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THE SYNONYMY OF THE EAST AFRICAN *NOTOGOMPHUS CATARACTAE* CONSIGLIO, 1978 AND *N. IMMISERICORS* CAMPION, 1923 WITH *N. LECYTHUS* CAMPION, 1923 (ANISOPTERA: GOMPHIDAE)

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Based on the examination of the holotypes of the 3 taxa and on fresh material from Kenya, these appear conspecific. Consequently, *N. cataractae* and *N. immisericors* are placed in synonymy of *N. lecythus*.

INTRODUCTION

In June 2000 I collected a *Notogomphus* in Saiwa Swamp, Kenya, which I first thought to be *N. cataractae*, described by CONSIGLIO (1978) from one male caught in Ethiopia in 1973. A visit to the Natural History Museum, London, in October 2000 revealed that my *Notogomphus* matched perfectly the holotype of *N. lecythus* as well. In January 2002 the Sezione Museo of the Istituto di Zoologia, Rome was so kind to loan me the type of *N. cataractae*, which I then compared with my material and the type of *N. lecythus* in the Natural History Museum, London.

MATERIAL

Notogomphus lecythus: Holotype ♂: Zegi, Lake Tsana, Abyssinia, V/VI-1902 (Degen) (CAMPION, 1923, pp. 664-667).

2 ♂, 1 ♀: Saiwa Swamp, Kenya (N01°05'38.1"/E35°07'05.8"; 1875 m a.s.l.), 10-VI-2000 (V. Clausnitzer); – 1 ♂, 1 ♀: Kakamega Forest, Kenya (N00°21'18.8"/E34°51'49.7"; 1611 m a.s.l.), 06-XI-2001 (V. Clausnitzer).

Notogomphus immisericors: Holotype ♀: Nandi Plateau, 5700-6200 ft, Kenya, 4-VI-1911 (S.A. Neave) (CAMPION, 1923, pp. 667-669); – Paratype ♀: Yala River, southern edge of Kakamega Forest, 4800-5300 ft, Kenya, 22-V-1911 (S.A. Neave) (CAMPION, 1923, pp. 667-669); – Paratype ♀: Upper Nzoia

River, 5100-5400 ft, Kenya Colony, 5-VI-1911 (CAMPION, 1923, pp. 667-669).

***Notogomphus cataractae*:** Holotype ♂: Kaffa, Uncuri, cascate del Piccolo Ghibiè, ca 1650 m a.s.l., Ethiopia, 29-X-1973 (C. Consiglio) (CONSIGLIO, 1978).

SPECIES COMPARISONS

NOTOGOMPHUS CATARACTAE. – CONSIGLIO (1978) described *N. cataractae* as a new species from Ethiopia from a single male he caught in 1973. His description and drawings are very similar to the ones CAMPION (1923) gave for *N. lecythus* and match perfectly the holotype of this species in the Natural History Museum, London. I compared the penis structure of both types, and these are identical. CONSIGLIO (1978) did not mention *N. lecythus* as a potential similar species and thus described no features to differentiate the two taxa. From the description of *N. cataractae* by CONSIGLIO (1978) it is obvious that he did not compare his specimen with the type of *N. lecythus*.

The main difference between Consiglio's description of *N. cataractae* and Campion's description of *N. lecythus* is the presence of two faint bands near the humeral suture in the brown area in the latter species. In a specimen I caught at Saiwa Swamp, W Kenya, these markings were only very faintly visible as a lighter browner area in the living specimen but faded when the specimen became dry.

CONSIGLIO (1978) wrote that his *N. cataractae* "is different from all known species ... and perhaps *N. immisericors* Campion (distinguished by having an anal loop in the hind wing)". The presence of an anal loop is variable in females in the Natural History Museum, London, labelled *N. immisericors* and thus not a good differential feature.

NOTOGOMPHUS IMMISERICORS. – CAMPION (1923) described *N. immisericors* as a new species, based on three females. *N. lecythus* is described in the same paper and Campion refers to the similarity of both species: "In many respects they [3 females of *Notogomphus immisericors*] are very similar to the male here described as *N. lecythus*, the most striking differences being found in the femur of the hind leg, which carries a powerful armature, and in the hind wing, which has a distinct anal loop and is considerably narrower at the base than in the Abyssinian insect mentioned" (CAMPION, 1923, p. 669).

From *N. immisericors* only the three type females seem to have been collected and PINHEY (1961, p. 75) wrote that F.C. Fraser "believes it [*N. immisericors*] to be the female of *lecythus*." The similarities have been also described by LONGFIELD (1936, pp. 477-478): "The colour-pattern of *N. dorsalis* is practically repeated in the types of *N. longus* Martin, *N. lecythus* Campion and *N. immisericors* Campion, and is also very similar to that of the genoptye. They all have a basal subcostal nervule in all four wings and long hind femora".

The only difference given between *N. lecythus* and *N. immisericors* are the long spines on the hind femur in the latter (CAMPION, 1923; LONGFIELD, 1936). All my specimen (males and females), Consiglio's *N. cataractae* and all three females described as *N. immisericors* have strong spines on the hind femur. The type of *N. lecythus* has

only the left hind femur left, the tibia and tarsus missing. This remaining hind femur appears to have only short spines, but a number of them are broken long spines, visible under a stereo microscope. Position and diameter of these normally long spines are identical to those of *N. cataractae* and *N. immisericors*.

CONCLUSIONS

After comparing all specimens listed, there is no doubt they belong to one species. The holotype males of *N. lecythus* and *N. cataractae* and my males from western Kenya are identical in colouring, anal appendages and penile organs. The female I collected in western Kenya is identical in colouring, structure of the prothorax and the vulvar scale to the paratype of *N. immisericors*. Therefore *Notogomphus immisericors* and *N. cataractae* are synonyms of *N. lecythus*.

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