

**Description of new *Calcaribracon* QUICKE, 1986
(Hymenoptera Braconidae Braconinae)
from Papua New Guinea**

by Yves BRAET

Zoologie Générale et Appliquée; Faculté Universitaire des Sciences Agronomiques de Gembloux; Passage des Déportés 2, B-5030 Gembloux, Belgique (e-mail : zoologie@fsagx.ac.be).

Abstract

A new species of *Calcaribracon* is described from Papua New Guinea. An up-to-date identification key is given for all the known species.

Keywords : Braconinae, *Calcaribracon*, key.

Résumé

Une nouvelle espèce de *Calcaribracon* est décrite de Papouasie-Nouvelle-Guinée. Une clé actualisée des espèces connues est fournie.

Introduction

The genus *Calcaribracon* QUICKE, 1986 was described to include the specimens of Braconinae which have an unusual combination of plesiomorphous and apomorphous wing venation features (QUICKE, 1986). He described *C. rostratus* as type species and established four new combinations. In 1988, the genus was separated into two subgenera with a description of three new species (QUICKE, 1988). MAETÔ (1992) transferred *Bracon nipponensis* WATANABE, 1937 to this genus and showed that it was a senior synonym of *C. sinensis* QUICKE. Recently, QUICKE & YOU (1996) described the ninth species from China. This small genus is present from the East Palaearctic (China, Japan) to the North of Australia. From the material collected during Canopy mission (1993-1996) of the "Institut Royal des Sciences Naturelles de Belgique" in Papua New Guinea, we have found the male of a new species of *Calcaribracon* (*Arostrombracon*) which has an extra transverse anal vein on the fore wing and an extra lobe on the posterior margin of the hind wing. Despite the lack of female specimens, we describe this species here because its wing features are previously unreported in this genus (QUICKE, personal communication).

Nothing is known about their biology, except for *C. nipponensis* and *C. camaraphilus* which have been recorded as parasitoids of *Paranthrene* and *Similipepsis* (Lepidoptera Sesiidae) and the Chinese tea stem borer (Lepidoptera Oecophoridae), respectively.

For identification of the Braconidae subfamilies, we refer to VAN ACHTERBERG (1990, 1993). The terminology used in this paper is according to VAN ACHTERBERG (1988, 1994a). The identification of the genera in the Braconinae and *Calcaribracon* species may be done by using the papers of QUICKE (1987) and QUICKE & INGRAM (1993). Identification of the subgenera may be done by using the key of QUICKE (1988). The *Calcaribracon* specimens are housed in the collections of Institut Royal des Sciences naturelles de Belgique (IRSNB).

Systematic account

***Calcaribracon* QUICKE, 1986**

Type-species : *Calcaribracon rostratus* QUICKE, 1986. QUICKE, 1986 : 115; QUICKE, 1988 : 114.

Key to the species of

Calcaribracon (Arostrobracon) QUICKE

- 1 Sclerotized parts of 1st and 2nd metasomal tergites black; wing membrane uniformly dark brown; pterostigma piceous brown 2
 - Sclerotized parts of 1st and 2nd metasomal tergites yellow to reddish yellow; membrane of at least the basal 0.2 of the fore wing yellow; pterostigma largely yellow 6
- 2 Vein cu-a of fore wing interstitial or marginally antefurcal; face reddish to yellowish; 4th and 6th tergites mainly glabrous; tarsal claws with the basal lobe produced into an angular point distally 3
 - Vein cu-a of fore wing distinctly antefurcal; face at least with a black supra-clypeal triangular area; 4th and 6th metasomal tergites variables; tarsal claws variables 4
- 3 Face completely ferruginous red; vein 3-CU1 of fore wing expanded and produced as a spur into the first subdiscal cell; fore wing uniformly brown; hind basitarsus around 6 times longer than deep
 - *C. nipponensis* (WATANABE)
 - Face yellowish; vein 3-CU1 of fore wing expanded posteriorly but not produced as a spur into the first subdiscal cell; fore wing largely yellow, with a narrow brown apex and several dark brown spots on the membrane; hind basitarsus less than 4 times longer than deep ...
 - *C. camaraphilus* QUICKE & YOU
- 4 Face largely black; colours of facial hairs variable; setosity of metasomal tergites 5 and 6 variable 5
 - Face with only the smooth supra-clypeal triangle black; facial hairs yellow; metasomal tergites 5 and 6 with very short setosity, much shorter than that arising from the lateral regions of the 3rd tergite *C. ferax* (SMITH)
- 5 Presence of a narrow dark orange band bordering each eye antero-dorsally; facial hairs silvery; metasomal tergites 5 and 6 with rather long setosity, approximately equal in length to that on the lateral regions of the 3rd tergite
 - *C. diores* (CAMERON)
 - Face near the eyes black antero-dorsally; facial hairs yellow; metasomal tergites 5 and 6

with sparse setae
 *C. sarcoseparophilus* sp. n.

- 6 Metasoma black posteriorly from the middle of the 3rd tergite; approximately the basal ½ of the fore wing yellow bordering on to dark fuscous abruptly approximately at the level of the base of the pterostigma
 - *C. conspiciendus* (TURNER)
 - Metasoma largely yellow behind the 2nd tergite, usually only the 6th tergite black; approximately the basal third of the fore wing yellow bordering on to pale fuscous which may darken somewhat near the level of the base of the pterostigma
 - *C. walkeralis* (SHENEFELT)

Calcaribracon (Arostrobracon)

sarcoseparophilus sp. n.

(Fig. 1)

Material examined : Holotype, ♂ (IRSNB) : "Canopy mission, FOG AR13 [fogging of *Sarcoseparus* sp. (Rubiaceae)], 9.iv.1995" "Papua New Guinea, Madang : Baiteta, 5°1'0"S 145°45'0"E, leg. O. Missa".

Etymology : From the genus name of the "host tree".

Holotype, ♂, body length 6 mm, fore wing 6.45 mm.

Head. Antennal segments 57, length of 3rd segment 1 to the 4th segment, length of 3rd, 4th, penultimate and apical segments 1, 1, 2 and 2.7 times their width, respectively, terminal flagellomere strongly acuminate; labio-maxillary complex short; length of eye in dorsal view 3 times temple; POL : OD : OOL = 3 : 2 : 5; face laterally punctate with several setae; frons and vertex smooth and quasi glabrous, frons with a fine median groove running between the antennal sockets to the stemmaticum; malar suture absent; length of malar space equal to basal width of mandible; temples sparsely punctulate.

Mesosoma. Length of mesosoma 1.5 times its height; mesopleuron smooth and glabrous except ventro-posteriorly; metapleural flange absent; mesoscutum and scutellum smooth; medio-longitudinal carina of metanotum absent; surface of propodeum smooth.

Wings (Fig. 1). Fore wing : r : 3-SR : SR1 = 6 : 26 : 38 ; 2-SR+M : m-cu : r-m = 16 : 7 : 12 ;

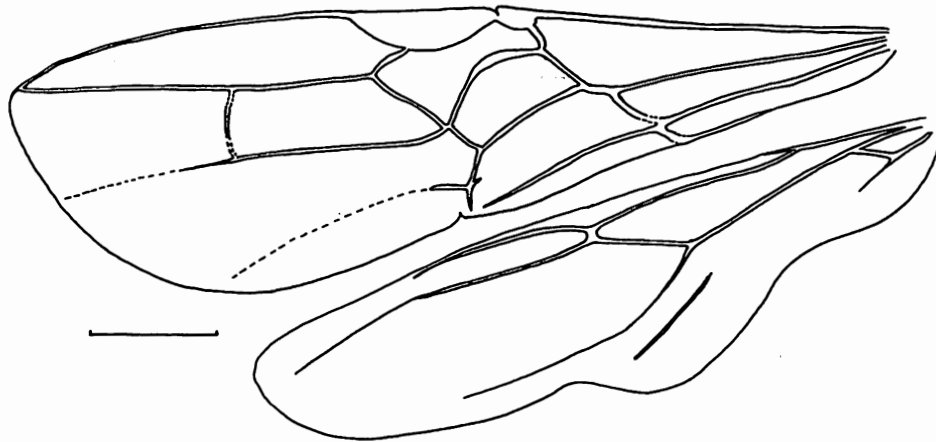


Fig. 1. *Calcaribracon sarcoseparophilus* sp. n., holotype ♂. Wings (scale bar : 1 mm).

vein 3-CU1 posteriorly produced as a short stub into first subdiscal cell. Vein 2-CU of hind wing present.

Legs. Length of femur, tibia and basitarsus of hind leg 3.3, 6.7 and 5.3 times their width, respectively; hind femur with long setae ventrally; length of hind spurs 0.6 and 0.5 times hind basitarsus; tarsal claws with a large lobe basally, lobe with a tooth-like process on the distal edge.

Metasoma. First tergite rectangular and 5 times longer than maximally wide; 2nd metasomal suture obsolete; all tergites smooth and shiny; tergites 3-6 sparsely setose posteriorly. Genitalia : parameres with long setae baso-ventrally, digitus with one apical spine.

Colour. Black. Fore legs, mid femur and tarsi brown-yellowish; wings completely infusate.

Distribution. Papua New Guinea.

Host. Unknown.

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