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***Cuapetes yapiensis* sp. nov. (Crustacea: Decapoda: Pontoniinae), a new mangrove shrimp from Yap, Caroline Islands**

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Abstract

A new pontoniine shrimp species, *Cuapetes yapiensis*, from mangroves at Quamun, on Yap Island, Caroline Islands, is described and illustrated. *Cuapetes yapiensis* most closely resembles *C. darwiniensis* Bruce. Six species of *Cuapetes* are now known from the Caroline Islands.

Key words: *Cuapetes yapiensis* sp. nov., Decapoda, Natantia, Palaemonidae, Pontoniinae, mangroves, zoogeography, Caroline Islands

Introduction

Through the kindness of Richard MacKenzie, of the USDA Forest Service in Honolulu, I have been able to examine some pontoniine shrimp specimens collected by him in 2001 from mangroves on the island of Yap, Caroline Islands. These were identified as a species of *Cuapetes* Clark, one of the former “*Periclimenes grandis*” group. Following the key provided to these species by Bruce (2004, as *Kemponia* spp.) they could not be identified with any of the species referred presently to this genus that lack supraorbital teeth and possess a distal ventral tooth on the second pereopod merus. These specimens are now referred to a new species which is described and illustrated. The specimens showed some variability in the presence or absence of the second pereopod ventral meral tooth, a character of major importance in this genus. Fortunately several specimens were collected, most with both second periods which demonstrated that the presence of this tooth was the predominant state. However, this tooth may be lacking from one or both pereopods which might present problems in the identification of isolated specimens.

Abbreviations used: CL, post-orbital carapace length; QM, Queensland Museum, Brisbane; RMNH, Naturalis Biodiversity Center, Leiden; OUMNH, Oxford University Museum of Natural History, Oxford.

Systematics

Family Palaemonidae Rafinesque, 1815

Subfamily Pontoniinae Kingsley, 1878

Genus *Cuapetes* Clark, 1919

***Cuapetes yapiensis* sp. nov.**

(Figs 1–6)

Material examined. ♂ holotype QM W29188, ovig. ♀ allotype QM W29197, 7 paratypes QM W29189, stn 3, Qamun, Yap, 17 August 2001, in mangroves, coll. R. MacKenzie. 1 ovig. ♀ paratype, *idem*, RMNH.CRUS.D.55313. 1 ovig. ♀ paratype, *idem*, OUMNH.ZC.2013-05-004.

carapace without postorbital carina, first pereopod carpus 1.3 times longer than chela (*vs* 1.6 times), second pereopods more slender, major chela less than twice CL, (*vs* greater than CL), carpus subequal to CL, (*vs* greater than CL) third ambulatory dactyl 9.0 times longer than basal width (*vs* 6.5 times), propod 2.8 times dactyl length (*vs* 3.0 times). *Cuapetes yapiensis* also differs from *C. darwiniensis* in occurring in a mangrove habitat, whereas *C. darwiniensis* was found among rocky coral reef pools.

Based on the key to *Cuapetes* provided by Bruce (2004, as *Kemponia* spp.), *C. yapiensis* is most similar to *C. darwiniensis* or *C. calmani* (Tattersall, 1921) depending upon the state of the second pereopod merus. It is also similar to two recently described species, *C. takedai* Okuno and *C. lanceolatus* Okuno & Chan, collected from Japanese seas (Okuno, 2012; Okuno & Chan, 2012). A key for the separation of *C. yapiensis* from *C. darwiniensis* and related species is presented below.

Cuapetes species with dorsal rostral teeth evenly distributed, similar, rostrum subequal to scaphocerite length, supraorbital spines absent, inferior orbital angle acute, with second pereopod with or without meral tooth.

1. Second pereopods without meral teeth... 2
- Second pereopods with merus generally distally dentate... 4
2. Rostrum deep, scaphocerite lateral tooth far exceeding lamella, second pereopods with concave gaps half way along cutting edges of fingers, R. 1+7–8/4–5... *C. calmani* (Tattersall)
- Rostrum slender, second pereopods fingers feebly armed... 3
3. Second pereopod fingers half palm length, dactyl with one small acute tooth proximally, fixed finger with three small acute teeth proximally and larger acute tooth at half cutting edge length, R. 1+8/3... *C. lanceolatus* Okuno & Chan
- Second pereopods feebly developed, fingers nearly as long as palm, with 1–2 small acute teeth proximally, R. 1+7–8/4 (sometimes 3)... *C. takedai* Okuno
4. Rostral dentition 1+10/2, with postorbital ridge and small supraorbital tubercle, second pereopods slender, carpus longer than major palm, with small meral tooth, third pereopod dactyl about 0.45 of propod length... *C. digitalis* (Kemp)
- Without supraorbital tubercle, second pereopods robust, carpus shorter than major palm... 5
5. Rostrum longer than CL, carapace with postorbital ridge, second pereopod with meral tooth, fingers of major pereopod generally with 4 small acute equally spaced teeth, third pereopod dactyl 6.5 times longer than basal width, R. 1+6–7/2... *C. darwiniensis* (Bruce)
- Rostrum shorter than CL, carapace without postorbital ridge, second pereopod with or without meral tooth, fingers of major pereopod generally strongly bidentate with deep notch separating teeth, third pereopod dactyl 9.0 times longer than basal width; R. 1+6–8/2–3... *C. yapiensis* sp. nov

Six species of *Cuapetes* are now known from the Caroline Islands. All, other than *Cuapetes yapiensis*, are reported from Palau: *C. elegans* (Paulson, 1875) (Miyake & Fujino, 1968), *C. grandis* (Stimpson, 1860) (Sendler, 1923); *C. kororensis* (Bruce, 1977); *C. platycheles* (Holthuis, 1952) (Miyake & Fujino, 1968) and *C. tenuipes* (Borradaile, 1898) (Read, 1974).

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