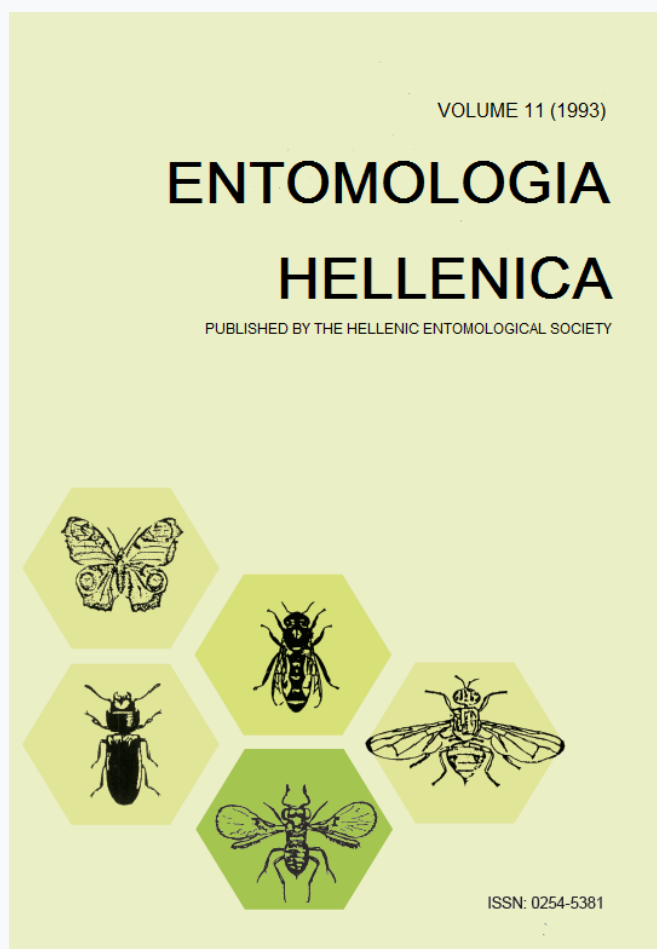


ENTOMOLOGIA HELLENICA

Vol 11 (1993)



First Record of *Alphitophagus bifasciatus* (Say) (Coleoptera: Tenebrionidae) from Greece; Its Occurrence in Cereal Product Stores

TH. Buchelos, C. G. Athanassiou

doi: [10.12681/eh.14011](https://doi.org/10.12681/eh.14011)

Copyright © 2017, TH. Buchelos, C. G. Athanassiou



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/).

To cite this article:

Buchelos T., & Athanassiou, C. G. (1993). First Record of *Alphitophagus bifasciatus* (Say) (Coleoptera: Tenebrionidae) from Greece; Its Occurrence in Cereal Product Stores. *ENTOMOLOGIA HELLENICA*, 11, 41–42.
<https://doi.org/10.12681/eh.14011>

First Record of *Alphitophagus bifasciatus* (Say) (Coleoptera: Tenebrionidae) from Greece; Its Occurrence in Cereal Product Stores¹

C. TH. BUCHELOS and
C. G. ATHANASSIOU

Laboratory of Agricultural Zoology and
Entomology
Agricultural University of Athens
75 Iera Odos, GR 11855 Athens, Greece

The «two-banded fungus beetle» *Alphitophagus bifasciatus* was recorded for the first time in Greece during a survey on beetles associated with stored cereal products, carried out during 1991 in the region of Farsala (Central Greece). Adults of the insect were found on dumb stored product residues inside the store rooms of the Regional State Products Handling Cooperative Administration (K.Y.D.E.P.). The rooms, approximately 300 m each, are made of concrete, the windows remaining constantly open, yet covered by a wire screen. The interior of the store room had low light intensity (between 20 and 450 LUX), sufficient ventilation and ambient conditions of min 23^o C and max 32^o C during summer months and 75% R.H. The products stored therein for prolonged periods of time were wheat, barley and maize.

The identification of the adults was made in the laboratory by the authors, based on the keys of Portevin (1934), Hinton and Corbet (1972) and Weidner (1982).

The insect was indentified as *A. bifasciatus* Say (1821) (Synonyms: *A. quadripustulatus* Stephens (1833), *A. pictus* Menetries (1832), *A. populi* Redt. (1849) (Coleoptera, superfamily He-

teromera, family Tenebrionidae, subfamily Diaperinae). The adult is elongate-oval up to 2.5 mm long, elytra black with two reddish bands, the anterior of which is larger than the posterior one, either one not attaining the median suture (Fig. 1). The larva is 6-7 mm long, narrowly cylindrical in shape and yellowish in colour; its last abdominal tergum is gradually tapering to a single acute blunt urogomph (Weidner 1982).

A. bifasciatus is probably of Mediterranean origin with almost cosmopolitan distribution; pre-eminently mycetophagous, it is mainly found on stored cereals showing preference for amylaceous foodstuff only when it is damp and partly mouldy (Aitken 1975). Cotton (1960) considers it being a scavenger in leftover grain products, decaying vegetable matter etc., frequently found around mills and storehouses where waste material is allowed to accumulate; often found on wet and damaged grain in the holds of grain - transporting ships. Hatch (1965) records it on decaying tree fungi as well as in damp cellars, stores, mills and houses. Lépèsme (1944) cites a record

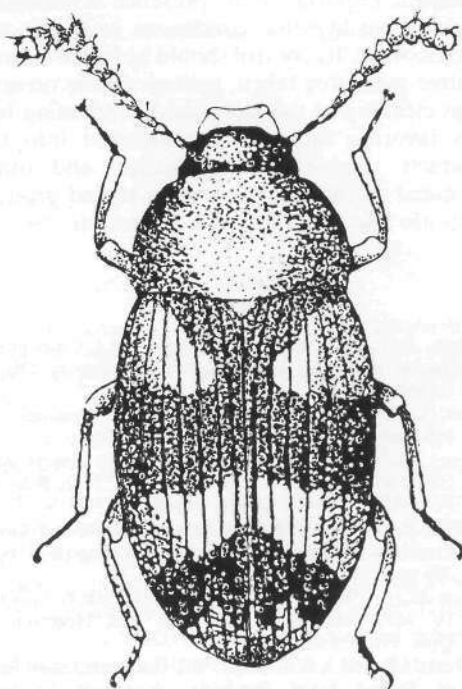


Fig. 1. Adult of *A. bifasciatus* (from Lépèsme).

¹ Received for publication November 23, 1993.

of it breeding in old litter of rabbit cages. There are records from North America (Hatch 1965), Nigeria (Cornes 1964), in Windsor forest, England (Allen 1948) while M.A.F.F. (United Kingdom) gives records from cargoes of flour from Malaya and hooves and horns from India (Aitken 1975). The insect has not been previously reported in Greece. The length of its life cycle is about one month at 25° C and 70% RH (Aitken 1975).

A total of 146 adults of *A. bifasciatus*, most of which alive and active, were collected during the year 1991.

The numbers of *A. bifasciatus* observed, presented abrupt relapses with periods of total absence periodically. In fact, 61 of them were found between mid-January and mid - February, 60 from early May and 25 in June; among and beyond the above mentioned periods of time no insects were observed.

This could possibly be explained by the fact that all *A. bifasciatus* adults were found in damp residues and in corners, whenever small piles of product and/or waste material had been accumulated, the existing insects been removed along with the piles each time the stores were cleaned.

Although *A. bifasciatus* is a pest of secondary economic importance, its presence is indicative of defective hygienic conditions in stores and commodities. Its control should be based on preventive measures taken, with emphasis on constant cleaning of the stores and eliminating factors favoring moisture development into the products themselves. Fumigation and other chemical methods against main stored product pests are also effective for *A. bifasciatus*.

References

- Aitken, A.D., 1975. Insect Travellers, Vol I. Coleoptera, Techn. Bull. 31, Her Majesty's Stationery Office, London 191 pp.
- Allen, A.A., 1948. A note on the habitat of *Alphitophagus bifasciatus* Entomologist's mon. Mag. 84:46.
- Cornes, M.A., 1964. A revised listing of the insects associated with stored products in Nigeria. Tech. Rep. 19. Federal Ministry of Trade, Nigeria.
- Cotton, R.T., 1960. Pests of Stored Grain and Grain Products. Burgess Publishing Co, Minneapolis, U.S.A. 306 pp.
- Hatch, M.H., 1965. The beetles of the Pacific Northwest. IV Macroductyles, Palpicornes and Heteromera. Univ. Wash. Publ. Biol., 16.
- Hinton, H.E. and A.S. Corbet, 1972. Common Insect Pests of Stored Food Products. A Guide to their Identification. Brit. Mus. (Nat Hist.) econ. ser. N. 15 (5th edition) London: 62 pp.

- Lépèsme, P., 1944. Les Coléoptères des denrées alimentaires et des produits industriels entreposées. Lechevalier, Paris: 335 pp.
- Portevin, G., 1934. Histoire Naturelle des Coléoptères de France III. Paul Lechevalier, Paris: 374 pp.
- Verdcourt, B., 1948. The habitat of *Alphitophagus bifasciatus* Say. (Col., Tenebrionidae). Entomologist's mon. Mag. 84:98.
- Weidner, H., 1982. Bestimmungstabellen der Vorrats-schadlinge und des Hausungeziefers Mitteleuropas 4th ed. G.F. Verlag, Stuttgart - N.Y. : 251 pp.

KEY WORDS: *Alphitophagus bifasciatus*, Tenebrionidae, Mycetophagous insects, Stored cereals.

Πρώτη Αναφορά στην Ελλάδα του *Alphitophagus bifasciatus* Say (Coleoptera: Tenebrionidae). Η Παρουσία του σε Αποθήκες Σιτηρών.

Κ.Θ. ΜΠΟΥΧΕΛΟΣ και
Χ.Γ. ΑΘΑΝΑΣΙΟΥ

Εργαστήριο Γεωργικής Ζωολογίας και
Εντομολογίας
Γεωργικό Πανεπιστήμιο Αθηνών, Ιερά Οδός 75,
11855 Βοτανικός

ΠΕΡΙΛΗΨΗ

Το μυκητοφάγο κολεόπτερο *Alphitophagus bifasciatus* παρατηρήθηκε για πρώτη φορά στην Ελλάδα, κατά τη διάρκεια καταγραφής των εντόμων που σχετίζονται με τα αποθηκευμένα σιτηρά στην περιοχή Φαρσάλων διαρκούντος του έτους 1991. Αρκετά αικμαία του εντόμου, τα περισσότερα από αυτά ζωντανά και δραστήρια, βρέθηκαν στις αποθήκες σιτηρών (σιτάρι, κριθάρι, καλαμπόκι) της Κ.Υ.Δ.Ε.Π. της περιοχής, κυρίως σε σημεία όπου υπήρχαν νοτισμένα από υγρασία υπολείμματα και σε γωνίες που ήταν συγκεντρωμένοι σωροί από το προϊόν και σκουπίδια μετά τον καθαρισμό των αποθηκών. Η παρουσία του εντόμου δεν ήταν συνεχής κατά τη διάρκεια του έτους.