

New synonymies in the scorpion families Buthidae, Chactidae, and Ischnuridae

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Abstract. Revision of types deposited in the Museo Zoologico de “La Specola”, Firenze, Italy, shows that *Tityus piceus* Caporiacco, 1947 is a junior synonym of *Tityus cambridgei* Pocock, 1897, *Iomachus borana* Caporiacco, 1939 is a junior synonym of *Iomachus politus* Pocock, 1896, and *Broteochactas magnus* Caporiacco, 1947 (lectotype) is a junior synonym of *Broteas granimanus* Pocock, 1898. One syntype of *Broteochactas magnus* is *Broteochactas delicatus* (Karsch, 1879). Lectotype and paralectotypes are designated for *Tityus piceus*, *Broteochactas magnus*, and *Iomachus borana*.

Taxonomy, new synonymy, Scorpiones, Buthidae, Chactidae, Ischnuridae

INTRODUCTION

In the course of identification and revision of scorpions deposited at the Museo Zoologico de “La Specola”, Firenze, Italy (MZUF), I found that three species (belonging to three families) hitherto regarded as valid are junior synonyms. Since no work on the pertinent genera is in progress, I decided to propose the new synonymies and designation of lectotypes in this taxonomic note.

The designation of lectotypes and paralectotypes included appending laser-printed labels with species name, author and year of description, notation whether the specimen is being designated lectotype or paralectotype, dsq. F. Kovařík, 1999, and the name of the species into whose synonymy is being placed, including the author and year of description. The information is repeated in lead pencil overleaf.

Buthidae Simon, 1879

Tityus cambridgei Pocock, 1897

Tityus cambridgei Pocock, 1897: 360; Kraepelin 1899: 78.
Tityus paraensis Kraepelin, 1896: 129 (syn. by Lourenço 1984: 8).
Tityus amazonicus Giltay, 1928: 79 (syn. by Lourenço 1984: 9).
Tityus sampaiocrulsi Mello-Leitao, 1931: 283 (syn. by Lourenço 1984: 9).
Tityus piceus Caporiacco, 1947a: 20; Caporiacco 1947b: 611; Bartolozzi et al. 1987: 294. **Syn. n.**

TYPE MATERIAL EXAMINED. Guyana Britannica, Campo V, XI.1931, 1 female, typus of *Tityus piceus* (hereby designated the lectotype of *Tityus piceus*), leg. N. Beccari; Guyana Britannica, Canister Falls, XI.1931, 1 female, typus of *Tityus piceus* (hereby designated the paralectotype No. 1 of *Tityus piceus*), leg. N. Beccari.

COMMENTS. Caporiacco (1947a: 20) described *Tityus piceus* from an unrecorded number of females. In a later paper (Caporiacco 1947b: 611) he mentioned two females. Bartolozzi et al. (1987: 294) stated that two syntypes are deposited at MZUF. I have examined both, and hereby designate them the lectotype and paralectotype No. 1. No other author mentions additional specimens of *T. piceus*.

The original description (Caporiacco 1947a: 20) is not accompanied by a figure and is very brief. It consists of only four lines that do not include any characters differentiating *T. piceus* from *T. cambridgei*. A later description with one figure (Caporiacco 1947b: 611–612) also does not contain characters that would permit distinguishing these two species. Neither my examination of both types has revealed any such characters, and I therefore conclude that *T. piceus* is a junior synonym of *T. cambridgei*, to which it corresponds in all regards.

Chactidae Pocock, 1893

Brotheas granimanus Pocock, 1898

(Fig. 1)

Broteas granimanus Pocock, 1898: 100; Kraepelin 1899: 171.

Broteochactas magnus Caporiacco, 1947a: 20; Caporiacco 1947b: 608; Bartolozzi et al. 1987: 294. **Syn. n.**

TYPE MATERIAL EXAMINED. Guyana Britannica, Campo 2, Sui, Fiume Demerara, XI.1931, 1 female (hereby designated the lectotype), leg. N. Beccari; Guyana Britannica, Campo V, XI.1931, 1 immature male, *typus* of *Broteochactas magnus* (hereby designated the paralectotype No. 1 of *Broteochactas magnus*), leg. N. Beccari.

Broteochactas delicatus (Karsch, 1879)

(Fig. 2)

Chactas delicatus Karsch, 1879: 134.

Broteochactas delicatus: Kraepelin, 1894: 177; Kraepelin 1899: 174; Pocock 1900: 68; Caporiacco 1947b: 608.

Broteas delicatus: Vachon, 1974: 930.

Chactas opacus Karsch, 1879: 134 (syn. by Kraepelin 1894: 177).

Broteas panamensis Thorell, 1893: 382; Bartolozzi et al. 1987: 297 (syn. by Kraepelin 1899: 176).

Broteochactas magnus (in part) Caporiacco, 1947a: 20; Caporiacco 1947b: 608; Bartolozzi et al. 1987: 294.

MATERIAL EXAMINED. Guyana Britannica, Curupucari, XI.1931, 1 male, type of *Broteochactas magnus*, leg. N. Beccari.

COMMENTS. Caporiacco (1947a: 20) described *Broteochactas magnus* from an undisclosed number of specimens. In a later paper (Caporiacco, 1947b: 611) he listed three females. Bartolozzi et al. (1987: 297) stated that three syntypes are deposited at MZUF. I examined all of them and designated the largest specimen as the lectotype. Its length (75 mm) is the only measurement given in Caporiacco's (1947a: 20) description.

The original description (Caporiacco, 1947a: 20) is not accompanied by a figure and is very brief. It consists of only three lines and does not include any characters that would permit to differentiate the lectotype of *B. magnus* from *Brotheas granimanus*. Also a later, more detailed description (Caporiacco, 1947b: 611–612) does not contain characters which unequivocally separate these two species. My examination of the syntypes revealed that they belong to two species of two genera. The lectotype (female, total length 75 mm, 9 pectinal teeth) and paralectotype No. 1 (probably an immature male, total length 60 mm, 10 and 11 pectinal teeth) belong to *Brotheas granimanus* (Fig. 1), whereas the third specimen (a male, total length 53 mm, 8 pectinal teeth) belongs to *Broteochactas delicatus* (Fig. 2).

Ischnuridae Simon, 1879

Iomachus politus Pocock, 1896

Iomachus politus Pocock, 1896: 317; Kraepelin 1899: 156.

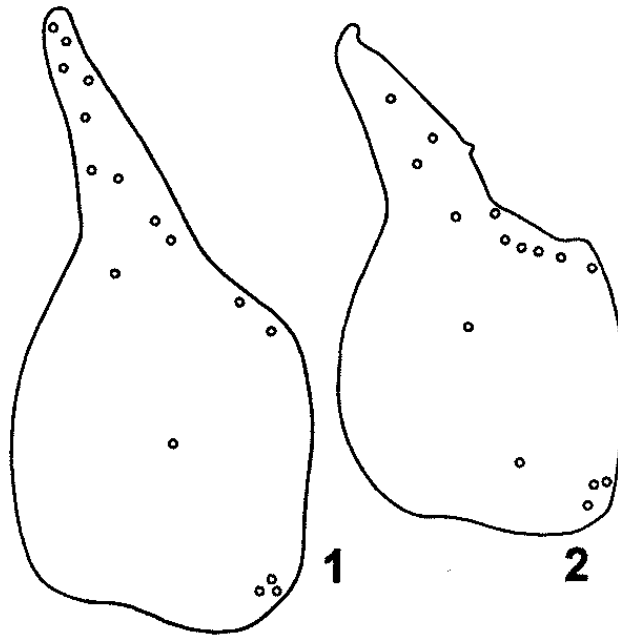
Iomachus politus: Kraepelin, 1896: 138; Caporiacco 1939: 307; Caporiacco 1949: 314.

Iomachus borana Caporiacco, 1939: 307; Moriggi 1941: 96; Bartolozzi et al. 1987: 295. **Syn. n.**

Iomachus borana: Sreenivasa-Reddy, 1968: 759; Lamoral & Reynders 1975: 544.

TYPE MATERIAL EXAMINED. Ethiopia, Borana, Neghelli, 10.III.1937, 2 juvs, type of *Jomachus borana* (hereby designated the lectotype and paralectotype No. 1 of *Jomachus borana*), leg. E. Zavattari.

COMMENTS. Caporiacco (1939: 307) described *Jomachus borana* from two specimens. They are juveniles of which the larger is 24.3 mm long, and Caporiacco apparently thought it to be an adult female. In the same paper (Caporiacco, 1939: 307) are included two truly adult specimens from the same locality (Neghelli, 29.III.1937), which are identified as *J. politus*. I examined both syntypes of *J. borana* and designate them the lectotype and paralectotype No. 1. I am certain they are juveniles of *I. politus*.



Figs 1-2. *Broteochactas magnus* Caporiacco. Tibia of pedipalps. 1 - lectotype of *Broteochactas magnus* (= *Brotheas granimanus*). 2 - syntype of *Broteochactas magnus* (= *Broteochactas delicatus*).

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