

Erthesina fullo (Thunberg, 1783) - first record of this invasive species in Greece (Hemiptera: Pentatomidae)

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Abstract. Since the first European observation in 2015 of *Erthesina fullo* (Thunberg, 1783) (Hemiptera: Heteroptera: Pentatomidae: Halyini) in Albania in the region of Durrës and Tirana, observations have remained limited to this 40 km wide region. The number of observations of *E. fullo* increased significantly in this region in 2023 and 2024. For the first time, we mention the presence of an adult and a nymph in Greece. The specimens were observed in October 2024 in Rio in the Peloponnesus near the port of Patras.

Key words: true bugs, Heteroptera, Pentatomoidea, Halyini, Yellow Spotted Stink Bug, invasive pest, new record, Greece.

Introduction

Erthesina fullo (Thunberg, 1783) (Hemiptera: Heteroptera: Pentatomidae: Halyini) is a species native to Southeast Asia, introduced in Europe (Lupoli et al. 2020, 2021). It was first observed on 08.04.2015 in Europe in Albania in Durrës by Leonardo Antonio Argese (<https://www.inaturalist.org/observations/135025670>). This observation documented by its author in iNaturalist on 14.09.2022 had not been reported by Lupoli et al. (2020, 2021), who mentioned the first European observation of this species on 22.03.2017 in Albania in Tirana. Since that date, more than 90 adults and nymphs of *E. fullo* were observed, but always around Durrës and Tirana, not exceeding an area of about forty kilometres wide.

Fig. 1 shows the number of observations of *E. fullo* adults and nymphs recorded in iNaturalist each year from 2015 to October 2024. It can be seen that the number of adult observations per year remained at about the same level until 2022 but doubled in 2023, and increased sixfold in 2024, as did the number of nymphs. Adults and nymphs were mainly observed in August and September, with no observations in January and February (Fig. 2). Further introductions into Europe were reported in 2021 and 2023 in the Czech Republic in shipments, including one in a sealed container from China (Kment et al. 2023). Still, these introductions were not followed by establishment from one year to the next by overwintering in these regions. Kment et al. (2023) also mentioned that *E. fullo* invaded Japan from the south as early as the 18th century, remaining limited to the island of Kyushu. However, since the beginning

of the 21st century, it has moved further north into Japan.

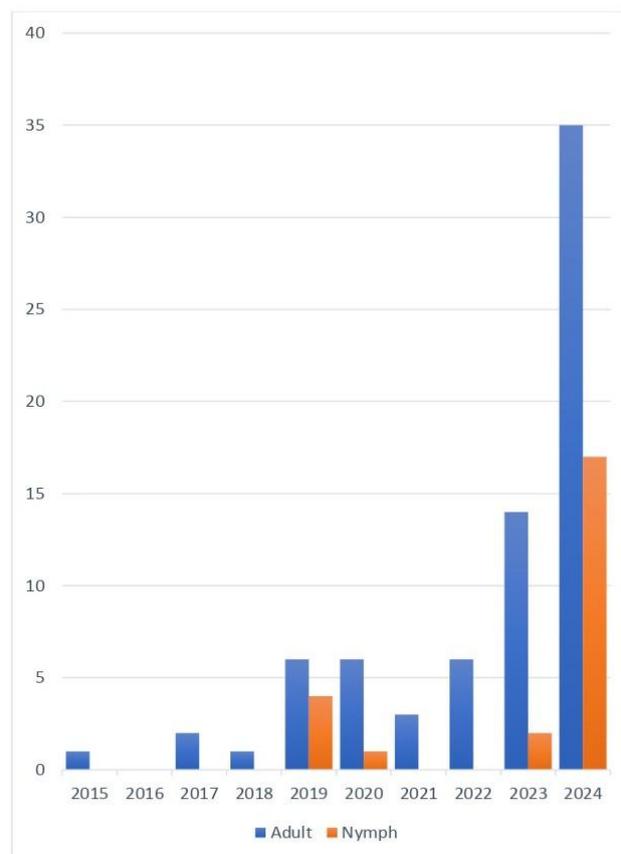


Fig. 1. Number of adults (blue bars) and nymphs (orange bars) per year observed in iNaturalist from April 2015 to October 2024.

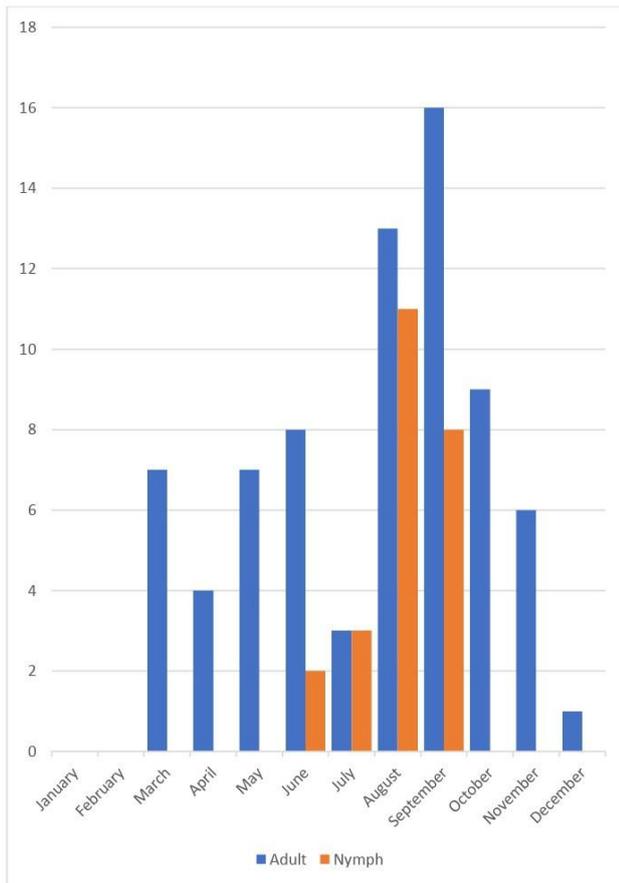


Fig. 2. Number of adults (blue bars) and nymphs (orange bars) per month observed in iNaturalist from April 2015 to October 2024.



Fig. 3. Nymph (5th instar) of *Erthesina fullo* (Thunberg, 1783) from Rio, Greece, dorsal view (photo: Konstantina Zografou).

Material

GREECE: Rio (Patras municipality), Peloponnesus, 38.300 N, 21.781 E, in a garden, 6 & 7.10.2024, 1 fifth instar nymph, leg. K. Zografou (Figs. 3 & 4); 26.10.2024, 1 female, leg. K. Zografou (Figs. 5 & 6). Both specimens are preserved in ethanol tubes and available for potential future genetic analysis at the Biodiversity Conservation Lab of the University of Ioannina, Greece.

Rio village is situated along the northwest coast of the Peloponnesus in Greece, approximately 7 km from the port of Patras, which is the third-largest city in the country. Most houses in the village feature gardens that create a mosaic of old pine and platanus trees, along with decorative shrubs and a variety of edible trees, including lemon, orange, olive, apricot, and pear trees.



Fig. 4. Nymph (5th instar) of *Erthesina fullo* (Thunberg, 1783) from Rio, Greece, ventral view (photo: Konstantina Zografou).



Fig. 5. Female of *Erthesina fullo* (Thunberg, 1783) from Rio, Greece, dorsal view (photo: Konstantina Zografou).



Fig. 6. Female of *Erthesina fullo* (Thunberg, 1783) from Rio, Greece, ventral view (photo: Konstantina Zografou).

Discussion

The ventral view of the adult in Fig. 6 shows that its rostrum is relatively short (although it is much longer in the fifth instar nymph (Fig. 4)), which corresponds well to the description of *E. fullo* as described in Lupoli et al. (2021).

It is yet impossible to know whether the individuals observed in Greece come from Albania or whether it is a new introduction, especially since the port of Patras is one of the largest Greek ports for receiving cargo from China.

Halyomorpha halys (Stål, 1855) is another invasive Asian Pentatomidae species in Europe. It was first reported in Europe in 2004 in Switzerland, and after a few years of latency, it very quickly invaded Italy in 2007 from Genoa (Cianferoni et al. 2018), then to Magreta village, near Modena in 2012, and France since 2015. At the end of 2015, there were only 18 observations on iNaturalist in Europe. Today it has spread to more than 20 European countries (Streito et al. 2021). It causes damage to fruit trees, and 23,000 European observations of this species have been made on iNaturalist up to now.

Given that *E. fullo* has been observed on 57 host plants belonging to 29 families, including apple, pear, peach, cherry, and kiwi (Kment et al. 2023), it remains to be hoped that *E. fullo* will not follow the same expansion pattern as *H. halys* in the coming years.

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