



## The Afrotropical ponerine ant genus *Phrynoponera* Wheeler (Hymenoptera: Formicidae)

by BARRY BOLTON<sup>1</sup> & BRIAN L. FISHER<sup>2</sup>

*c/o Department of Entomology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*

*Department of Entomology, California Academy of Sciences, Howard Street, San Francisco, California 94103, U.S.A.*

### Abstract

The Afrotropical ponerine ant genus *Phrynoponera* is revised and a worker-based key to species presented. Five species are recognised of which two (*pulchella* and *transversa*) are described as new. Two new junior synonyms of the type-species *gabonensis* are established (*armata*, *heterodus*) and earlier synonymy of some infraspecific taxa is confirmed. The genus is redefined, with diagnoses of all castes and sexes. New and important characters of the genus are discussed.

**Key words:** *Phrynoponera*, Ponerinae, Ponerini, taxonomy

### Introduction

The name *Phrynoponera* first appeared in a paper by Wheeler (1920), merely as a new genus-group name with the designation of an already described species as the type-species. A couple of years later Wheeler (1922) presented a formal description of the genus, a synopsis of newly discovered material from the Democratic Republic of Congo, mostly infraspecific taxa, and notes on a few previously described forms.

The description of the genus that Wheeler (1922) presented was adequate for its time, but superficial by modern standards and mistaken in several characters. First, Wheeler noted that the “stridulatory surface is well developed”, which it is not. In fact, the stridulitrum is absent from all species except *pulchella*, where a vestigial and non-functional remnant is present. Second, he maintained that there was an “absence of any constriction between postpetiole [= first gastral segment] and gaster”, when in fact differentiated presclerites are strongly developed on the second gastral segment but are specialised in form and usually concealed by the posterior portions of the sclerites of the first gastral segment. However, Wheeler did recognise that the apparent similarities between his *Phrynoponera* species and two Indian *Pachycondyla* (then *Bothroponera*) species, *P. bispinosa* (bispinose propodeum) and *P. rufipes* (denticulate dorsal margin of petiole), were superficial and possibly independently acquired. Each of these *Phrynoponera*-like species lack the extremely specialised morphology of the petiole sternite, helcium, and prora, as well as the characteristic 5-spinose petiole node, that are unique and consistent in the female castes of *Phrynoponera*.

*Phrynoponera* is a strictly Afrotropical member of the subfamily Ponerinae, tribe Ponerini, as diagnosed by Bolton (2003). Within the tribe, apomorphies of the *Odontomachus* genus group (*Anochetus*, *Odontomachus*) (Brown, 1976) and apomorphies of the *Plectroctena* genus group (*Loboponera*, *Psalidomyrmex*, *Plectroctena*) (Bolton & Brown, 2002) are absent. *Phrynoponera* apparently belongs in the mass of genus-group names that surrounds *Pachycondyla* and its synonyms, but the diagnosis below is unique to *Phrynoponera* and is not repeated in any other *Pachycondyla*-group member.

The species-rank taxonomy of the genus remained as Wheeler (1922) left it, until Brown (1950) reviewed