

**First records of *Smicrus filicornis* Fairmaire & Laboulbène, 1855 for the  
Iberian Feather-Winged Beetle fauna (Coleoptera, Ptiliidae)**

I. de F. e Silva\*, M. Boieiro, P. Martins da Silva & A. R. M. Serrano

The family Ptiliidae Erichson, 1845 includes some of the smallest known insects, usually ranging from 0,5 to 1,2 mm in length. Besides their minute size, they also possess rather characteristic feather-like wings (sometimes partly exposed by short truncated elytra) and fragile antennae with thin and fairly flimsy mid-segments. Adults and larvae can be found in a wide range of habitats, such as rotting vegetation and wood, dung, leaf litter, under bark, on decaying fungi and in other moist organic materials suitable for growth of the moulds and fungi upon which larvae and adults feed, both on hyphae and spores (Besuchet & Sundt, 1971; Dybas, 1980; Darby, 1991).

This group comprises over 183 species in the Palaearctic region, of which 125 are reported from Europe (excluding Caucasus). Of these, 46 species are known from Iberia (44 in Spain and only 13 in Portugal) (Johnson, 2004; Polilov, 2007). Despite having quite a unique morphology, ptiliids have been much overlooked by entomologists, especially in the Iberian Peninsula, probably owing to their dimensions and the difficult study of their complex spermathecae, which is mandatory for reliable species identification (particularly so for the species-rich genus *Acrotrichis* Motschulsky, 1848). The most effective way of collecting Feather-Winged Beetles is through use of Berlese funnels filled with decaying moist organic detritus (Dybas, 1980). Baited pitfall trapping, debris sifting, fine-mesh netting and flight intercept traps are also among the most efficient collecting methods (Dybas, 1980; Darby, 1991).

In this short note *Smicrus filicornis* Fairmaire & Laboulbène, 1855, the only Palaearctic species within the genus *Smicrus* Matthews, 1872

(Ptiliidae: Acrotrichinae: Nephaniini), is reported for the first time from Portugal and the Iberian Peninsula.

***Smicrus filicornis* Fairmaire & Laboulbène, 1855**

MATERIAL EXAMINED: 29SND36 (UTM 10x10 km) – Azinhaga, Golegã, Ribatejo, Reserva Natural do Paúl do Boquilobo (RNPB); altitude: 20 m ASL; 06-x-2002, 1♂, 1♀ (Faria e Silva leg. et det., Faria e Silva–FCUL col.); habitat: Cork oak (*Quercus suber*) stand; collecting method: unbaited pitfall traps with ethylene glycol.

This species is quite characteristic, with a rather distinctive reticulation of the pronotum and long straight setae on the swollen first segment of the fore tarsi, especially in the male specimen. The identification was further confirmed through examination of the female spermatheca, as figured in Besuchet & Sundt (1971).

*Smicrus filicornis* occurs mostly in litter at the edge of ponds and streams (Besuchet & Sundt, 1971; Darby, 1991) of the Western Palaearctic, Nearctic and Neotropical regions (Johnson, 2004; Polilov, 2007), a habitat which in fact is favoured by many other Ptiliidae. Only two specimens were found in a rather intensively sampled (4 x 8 unbaited pitfall trap grid, all year round fortnightly sampling) cork oak forest within the limits of the Boquilobo Wetland Natural Reserve. *Smicrus filicornis* has been considered rare in England (Darby, 1991) and classified as Red Data Book “K-Insufficiently Known” (Hyman & Parsons, 1994). Considering this species’ wide distribution range, this apparent rarity may also be explained by under recording and a general lack of interest for beetles of this family.

Centro de Biologia Ambiental e Departamento de Biologia Animal, Faculdade de Ciências da Universidade de Lisboa (FCUL), Ed. C2, 2º piso, Campo Grande 1749-016 Lisboa, Portugal.  
\* Corresponding author: insilva@fc.ul.pt

## ACKNOWLEDGEMENTS

We are grateful to Pedro Cardoso, Nuno Oliveira and RNPB for fieldwork assistance. Faria e Silva was supported by Fundação para a Ciência e Tecnologia, through SFRH/BD/6051/2001 PhD grant.

## References

- BESUCHET, C. & SUNDT, E., 1971. Familie: Ptiliidae. In: Freude, H., Harde, K.W. & Lohse, G. A. (eds.). *Die Käfer Mitteleuropas*, 3: 311-342.
- DARBY, M., 1991. Ptiliidae. In: Cooter, J. (ed.) *A Coleopterist's Handbook* (3rd edition). Cribb, P. W. (general editor). The Amateur Entomologists' Society. Feltham: 81-83.
- DYBAS, H.S., 1980. The smallest beetles (Coleoptera: Ptiliidae). *Florida Department of Agriculture and Consumer Service, Division of Plant Industry; Entomology Circular*, 218: 1-4.
- JOHNSON, C. 2004. Ptiliidae. In: I. Löbl & A. Smetana (eds.). *Catalogue of Palaearctic Coleoptera*, Vol. 2. Apollo Books. Stenstrup: 122-131.
- POLILOV, A., 2007. Fauna Europaea: Ptiliidae. In: Alonso-Zarazaga, M. A. (ed.). *Fauna Europaea: Coleoptera*. Fauna Europaea version 1.1, <http://www.faunaeur.org>

**Recibido, 24-X-2008  
Aceptado, 12-III-2009  
Publicado, 29-VI-2009**