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Type specimens of Orthoptera (Insecta) described by Franz Werner deposited in the Muséum d'histoire naturelle de Genève

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Abstract: Primary type specimens of ten species described by Franz Werner have been identified in the collections of the Muséum d'histoire naturelle de Genève. These are listed alphabetically, the condition of the specimens is recorded and the valid combination is given. The status of a specimen labelled as the lectotype of an eleventh species is discussed.

Keywords: Adolf Nadig - Acrididae - Pamphigidae - Tettigonidae.

INTRODUCTION

The Austrian biologist Franz Werner (1867-1939) was a professor at the Vienna Institute of Zoology for many years and is probably best known as a herpetologist. He also studied scorpions and orthopteroid insects however, publishing more than 100 papers on the latter group, principally the Mantodea.

After Werner's death his private collection was given to the Naturhistorische Museum in Vienna by his sons, but many of the type specimens had already been sold to various European museums to help finance Werner's fieldtrips (Kaltenbach, 2003). Most of the Mantodea type specimens are deposited in the Naturhistoriska Riksmuseet in Stockholm (Ehrmann, 2002), and there is some confusion about the depository of others.

The type specimens of species described by Werner found in the Muséum d'histoire naturelle de Genève (MHNG) were in the collection left to the MHNG by Adolf Nadig (Schwendinger & Lienhard, 2001). All of them are specimens collected by Nadig and his father (also called Adolf Nadig) in Morocco and described by Werner in two publications (Werner, 1932, 1933).

Werner did not designate holotypes in his descriptions, but he sometimes labelled specimens as the type and paratypes. Nadig accorded these specimens a formal status, and in some of his publications referred to Werner's labelled specimens as holotypes, but they are actually syntypes unless it is clear that Werner had only seen one specimen or a lectotype has been designated.

ARRANGMENT AND FORMAT

The species are listed alphabetically. The format for each is:

specific epithet Author, publication: page [*Original generic placement*].

Provenance as given in the original description. Type series.

Specimen: "Label data" [format of label]. Following the recommendations of Ohl & Oswald (2004) the condition of each primary type specimen is noted. Other comments. Location of material in the MHNG Orthoptera collection. Currently valid combination following Cigliano *et al.* (2015)

The following abbreviations are used in the list.

MHNG Muséum d'histoire naturelle de Genève

OSF Orthoptera Species File (Cigliano *et al.*, 2015)

CATALOGUE

atlanticus Werner, 1933: 84 [*Uromenus*].

Tizi n'Tichka, Grosser Atlas, 19.-21.7.32. Unspecified number of ♂ and ♀.

A ♂ lectotype was inadvertently designated by Nadig (1979: 137) when he referred to the specimen in his collection labelled by Werner as the "Type" as the holotype: a ♂ with labels: "Tizi n'Tichka, Maroc, 19.-21. VII.32, Ad. Nadig" [printed on white card]; "Uromenus atlanticus det. Werner Type ♂ det. Werner" [handwritten by Werner on white card with "det. Werner" printed twice]; "U. poncyi atlanticus WERNER ♂ det. Nadig"

[typewritten on white card with “♂” handwritten and “det. Nadig” printed]; “Holo-Typus” [printed on red card with “Holo-” typewritten]; “Lectotypus” [printed on red card]. Both antennae, the tip of the femur, the tibia and the tarsi of the left front leg and the tibia and tarsi of the right hind leg are missing. Dissected genitalia are glued to a card mount supported on the original pin.

The ♀ specimen Nadig labelled as allotype has a Werner identification label with the word “paratype” handwritten on it. There are two additional ♂ and two ♀ with the same data and labelled by Nadig as paratypes which are probably not paralectotypes, because they do not have Werner’s labels. Nadig collection, box 248.

Uromenus poncyi atlanticus Werner, 1933

bifidus Werner, 1932: 119-120 [*Ephippiger*].

El Hajeb, 22.VII.31. Unspecified number of ♂ and ♀.

A ♂ lectotype was inadvertently designated by Nadig (1976: 337) when he referred to a specimen in his collection as the holotype: a ♂ with labels: “El Hajeb Maroc, 22.VII.31, Ad, Nadig” [printed on white card]; “6” [printed on white card]; “Type” [handwritten on red card]; “Ephippiger bifidus Werner nov. spec. ♂” [Typewritten in red ink on white squared paper with “♂” added by hand]; “Lectotypus” [printed on red paper]. Most of the right antenna and the claws of the right hind leg are missing.

A ♂ with the same data and a red typewritten identification label is a paralectotype. There are a further seventeen ♂ and eighteen ♀ with the same data and labelled by Nadig as cotypes which may also be paralectotypes. Nadig collection, box 240.

Uromenus bifidus (Werner, 1932)

brachypterus Werner, 1932: 121 [*Stauroderus*].

Ifrane, 18.-21.VII.31. Unspecified number of ♂ and ♀.

A lectotype was inadvertently designated by Harz (1986: 337) who referred to the specimen thus labelled in Nadig’s collection as the holotype: a ♂ with labels: “Ifrane Maroc, 18.-21.VII.31, Ad, Nadig” [printed on white card]; “St. brachypterus Wern. ♂ det. Wern.” [handwritten by Werner on white card]; “Holo-Typus” [printed on red card with “Holo-” typewritten]; “Ch. brachypterus WE. ♂ det Werner” [photocopy of label handwritten by Nadig on white card with “det. NADIG” printed, the name being crossed out by hand]; “Lectotypus” [printed on red card]. The right middle leg and left hind leg are lost.

A ♀ with the same data and a Werner identification label is a paralectotype. There are two other ♂ and ten other ♀ with the same data but without Werner identification labels which may also be paralectotypes. Nadig collection, box 810.

Chorthippus brachypterus (Werner, 1932)

ifranensis Werner, 1932: 124 [*Nadigia*]

Ifrane, 18.-21.VII.31. Unspecified number of ♂.

One ♂ syntype with labels: “Ifrane Maroc, 18.-21-

VII.31, Ad. Nadig” [printed on white card]; “NADIGIA n. gen., ifranensis Werner n. sp. ♂, Type” [two labels, the first with the identification typewritten in red on white paper with “♂” added by hand and the second with “Type” printed in red on white card with a red margin, both glued to a single piece of white card]; “Eunapiodes latipes I. Bol. V. M. Dirsh det. 1960” [handwritten on white card with “V. M. Dirsh det. 19” printed]; “det. LA GRECA” [typewritten on white card with a circular blue label glued on]. The tarsi of the left hind leg are lost. Dissected genitalia are glued to a card mount supported on the original pin. Nadig collection, box 361.

Eunapiodes ifranensis (Werner, 1932)

intermedius Werner, 1933: 79-80 [*Euryparyphes*].

Tanger, 4.6.32. Unspecified number of ♀.

One ♀ syntype with labels: “Tanger Maroc, 4.VII.32, Ad. Nadig” [printed on white card]; “3” [printed on white paper]; “Euryparyphes intermedius Wern. det. Werner, ♀ Type det. Werner” [handwritten by Werner on white card with “det. Werner” printed twice]; “Gestützt auf dieses Weibchen beschrieb WERNER, 1933, pag. 79 die n. sp. intermedius. Ist mit Eu. vaucherianus synonym. A.N.” [typewritten by Nadig on white card with the initials added by hand]; “Syntypus” [printed on red paper]. The last tarsal segment of the front right and the last tarsal segment of the left hind leg are missing. Nadig collection, box 349.

A junior synonym of *Euryparyphes bolivari* (Stål, 1876)

kenitramus Werner, 1932: 123 [*Euryparyphes*].

Kenitra, 2.IV.23. One ♀.

♀ holotype with labels: “Marocco, Kenitra, 2.4.23” [printed on a square of white card]; “Euryparyphes kenitranus ♀ Werner n.sp.” [typewritten in red on white card with “♀” handwritten]; “Euryparyphes vaucherianus (Sauss) LA GRECA DET.” [handwritten by La Greca on white card with “LA GRECA DET.” printed]; “det. LA GRECA” [typewritten on white card with a circular blue label glued on]; “Type” [handwritten by Nadig on red card]. The last tarsal segment of the right front leg, both of the middle legs, the tarsi of the left hind leg and the tibia and tarsi of the right hind leg are missing. The right hind femur is detached and glued to a card mount secured on the original pin. The specimen, especially its abdomen, is laterally compressed. A label in the insect box states that the specimen was collected by Anton Schulthess, a Swiss entomologist and friend of Adolf Nadig. Nadig collection, box 349.

A junior synonym of *Euryparyphes bolivari* (Stål, 1876)

nadigiorum Werner, 1932: 116-118 [*Pteroleptis*].

El Hajeb, 22.VII.31. One ♀.

♀ holotype with labels: “El Hajeb Maroc, 22.VII.31, Ad. Nadig” [printed on white card]; “Pt. nadigiorum Werner, ♀ det. Werner” [handwritten by Werner on white card with “det. Ad. Nadig” printed, the name being crossed

out by hand]; “Type” [handwritten on red card]; “Me. seniae Finot ♀ det. Nadig” [handwritten on white card with “det. Nadig” printed]; “Holotypus” [printed on red card]. The claws of the left front leg are lost.

There are one ♂ and two ♀ with the same data, and six ♂ and eight ♀ from the same locality but collected in 1932 which are labelled as cotypes. However, the original description is explicitly based on one ♀ and so these specimens are not part of the type series. Nadig collection, box 127.

A junior synonym of *Incertana decorata* (Fieber, 1853)

peraffinis Werner, 1933: 85-86 [*Uromenus*].

Casablanca, 5.7.32. Unspecified number of ♂ and ♀.

A lectotype was inadvertently designated by Nadig (1994: 962) when he referred to the ♂ specimen in his collection as the holotype: a ♂ with labels: “Casablanca Maroc, 5.VII.32, Ad. Nadig” [printed on white card]; “Uromenus peraffinis det. Werner Type ♂ det. Werner” [handwritten by Werner on white card with “det. Werner” printed twice]; “U. peraffinis Wern. ♂ det. Nadig” [handwritten by Nadig on white card with “det. Nadig” printed]; “MA Casabl. 1932: No. 1 (M) peraffinis HOLOTYPE MIKROF. 92:II: 10, 12, 35 und MIKROF. 92/VIII: 13, 14, 16, 20-23. Fotos und ZEICHN. Abd. Ende versch. Lage” [typewritten on yellow paper]; “Holo-Typus” [printed on red card with “Holo-” typewritten]; “Lectotypus” [printed on red card]. The last tarsal segment of the left front leg, two tarsal segments of the right front leg, the last tarsal segment of the right middle leg and the tarsi of both hind legs are missing. The hind legs have been reattached with glue.

There are four ♀ specimens with the same data labelled as allotype and paratypes by Nadig. Two of these have Werner’s identification labels and are clearly paralectotypes, the other two do not have Werner labels and were probably not studied by him as part of the type series. Images on OSF. Nadig collection, box 247.

Uromenus peraffinis Werner, 1933

robustus Werner, 1933: 85 [*Uromenus*].

El Haieb, 22.7.32. Unspecified number of ♂ and ♀.

A ♂ lectotype was inadvertently designated by Nadig (1994: 993) when he referred to a specimen in his collection as the holotype: a ♂ with labels: “El Hajeb Maroc, 22.VII.32, Ad. Nadig” [printed on white card]; “Uromenus robustus det. Werner Type ♂ det. Werner” [handwritten by Werner on white card with “det. Werner” printed twice]; “U. robustus Werner ♂ det. Nadig” [handwritten by Nadig on white card with “det. Nadig” printed]; “MIKROFO. 92:III Pronot.v.oben + Zeichn cercus” [typewritten in red on yellow paper, with “+ Zeichn cercus” handwritten in pencil]; “Holo-Typus” [printed on red card with “Holo-” typewritten]; “Lectotypus” [printed on red card]. The last tarsal segment of the left front leg, two tarsal segments of the right front leg, the claws of the right middle leg, the last

tarsal segment of the left hind leg and the entire right hind leg are lost. The abdomen has been eviscerated and stuffed, and is coming apart from the thorax.

A ♀ specimen with the same data and a Werner identification label is a paralectotype. Nadig collection, box 251.

Uromenus robustus Werner, 1933

septentrionalis Werner, 1931: 202-203 [*Euryparphytes*].

Bou Kellal; Dar Kaid Medboch. More than one ♀.

The MHNG collection includes a ♂ specimen with labels: “Marocco, Meknès, 28.3.23” [printed on white card]; “Euparphytes septentrionalis Wern. ♂” [handwritten by Werner on white card]; “Euparphytes septentrionalis Werner LA GRECA DET.” [handwritten by La Greca on white card with “LA GRECA DET.” printed]; “Lectotypus” [handwritten by La Greca on red card]; “det. LA GRECA” [typewritten on white card, with a circular blue label glued on]. This specimen is clearly not part of the type series and therefore cannot be the lectotype. La Greca (1993: 319) states erroneously that this specimen is in the NHMW, and designates it as a “neoallotype” (an unrecognized category) rather than a lectotype. Nadig collection, box 350.

A junior synonym of *Euparphytes laetus* (Bolívar, 1907)

validus Werner, 1932: 118-119 [*Ephippiger*].

El Hajeb, 22.VII.31. Unspecified number of ♂.

A ♂ lectotype was inadvertently designated by Nadig (1976: 335) when he referred to a specimen in his collection as the holotype: a ♂ with labels: “El Hajeb Maroc, 22.VII.31, Ad. Nadig” [printed on white card]; “5” [typewritten on white card]; “Type” [handwritten by Nadig on red card]; “Ephippiger validus Werner n. sp. ♂” [typewritten in red ink on squared paper with “♂” added in black ink by hand]; “Lectotypus” [printed on red card]. The claws of the right front leg, the tarsi of the right hind leg and the entire left hind leg are lost. The abdomen has been eviscerated and stuffed, the legs have been repaired with glue and there is insect feeding damage to the right hind tibia.

There are two ♂ paralectotypes, but the allotype and other paratypes referred to by Nadig, which are labelled as cotypes, were collected in 1932 and are therefore not part of the type series. Nadig collection, box 237.

Sabaterpia valida (Werner, 1932)

Descamps & Mounassif (1972: 276) state that the ♀ holotype of *Acinipe tubericollis* Werner, 1932 is in Nadig’s collection, but the specimen is not present in the MHNG. A note in Nadig’s handwriting pinned in the insect box questions whether the specimen was returned by Descamps. OSF states that the holotype is in the Natural History Museum in London, but it does not appear on their online database and the current whereabouts of the specimen is unknown.

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