

PETALOPTILA (*PETALOPTILA*) FERMINI GOROCHOV & LLORENTE, 2001, NEW SPECIES TO PORTUGAL (ORTHOPTERA, GRYLLIDAE)

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Abstract: The presence of the cricket *Petaloptila (Petaloptila) fermini* Gorochov & Llorente, 2001 (Orthoptera, Gryllidae) is recorded for the first time from Portugal.

Key words: Orthoptera, Gryllidae, *Petaloptila (Petaloptila) fermini*, first record, Portugal.

***Petaloptila (Petaloptila) fermini* Gorochov & Llorente, 2001 - Nueva especie para Portugal (Orthoptera, Gryllidae)**

Resumen: Se cita por primera vez para Portugal el grillo *Petaloptila (Petaloptila) fermini* Gorochov & Llorente, 2001 (Orthoptera, Gryllidae).

Palabras clave: Orthoptera, Gryllidae, *Petaloptila (Petaloptila) fermini*, primera cita, Portugal.

The genus *Petaloptila* Pantel, 1890 is represented in the Iberian Peninsula by twelve species, eight of which were described in the present century (Gorochov & Llorente, 2001; Barranco, 2004). Outside Iberia only one species of the genus is known, *Petaloptila (Italoptila) andreinii* Capra, 1935 described from Italy (Lippiano, Perugia) (Capra, 1935; Barranco, 2004).

In the Iberian Peninsula the genus is widespread, and although numerous vouchers are deposited in several collections, the species' distributions are poorly defined. Obviously, this fact is not independent of their recent description, an outcome of the use of the male genitalia in the determination and characterization of species. At the light of this new information all early records should be verified.

In Portugal two species of the genus *Petaloptila* were recorded in ancient times, *Petaloptila (Petaloptila) aliena* (Brunner von Wattenwyl, 1882) and *Petaloptila (Petaloptila) pallescens* Bolívar, 1927 (Aires & Menano, 1915; Bolívar, 1927; Seabra, 1939). With the new information provided by the revision of the Spanish crickets (Gorochov & Llorente, 2001) the presence of *P. (P.) aliena* in Portugal became particularly dubious as it only occurs in the eastern part of Iberia.

In order to verify earlier identifications, the location of the male specimens that originated the records was traced. The specimens studied by Aires & Menano (1915) are deposited in the Zoological Museum of Coimbra (MZCP, Portugal), whereas the one studied by Bolívar (1927) was lost in the fire that destroyed the collection of Museu Bocado (Lisbon) while on loan from Instituto Español de Entomología (Spain) (Gorochov & Llorente 2001). Moreover, the specimens recorded by Seabra (1939) are nowadays in the entomological collection of the former Estação Florestal Nacional (Oeiras, Portugal).

Regarding the material deposited in the above mentioned collections, seven males previously identified as *P. (P.) aliena*, from Mata do Fundão and Sobreiral, were stu-

died at the MZCP. The external morphology of these specimens is homogeneous and clearly distinct from that of *P. (P.) aliena* in the shape of the dorsal gland. The genitalia of one specimen from Mata do Fundão was extracted and prepared, being very similar to that of *Petaloptila (Petaloptila) fermini* Gorochov & Llorente 2001.

Since the Portuguese specimen (from Buçaco) studied by Bolívar and used in the description of *P. aliena pallescens* was lost, its identity cannot be verified. Attempts to collect new material in Buçaco carried out by the authors have been unsuccessful, so the identity of the local population remains unclear. It should be mentioned that according to Bolívar, the specimen from Las Hurdes (Cáceres, Spain) identified by him as *P. aliena pallescens* [which belongs to *P. (P.) fermini* (cf. Gorochov & Llorente, 2001)] was more similar in coloration to the specimen from Buçaco than from those collected at Cercedilla (Madrid, Spain).

Finally, the collection of the former Estação Florestal Nacional does not include any male specimens of *Petaloptila*, and as they have a clearly distinct geographical origin, they will be the subject of future research.

In addition to the museum specimens, material collected between 1999 and 2005 in several localities of the Serra da Estrela Natural Park was examined: **Covilhã:** Above hydroelectric station of Covão do Ferro (29TPE2063 – 1450 m), 13-05-2001 (2 ♀♀) (Grosso-Silva col.). **Gouveia:** Near Quinta do Tinoco (29TPE2788 – 635 m), 13-05-2004 (1 ♀) (Grosso-Silva col.). **Guarda:** Near Fojo (29TPE3885 – 700 m), 27-05-2004 (1 ♀) (CIBIO/UP col.). **Manteigas:** Albarcãs (29TPE2268 – 1080 m), 24-04-2003 (1 ♀) (Grosso-Silva col.), 17-08-2005 (1 ♂) (CIBIO/UP col.); Carvalheira (29TPE2374 – 1100 m), 16-05-1999 (1 ♂ and 1 ♀), 24-06-1999 (1 ♀) (Grosso-Silva col.), Lagoa Seca (29TPE2267 – 1420 m), 09-06-2005 (1 ♀) (CIBIO/UP col.); Mata do Fragusto (29TPE3175 – 695 m), 18-05-2005 (1 ♀) (CIBIO/UP col.); Poço do Inferno (29TPE2570 – 1080 m), 10-05-2004 (2 ♂♂) (CIBIO/UP col.); Near Pracota

(29TPE2273 – 1055 m), 13-04-2005 (2 ♂♂ and 2 ♀♀) (CIBIO/UP col.); **Seia**: Cabeça (29TPE0664 – 550 m), 13-04-1999 (1 ♂), 18-04-1999 (3 ♀♀) (Grosso-Silva col.); Safra (29TPE0655 – 665 m), 12-05-2004 (1 ♂) (CIBIO/UP col.). All these specimens agree morphologically with the specimens studied at MZCP.

In March 2008, during a visit to the Museo Nacional de Ciencias Naturales (Madrid, Spain), a sample of the Portuguese specimens was compared with the type of *P. (P.) fermini* that had recently been returned from Russia. This was the most similar species of the Portuguese specimens mentioned by Gorochov & Llorente (2001), however some doubts subsisted regarding the dorsal gland and small details on the genitalia. After the study of the type it was patent that the differences were artefacts and they all belong to the same species: *P. (P.) fermini*. Differences in observation angle explain the few doubts concerning the genitalia while the fact that the Portuguese specimens are preserved in alcohol and the type specimen is dried explains the morphological differences observed in the dorsal gland, which is slightly less rounded than in the illustration of the original description.

As a result, the old records of Aires & Menano (1915) of *P. (P.) aliena* from Mata do Fundão and Sobreiral are here attributed to *P. (P.) fermini*. The area formerly known as Mata do Fundão is located in Serra da Gardunha (29TPE24), whereas Sobreiral could not be traced since there are several places with that name in the country.

Petaloptila (P.) fermini was previously only known from Cáceres, from where it was described based in one male from “Casar de Palomero” and two females, from “Las Hurdes” and “Jarandilla”, and no ecological information was available about its collecting sites. In Serra da Estrela Natural Park, the species was collected between 550 and 1450 metres above sea level, in a variety of habitats which include open areas (Albarcãs and Lagoa Seca), mixed-

forests with predominance of oak (Carvalheira) and pine forests (Cabeça). The specimens were collected with pitfall traps and directly during nocturnal fieldwork, period in which they are active and can be more easily seen in rocky areas.

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