

## SHORT NOTE

***Globicornis nigripes* and *Anthrenus verbasci* (Coleoptera: Dermestidae) in oothecae of *Hierodula tenuidentata* (Mantodea: Mantidae) from Romania**

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**Abstract.** The species *Globicornis* (*Globicornis*) *nigripes* (Fabricius, 1792) and *Anthrenus* (*Nathrenus*) *verbasci* (Linnaeus, 1767) are firstly recorded from the mantis oothecae of *Hierodula tenuidentata* Saussure, 1869 from Romania.

**Coleoptera: Dermestidae: Megatominae**

***Globicornis* (*Globicornis*) *nigripes* (Fabricius, 1792).** Romania, Timișoara Cathedral park, 45.750405°N 21.223345°E, 10-13.1.2021, I-A. Rădac lgt., 2 ♀♀ and 1 larva, Háva det., coll. J. Háva & I-A. Rădac; 3.02.2021, 1 ♂, I-A. Rădac lgt., J. Háva det., coll. J. Háva & I-A. Rădac.

***Anthrenus* (*Nathrenus*) *verbasci* (Linnaeus, 1767).** Romania, Timișoara Cathedral park, 45.750405°N 21.223345°E, 3-5.2.2021, I-A. Rădac lgt., 2 spec., J. Háva det., coll. J. Háva & I-A. Rădac.

**Remarks.** Numerous oothecae of *Hierodula tenuidentata* Saussure, 1869 were collected from Cathedral park Timișoara (45.750405°N 21.223345°E). Five oothecae that were laid probably during the 2018 season were collected on 20.11.2019 and 15 oothecae laid in 2019 were collected on 20.11.2020. 15 viable oothecae were also collected on 20.11.2019. All oothecae were collected by detachment from the bark of tress (mainly *Platanus*) with as few bark as possible. The contents of additional ten fresh and five old oothecae were examined by dissection.

The collected oothecae were kept at room temperature in plastic containers. These were opened on 2-3 times a week to check for emergence of arthropods and for air ventilation. Occasionally, a few drops of water were added to the containers in order to keep a certain level of humidity inside.

On the examination of the old oothecae we found mites, small spiders, psocids, diplopods (*Polyxenus lagurus*) and beetles larvae (*Dasytes* sp). Furthermore, many unfertilized mantid eggs, empty eggs hulls and nymphs that couldn't emerge were observed. In the viable oothecae only mites and psocids were found.

From the oothecae collected in 2020, two dermestid beetles and one larva of *Globicornis nigripes*, two beetles and one larva of *Anthrenus verbasci* emerged on 10-13.1.2021 and 3-5.2.2021.

The species *Globicornis nigripes* (Figs. 1-2) is a saproxylic species, necrophagous larvae develop in the cavities of old deciduous trees (Mroczkowski 1975, Ranius & Jansson 2002, Háva 2011, 2015). On the examination of three viable oothecae that hatched under laboratory conditions, we found that 237-375 eggs were laid per ootheca from which up to 45 were infertile and up to 31 had a dead nymph in them. Thus, after hatching some oothecae may become a suitable microhabitat for necrophagous or opportunistic species. Although we cannot entirely exclude the possibility that this association was determined by the substrate of the oothecae, the fact that we found three dermestid individuals suggests that the observation is not accidental. Further investigation of old oothecae will show if there is an ecological relationship or just opportunism.

In the case of *Anthrenus verbasci* (Figs. 3-4), the larvae are necrophagous, attacking many animal-based materials like wool, felt, fur, silk, feathers or leather and it can also be a pest in insect collections. Although the association of this species with the oothecae of *Hierodula* has not been reported until now, the ecological relationship is to be expected based on the dead nymphs found in old oothecae, as the species is highly opportunistic.

The records of *Globicornis* (s. str.) *nigripes* (Fabricius, 1792) and *Anthrenus* (*Nathrenus*) *verbasci* (Linnaeus, 1767) in oothecae of *Hierodula tenuidentata* Saussure, 1869 from Romania represent the first report of this dermestid beetles developing in oothecae.



Figs. 1-4. *Globicornis* (s. str.) *nigripes* (Fabricius, 1792): 1- adult, 2- larva; *Anthrenus* (*Nathrenus*) *verbasci* (Linnaeus, 1767): 3- adult, 4- larva. Substrate of 2 and 3: oothecae of *Hierodula tenuidentata* Saussure, 1869.

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