



<http://dx.doi.org/10.11646/zootaxa.3973.1.4>

<http://zoobank.org/urn:lsid:zoobank.org:pub:688DC9B0-2EA4-43D5-926A-B184A0A9A7B2>

Redescriptions of three species of freshwater crabs from the Democratic Republic of Congo, Central Africa (Brachyura: Potamoidea: Potamonautidae)

NEIL CUMBERLIDGE

Department of Biology, Northern Michigan University, Marquette, MI, USA. E-mail: ncumberl@nmu.edu

Abstract

The taxonomy of three species of freshwater crabs from the Upper Congo River in the Democratic Republic of Congo, *Potamonautes congoensis* (Rathbun, 1921), *P. langi* (Rathbun, 1921), and *P. stanleyensis* (Rathbun, 1921), is revised based on examination of the holotypes. Updated diagnoses, illustrations, and distribution maps are provided for these species, and their conservation status is discussed.

Key words: Africa, taxonomy, *Potamonautes*, Congo River

Introduction

The freshwater crab species reported on here belong to the African freshwater crab family Potamonautidae Bott, 1970, and were first collected over a hundred years ago by James P. Chapin and Herbert Lang in the Belgian Congo (now the Democratic Republic of the Congo) during the American Museum Congo Expedition 1909–1915. The species were described by Rathbun (1921) and the type specimens deposited in the American Museum of Natural History (AMNH), New York, USA. The three species under discussion (*Potamonautes congoensis* (Rathbun, 1921), *P. langi* (Rathbun, 1921), and *P. stanleyensis* (Rathbun, 1921)) were all collected from rivers and streams in the vicinity of Kisangani (formerly Stanleyville) in the Upper Congo River basin. A fourth species of *Potamonautes*, *P. perparvus* (Rathbun, 1921), was also described by Rathbun (1921) from this same region, but this was redescribed recently by Meyer & Cumberlidge (2011) and is therefore not included here.

Redescriptions of these species are necessary because the absence of modern taxonomic treatments makes it difficult for the non-specialist to distinguish between the many species of *Potamonautes* from Central Africa, not least because the only available identification keys (Rathbun 1921; Chace 1942; Bott 1955) are now incomplete and the classifications used are out of date. In the absence of reliable identification keys the only way to make identifications of freshwater crabs from this part of Africa is to refer to original type series of these and all other relevant taxa, a task made more difficult by the fact that the types are deposited in a number of different museums. Molecular data for *P. langi* and *P. stanleyensis* (Daniels *et al.* 2015) indicate that these two species belong to separate lineages within the large genus *Potamonautes*, but DNA sequence data are still deficient for *P. congoensis*, and indeed for a large number of species from the Congo River basin.

The present work redescribes these three taxa each as a valid species of *Potamonautes* based on examination of the types of these species, together with previously unidentified museum specimens from Central Africa assigned here to these species. The types of all other relevant taxa were also examined in the course of this work, including those that have been listed as synonyms, those that have been included in a subgeneric group, and those that bear a superficial morphological similarity. Important taxonomic characters such as the gonopods, mouthparts, pereopods, and thoracic sternum of the holotypes are illustrated and their distributional ranges are revised based on all known specimens (Cumberlidge 1999). Distribution maps and the conservation status of each of these species are also provided.