

NOTE

**Record of an alien species of *Fulvius*
(Hemiptera: Heteroptera: Miridae: Cylapinae)
in the northern Iberian Peninsula**

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Abstract

Fulvius borgesii Chérot, J. Ribes & Gorczyca, 2006, an alien species of cylapine plant bug (Hemiptera: Heteroptera), is recorded from Hernani (Gipuzkoa, northern Iberian Peninsula). It was hitherto known only from the Azores Islands. The present collecting data support the idea of its South American origin, which is also in agreement with its inclusion within the *bisbistillatus*-group of species.

Key words: Heteroptera, Miridae, Cylapinae, *Fulvius borgesii* Chérot, J. Ribes & Gorczyca, 2006, Gipuzkoa, northern Iberian Peninsula.

Resumen

Registro de una especie exótica de *Fulvius* (Hemiptera: Heteroptera: Miridae: Cylapinae) en el norte de la Península Ibérica

Se ha registrado *Fulvius borgesii* Chérot, J. Ribes & Gorczyca, 2006 en Hernani (Gipuzkoa, norte de la Península Ibérica). Se trata de un mirido cilapino (Hemiptera: Heteroptera) exótico, hasta ahora sólo conocido de las Islas Azores. Los datos de captura refuerzan la tesis de su origen sudamericano, también concordante con su pertenencia al grupo de especies *bisbistillatus*.

Palabras clave: Heteroptera, Miridae, Cylapinae, *Fulvius borgesii* Chérot, J. Ribes & Gorczyca, 2006, Gipuzkoa, norte de la Península Ibérica.

Laburpena

***Fulvius* espezie exotiko baten aipua (Hemiptera: Heteroptera: Miridae: Cylapinae) Iberiar Penintsularen iparraldean**

Fulvius borgesii Chérot, J. Ribes & Gorczyca, 2006 aurkitu da Hernanin (Gipuzkoa, Iberiar Penintsularen iparraldean). Mirido zilapinoa da (Hemiptera: Heteroptera), orain arte Azore Uharteetakoa baino ezaguna ez zena. Oraingo harrapaketa-datuak indarra ematen diote hegoamerikar jatorriaren usteari, *bisbistillatus* espezie-taldekoko izateak ematen dion bezala.

Gako-hitzak: Heteroptera, Miridae, Cylapinae, *Fulvius borgesii* Chérot, J. Ribes & Gorczyca, 2006, Gipuzkoa, Iberiar Penintsularen iparraldea.

Introduction

Cylapinae is a relatively small subfamily among the Miridae. Two of the five recognized tribes, namely Fulviini and Bothriomirini, occur in the Palaearctic Region, comprising here a total of 14 species until the publication of the catalogue by Kerzhner and Josifov (1999).

Fulvius Stål, 1862 is the largest genus within the Cylapinae, with more than 80 species described from both the Old and New World, particularly from tropical areas. The only species recorded up to now from the Iberian Peninsula is *F. oxycarenoides* (Reuter, 1878), which may be considered as belonging to the Spanish autochthonous fauna.

Several species of *Fulvius* have been detected in European mainland in the last years and are considered to be alien species. *F. anthocoroides* (Reuter, 1875) was formally described from Europe more than 136 years ago on the basis of specimens collected in the harbour of Rouen (France) on a ship from Senegal (lectotype designated by Kerzhner, 1997). This species is widely distributed in the Old World (Gorczyca, 2006), in United States and Venezuela, but until its recent introduction in Antwerp harbour, Belgium (Chérot *et al.*, 2011) it was not found again in western Europe. A still undescribed species of *Fulvius* (Pluot-Sigwalt and Chérot, in prep.) and *F. subnitens* (Poppius, 1909) (Chérot *et al.*, 2011) were also found in Antwerp Harbour, apparently as a result of their introduction with trunks from central Africa (probably Gabon).

F. borgesii Chérot, J. Ribes & Gorczyca, 2006 was described from Azores Islands. This species, never observed before in Azores and not found elsewhere since, belongs to the *bisbistillatus*-group of the genus, a group of species from the New World, particularly diversified in Central and South America and apparently absent in the native fauna of the Old World. Even if the relationships within the genus *Fulvius* remains largely unresolved (cf. Sadowska-Woda *et al.*, 2008) and if the accurate origin of *F. borgesii* remains unknown, its introduction in Azores seems very likely (Chérot *et al.*, 2006).

In the autumn of 2011 a female of *Fulvius* differing of the native *F. oxycarenoides* was collected in the northern Iberian Peninsula by the second author. We discuss briefly hereafter its specific identity and its potential origin.

Material studied

A female collected inside a house (fourth floor), labelled as follows: «GIPUZKOA: / Hernani: Zikuñaga / 30 m 30TWN8390 / Attracted to home light, evening / 4-11-2011 / S. Pagola Carte *leg.*».

The specimen is mounted on card with the right hemelytron and wing spread and the antennae, right middle and posterior legs uncomplete and is deposited in the Pagola-Zabalegui collection.

Zikuñaga is a district of Hernani (Gipuzkoa, Basque Country, northern Iberian Peninsula) which was builded in the vicinity of a paper mill. As can be read in the web site of the company (Iberpapel), *Eucalyptus* trees from Spain, Argentina and Uruguay are the raw material used to produce cellulose pulp. Great amounts of wood are periodically imported by ship to Pasaia Harbour, less than 10 km far in a straight line.

Results and discussion

The analysed specimen is a relatively large and elongated female (total length about 4.38 mm) with a whitish to yellowish stripe on the corium, a whitish apex of the clavus, a white spot on the base of the cuneus, a totally black scutellum, the meso- and metacoxae not totally dark, brown only at base, whitish or yellow more apically and the second antennal segment yellowish at apex (on about 1/5 of its length).

Apparently, all African species of the *F. anthocoroides*-group (the alone species-group of *Fulvius* known from Africa) and all Oriental species of the *F. anthocoroides* and *F. bifenestratus*-groups could be excluded by their habitus (cf. Gorczyca, 2000, 2002). *F. oxycarenoides* could also be excluded by its habitus. The dorsal coloration of this species is very different: its exocorium and its anterior part of the clavus are the clearest parts of the hemelytra, the endocorium and the apex of clavus being darker.

Among the Central and South American species of the *bisbistillatus*-group, by its meso- and metacoxae with two colours, the analysed specimen is close to *F. bolivianus* Carvalho & Costa, 1994 (cf. Carvalho and Costa, 1994), *F. paranensis* Ferreira & Henry, 2002 (cf. Ferreira and Henry, 2002) and *F. borgesii* (cf. Chérot *et al.*, 2006). It is separated from *F. bolivianus* by the marked stripe of hemelytra (they are shaded in *F. bolivianus*), sharply delimited (their «borders» are fuzzy in *F. bolivianus*) and totally separated (the medial patch

of corium and the patch at apex of clavus are converging in *F. boliviannus*) and by the shape of the spot of cuneus (not curved in the analysed specimen, obviously curved in *F. boliviannus*), by the total length, etc. It is separated from *F. paranensis* by the coloration of mesocoxae (unicolorous dark brown in *F. paranensis*, contrasted dark brown and yellowish in the analysed specimen). On the other hand, it is very similar to two paratypes of *F. borgesii* preserved in the Brussels Museum. We just detect minor differences in the coloration of the membrane, brown in the paratypes, grey in the analysed specimen. Consequently, we identify the specimen collected in Hernani as *F. borgesii* Chérot, J. Ribes & Gorczyca, 2006.

Most probably, *F. borgesii* has arrived to Hernani among *Eucalyptus* trees imported from Argentina or Uruguay. If so, further research is needed to find out whether the collected specimen came directly from the trunks piled up in the factory of Zikuñaga or from the surrounding, autochthonous habitats after its, presumably recent, establishment in the area.

The new finding of *F. borgesii* in Gipuzkoa not only is the first record of the species for the European continent, but also supports the idea of its exotic origin and recent introduction both here and in the Azores Islands, from where it was described (Chérot *et al.*, 2006). Furthermore, now we could hypothesize that this species probably shows a high potential to widespread or to become establish in various temperate regions of Europe, at least in their coastal areas.

Consequences of insect importations are difficult to predict, particularly when the biology of the species is unknown, as in the present case.

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