos, F., Facolli, M. and Kirkendall, L.R. 2010. Weevils and Bark Beetles (Coleoptera, Curculionoidea). *BioRisk*, 4(1): 19-266. <https://doi.org/10.3897/biorisk.4.64>.
- Vassiliou, V. and Kitsis, P. 2015. First record of the signal weevil, *Scyphophorus acupunctatus*, in Cyprus. *ENTOMOLOGIA HELLENICA*, 24: 22-26. <https://doi.org/10.12681/eh.11542>.
- Yang, S.W., Shim, G.Y., Kim, J.H., Hong, K.J. and Jeong, Y.G. 2009. Exotic pest, hunting billbug, *Sphenophorus venatus vestitus* Chittenden (Coleoptera, Dryophthoridae) in Korea. *Asian Journal of Turfgrass Science*, 23(2): 265-270.

Received: 18 June 2021; Accepted: 17 March 2022

ΣΥΝΤΟΜΗ ΑΝΑΚΟΙΝΩΣΗ

Πρώτη καταγραφή του *Sphenophorus placidus vestitus* (Coleoptera: Curculionidae: Dryophthorinae) στην Κύπρο

Η. Κακούρης, Χ. Μακρής και Ι. Δημητρίου

Περίληψη Το Βορειοαμερικανικό σκαθάρι *Sphenophorus placidus vestitus* Chittenden, 1904, ένα ξενικό έντομο που είναι γνωστό ότι προσβάλλει χλοοτάπητες, αναφέρεται για πρώτη φορά στην Κύπρο. Ένα μοναδικό δείγμα συλλέχθηκε από την Αμμόχωστο, στον Πρωταρά το 2012. Γίνεται αναφορά στη διασπορά του εντόμου και τις πιθανές οικονομικές επιπτώσεις. Παρουσιάζεται μια συνοπτική λίστα με τα ξενικά είδη Dryophthorinae της Κύπρου.

Hellenic Plant Protection Journal **15**: 72-75, 2022
