

**Rediscovery of *Prionotropis hystrix* (Germar, 1817)
(Orthoptera: Pamphagidae) in NE Italy after 90 years**

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Abstract

After nine decades, the occurrence of *Prionotropis hystrix* in northeasternmost Italy is confirmed by a new photographic record of a female from 20 km NNE of Trieste, taken on July 25, 2010. Morphologically, the specimen agrees well with the description of *P. h. sontiaca* Uvarov, 1923 currently listed as a synonym of *P. h. hystrix*. Taxonomy, distribution and habitat of *P. hystrix* are briefly discussed and the necessity for further studies on the infraspecific structure of this species is emphasized.

Zusammenfassung

Nach neun Jahrzehnten bestätigen wir das Vorkommen von *Prionotropis hystrix* auf italienischem Territorium anhand eines Foto-Beleges (20 km NNO von Triest) vom 25. Juli 2010. Das photographierte Weibchen stimmt morphologisch gut mit der Beschreibung der heute als Synonym von *P. h. hystrix* angesehenen *P. h. sontiaca* Uvarov, 1923 überein. Wir erörtern Taxonomie, Verbreitung und Habitat von *P. hystrix* und weisen auf die Notwendigkeit weiterer Studien zur Klärung der innerartlichen Struktur dieser Art hin.

Introduction

The genus *Prionotropis* Fieber, 1853 consists of five species, two of which are polytypic. It is distributed over southern Europe, eastwards to Anatolia (EADES et al. 2011 - 2011-08-11). *P. hystrix*, originally described by GERMAR (1817) as *Gryllus hystrix* from Krk Island (formerly Veglia, Croatia), is mainly distributed along the eastern Adriatic coast including several Dalmatian islands. It was later subdivided by UVAROV (1923) into four subspecies: apart from the nominotypic form the newly described taxa *P. h. sontiaca* from Gorizia (Italian-Slovenian border), *P. h. azami* from the Var (Dép. Var, S France), and *P. h. rhodanica* from the Crau (Dép. Bouches-du-Rhône, S France). Furthermore, he downgraded *P. appula* (Costa, 1836) to the rank of a further subspecies of *P. hystrix* (Germar, 1817), despite its marked differences from the four former forms in respect to distinctly longer fore wings, which in males are reaching the hind knees and the strongly compressed pronotum with a markedly pointed hind margin. Two decades later, however, UVAROV (1943) elevated *P. appula*, which later turned out to occur apart from southern Italy also in some places in Greece (WILLEMSE & WILLEMSE 2008), again to the rank of a full species.

The four remaining "subspecies" are strongly brachypterous to squamipterous forms which differ from each other mainly in length and shape of the reduced forewings (see UVAROV 1923, 1943). In the latter paper, he elevated *P. h. rhodanica* to species level but recent French authors regard it as subspecies of *P. hystrix* (see FOUCART 1995, DEFAUT 2001, STREIFF et al. 2006). *P. h. sontiaca*, at last, was synonymized with the nominotypic form by HARZ (1975).

It seems that *P. h. sontiaca* is only known from the voucher specimens collected by Ebner in Goricia (formerly Görz) at the Italian-Slovenian border, on which UVAROV (1923) had based his original description. Apparently it was never found again on Italian territory, although FONTANA et al. (2002) included it in their identification key, most likely for completeness' sake only, since they did not provide any own, new data, and the accompanying figure seems to show a specimen from Dalmatia rather than from Italy. The photographic record of a *P. hystrix* female from N of Trieste which we are reporting in this note represents thus the second record from Italy ever, and a rediscovery in this country after no less than nearly nine decades.

Results and Discussion

The photographs of the *P. hystrix* specimen (Fig. 2) and its habitat (Fig. 1) were taken by Mr. Benny Trapp, Wuppertal, on July 25, 2010 in a carstic region ("Carso Triestino") 20 km NW of Trieste on his way back from a herpetological photographic survey excursion to the Balcans. The exact coordinates are: 45°47'39.44"N, and 13°36'6.53"E, the nearest city being Monfalcone. The type locality of *P. sontiaca*, Goricia, is about 20 km air distance further north. This border area to Slovenia is called Triestian and Gorizian carst ("Carso triestino and goriziano") and is characterised as the northwesternmost point of faunal elements, which have their main distribution along the Dalmatian coast. The most famous example is certainly the cave-dwelling olm (*Proteus anguineus*) (PARZEFALL et al. 1999), but also two lizard species (*Algyroides nigropunctatus* and *Podarcis melisellensis*) follow exactly this distributional pattern (CORTI & LO CASCIO 1999). When the second author of this note (WB) visited this area in July 1993, he found also *Saga pedo* in this carstic habitat.

Although the photograph (Fig. 2) leaves no doubt as to the specific identity of this female specimen, it has distinctly shorter forewings (tegmina) than conspecific females from Dalmatia (Fig. 3). Also, the pronotum has a less elevated median keel with a less pointed termination.

A web search revealed a few photographs of *P. hystrix* from Slovenia that likewise showed this pattern of shortened wings. Those specimens have been photographed in the Submediterranean area of Slovenia between the Adriatic coast near Koper and Kraški rob (<http://www.biolib.cz/en/taxonimage/id5861>); thus south of Trieste.

Our observation suggests that the question of subspecies formation in *P. hystrix* has to be revisited. Two alternative hypotheses could be put forward: (1) a clinal reduction of wing length from Dalmatia towards the northwestern marginal populations, or (2) the formation of a local form (subspecies?) in the Slovenian and

Triestinian carst for which the name *P. h. sontiaca* Uvarov, 1923 would have to be reinstated. To resolve this question, detailed studies of more material are necessary, including genital morphological and molecular genetic methods.



Fig. 1: Habitat of *P. hystrix* 20 km NW of Trieste, Italy. Photograph: Benny Trapp.



Fig. 2: Female of *P. hystrix* found and photographed 20 km NW of Trieste on July 25, 2010 by Benny Trapp.



Fig. 3: Female of *P. hystrix* from Dalmatia in the Burmeister collection in the Entomological Collections of the Martin-Luther-Universität Halle-Wittenberg. Photograph: S. Ingrisch (from DORSA).

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References

- BIOLIB.CZ (2011). An international encyclopedia of plants, fungi and animals. [11.viii.2011].
<http://www.biolib.cz>
- CORTI, C. & LOCASCIO, P. (1999): I Lacertidi Italiani. - Palermo (L'Epos), 87 pp.
- DEFAULT, B. (2001): Actualisation taxonomique et nomenclaturale du "Synopsis des Orthoptères de France". – Matériaux Entomocénologiques 6: 107–112.
- EADES, D.C., OTTE, D., CIGLIANO, M.M. & BRAUN, H. (2011): Orthoptera Species File Online. Version 2.0/4.0. [11.viii.2011]. <http://Orthoptera.SpeciesFile.org>
- FONTANA, P., BUZZETTI, F.M., COGO, A. & ODÉ, B. (2002): Guida al riconoscimento e allo studio di cavallette, grilli, mantidi e insetti affini del Veneto: Blattaria, Mantodea, Isoptera, Orthoptera, Phasmatodea, Dermaptera, Embiidina. 1–592; Vicenza (Museo Naturalistico Archaeologico di Vicenza).
- FOUCART, A. (1995): *Prionotropis rhodanica* Uvarov 1923 (Acridoidea, Pamphagidae, Akicerinae), acridien protégé de la Crau (Bouches-du-Rhône, France). – Ecole Pratique des Hautes Etudes, Montpellier 1995: 1–109.
- GERMAR, E.F. (1817): Reise durch Oesterreich Tyrol nach Dalmatien und in das Gebiet von Ragusa; xii + 323 pp. [Orthoptera 249–255]; Leipzig & Altenburg (Brockhaus).
- HARZ, K. (1975): The Orthoptera of Europe II. – Series entomologica 11: 939 pp.; The Hague (Dr. W. Junk N.V.).
- PARZEFALL, J., DURAND, J.P. & SKET, B. (1999): *Proteus anguineus* Laurenti, 1768 - Grottenolm. Pp. 57-76 in Grossenbacher, K. & B. Thiesmeier (eds.): Handbuch der Reptilien und Amphibien Europas, vol. 4/I, Wiebelsheim (AULA), 405 pp.
- STREIFF, R., AUDIOT, P., FOUCART, A., LECOQ, M. & RASPLUS, J.-Y. (2006): Genetic survey of two endangered grasshopper subspecies, *Prionotropis hystrix rhodanica* and *Prionotropis hystrix azami* (Orthoptera, Pamphagidae): within- and between-population dynamics at the regional scale. – Conservation Genetics 7: 331–344.
- UVAROV, B.P. (1923): Sur les races géographiques du *Prionotropis hystrix* Germ. (Orth. Acrididae). – Annales de la Société Entomologique de France 91 [1922]: 245–248.
- UVAROV, B.P. (1943): The tribe Thrinchini of the subfamily Pamphaginae, and the interrelations of the acridid subfamilies (Orthoptera). – Transactions of the Royal Entomological Society of London 93: 1–72.
- WILLEMSE, F. & WILLEMSE, L. (2008): An annotated checklist of the Orthoptera-Saltatoria from Greece including [including] an updated bibliography. – Articulata Beiheft 13: 1–91.

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