

THE PONTONIINE SHRIMPS (CRUSTACEA: DECAPODA: PALAEMONIDAE)
FROM ANAMBAS AND NATUNA ISLANDS, INDONESIA,
COLLECTED BY ANAMBAS EXPEDITION, 2002

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ABSTRACT. – The present paper reports 8 pontoniine shrimp species, from Anambas and Natuna, Indonesia, i. e., *Anchistus miersi* (De Man, 1888), *Conchodytes meleagrinae* Peters, 1852, *Hamodactylus boschmai* Holthuis, 1952, *Jocaste japonica* (Ortmann, 1890), *Palaemonella pottsi* (Borradaile, 1915), *Periclimenes andamanensis* Kemp, 1922, *Periclimenes attenuatus* Bruce, 1971, and *Periclimenes grandis* (Stimpson, 1860).

KEY WORDS. – Crustacea, Decapoda, Palaemonidae, Pontoniinae, Anambas, Indonesia, taxonomy.

INTRODUCTION

The Subfamily Pontoniinae is a large caridean group, distributed mainly in tropical and subtropical waters, particularly in Indo-West Pacific, and most of the species of this subfamily are commensal, associated mainly with coelenterates, sponges, bivalve mollusks, echinoderms, tunicates, and several species are cleaners of fishes. The Indonesia Pontoniinae fauna having been under study since the time of Rumphius (1775), although there have been many reports about pontoniine shrimps from Indonesia waters (e.g., Holthuis, 1952; Bruce, 1972, 1984; Chace & Bruce, 1993), any additions to the Indonesia fauna and new taxa are still reported and described. Among the samples collected by the Anambas Expedition, March of 2002, from Anambas and Natuna Islands (between 02°52'N ~ 04°43'N, 105°40'E ~ 108°13'E), Indonesia, 8 species of Pontoniinae shrimps are reported here.

SYSTEMATIC ACCOUNT

Anchistus miersi (De Man, 1888)

Harpilius Miersi De Man, 1888: 274, pl. 17, figs. 6-10.

Anchistus miersi - Borradaile, 1898: 387; Holthuis, 1952: 110, fig. 45; Chace & Bruce, 1993: 72; Müller, 1993: 9; Fransen, 1994: 89, pl. 1D; Li, 1996: 224, fig. 2; 1997: 228; 2000: 10-12, fig. 11.

Material examined. – 1 male, Jemaja Island, Anambas (no detailed locality data), associated with *Tridacna* sp., 12 Mar.2002.

Distribution. – No record from Indonesian waters previously. The species is known from various localities throughout the Indo-West Pacific, living in association with bivalve mollusks of genera *Hippopus* and *Tridacna*.

Conchodytes meleagrinae Peters, 1852

Conchodytes meleagrinae Peters, 1852: 594; Borradaile, 1917: 393; Kemp, 1922: 285; Kubo, 1940: 58, figs. 24-25; Bruce, 1977a: 73, fig. 14c, d; Müller, 1993: 14-15; Fransen, 1994: 96, fig. 21, pl. 1E; Li, 1997: 228, fig. 4, 5a-e; 2000: 25, fig. 26; 2001: 77.

Material examined. – 1 male, Site EA-D05, 02°52.80'N, 105°50.43'E, Anambas: SW coast of P. Matak: islet SE Tanjung Yang, off Selat Peninting, 30m, coll. THH, Adrim, Mantor, Agus, Yusri, Mags, Anjo, Tek, CSC, 14 Mar.2002.

Distribution. – Not definitely reported from Indonesian waters previously, although many authors reported this species wide spread in the Indo-Pacific, ranging from the Red Sea to French Polynesia and Hawaii (e.g., Kemp, 1922; Bruce, 1978, 1979, 1991; Chace & Bruce, 1993; Fransen, 1994; De Grave, 1999). The record nearest to Indonesian waters, as I known, is Torres Straits (Bate, 1888). Associated with bivalve mollusks, usually with the genus *Pinctada*.

Remarks. – The species is closely allied to *Conchodytes tridacnae* Peters, 1852. It differs from the latter in having the carpus of the first pereopod distinctly shorter than the merus. The carpus of the first pereopod is subequal to the merus.

***Hamodactylus boschmai* Holthuis, 1952**

Hamodactylus boschmai Holthuis, 1952: 209-212, figs. 102-104; Bruce, 1982: 272, figs. 25, 26; Müller, 1993: 27; Bruce & Coombes, 1995: 108; Li, 2000: 58, fig. 61.

Material examined. – 1 female, Site EA-D10, 04°37'39.8"N, 107°58'18.1"E, Natuna: rocky islet, SE Pulau Laut, the habitat is fringing reef off rocky islet, lot of *Poritis*, *Acropora*, and soft corals, coll. THH, Adrim, Mantor, Agus, Yusri, Mags, Anjo, Tek, CSC, DY, TT, 16 Mar.2002.

Distribution. – Previously reported from the type locality, Ternate and Djedjan, Indonesia, and also Kenya, Zanzibar, Madagascar, Hong Kong, Singapore, New Caledonia, Northern Territory and Queensland, Australia; associated with gorgonians.

***Jocaste japonica* (Ortmann, 1890)**

Coralliocaris superba var. *japonica* Ortmann, 1890: 509, pl. 22. *Jocaste japonica* - Patton, 1966: 279, fig. 3b; Fransen, 1989: 146; Müller, 1993: 35; Li, 1996: 225, fig. 4; 1997: 233; Li, 2000: 69, fig. 70; 2001: 79; De Grave, 2000: 125.

Material examined. – 1 female, Site EA-D11, 04°37'39.8"N, 107°58'18.1"E, Natuna: rocky islet, SE Pulau Laut, coll. THH, Adrim, Agus, Yusri, DY, TT, 16 Mar.2002.

Distribution. – Widely distributed in the tropical Indo-West Pacific, associated with branching *Acropora* corals. It was previously recorded from Indonesian waters at Borneo Island and adjacent region (Bruce, 1969).

Remarks. – This species is close to *Jocaste lucina* (Nobili, 1901) and *J. platysoma* Fransen, 1994. It can be distinguished from these two species by the rostrum with 3-5 dorsal and 1-2 ventral teeth, and from *J. lucina* also by lateral rostral carina gradually expanding posterior into convex supracocular eave, and the major second pereopod with 1 tooth on the cutting edge of the dactyl; from *J. platysoma* also by the rostrum exceeding antennular peduncle, body depressed.

***Palaemonella pottsi* (Borradaile, 1915)**

Periclimenes (Falciger) pottsi Borradaile, 1915: 212. *Periclimenes pottsi* - Potts, 1915: 82. *Palaemonella pottsi* - Kemp, 1922: 126; Bruce, 1970: 274, 279, figs. 1, 3-7; 2002: 290; Müller, 1993: 45; Li, 2000: 103, fig. 113; 2001: 80; De Grave, 2000: 129, fig. 4.

Material examined. – 1 male, Site EA-D03, 03°14'34.9"N, 106°14'32.6"E, Anambas: east coast of Pulau Jemaja: north-eastern corner of Teluk Jebung: off Tanjung Jebung, ?15m depth, coll. THH, Adrim, Mantor, Agus, Yusri, Mags, Anjo, Tek, CSC, DY, TT, 13 Mar.2002.

Distribution. – Widespread from east Africa to the Marshall Islands; associated with crinoids. Previously recorded from Indonesian waters at Marsegu Island, Seram Island, Banda Island, Gotong Island, Misool Island (Bruce, 1983a).

Remarks. – This species is the only known commensal species of the genus. It is close to *Palaemonella rotumana* (Borradaile, 1898). As indicated by Bruce (1970) and De Grave (2000), the dactyls and propodi of the ambulatory pereopods are different in the two species. The present male specimen has the flexor margin of the dactyl of the ambulatory pereopod distinctly sinuous, and the distoventral propodal spines are small and short, less than 0.13 times as long as the dactyl, indicating that it is identical to *P. pottsi*.

***Periclimenes andamanensis* Kemp, 1922**

Periclimenes (Ancylocaris) andamanensis Kemp, 1922: 204, figs. 54-57. *Periclimenes andamanensis* – Dammerman, 1948: 511, fig. 43; Bruce, 1977b: 269; Chace & Bruce, 1993: 103; Li, 1996: 229, fig. 7; 1997: 238; 2000: 156, fig. 192; 2001: 81. *Periclimenes (Harpilius) andamanensis* – Holthuis, 1952: 79.

Material examined. – 33 males, 9 females, 13 ovigerous females, Site EA-JL01, Anambas: Pulau Jemaja: northern edge of Teluk Tiru, opposite Pulau Punisan, coll. Joelle, Ben, Zaidi, Huang, 12 Mar.2002; 1 male, 1 ovigerous female, Site EA-ZJ04, Anambas: east coast of Pulau Jemaja: north-eastern corner of Teluk Jebung: western-most of a pair of islands off Tanjung Jebung, 13 Mar.2002; 10 males, 19 females, 8 ovigerous females, Site EA-DW04, 02°58.35'N, 105°40.18'E, Anambas: Pulau Jemaja: Teluk Jebung: northern mangrove inlet, coll. SS, SJ, CIS, 13 Mar.2002; 1 ovigerous female, Site EA-JL03, 02°52'54.4"N, 105°47'38.5"E, Anambas: Pulau Jemaja: Teluk Jebung: northern and eastern mangrove inlets, coll. Joelle, Ben, I-In, coll. Joelle, Ben, I-In, 13 Mar.2002.

Distribution. – Previously reported from Madagascar, Andaman Islands, South China Sea, Ryukyu Islands, Australia. The only Indonesian record is from a brackish pool in Selat Sunda (Dammerman, 1948; Chace & Bruce, 1993).

Remarks. – The specimens agree closely with the original description, but the dactyls of the ambulatory pereopods are longer than in the types. This may be a very common species in the South China Sea and adjacent waters, which is often collected in numbers in suitable locality in this area. The morphological and distributed range of this species should be reviewed carefully, as nobody has checked the types since Kemp (1922).

***Periclimenes attenuatus* Bruce, 1971
(Figs. 1, 2)**

Periclimenes attenuatus Bruce, 1971: 533, figs. 1-5; 1983a: 879; 1983b: 206; 1992: 69, fig. 19; Chace & Bruce, 1993: 103; Müller, 1993: 71; De Grave, 2000: 134; Li, 2000: 159, fig. 196.

Material examined. – 1 ovigerous female, Site EA-D02, 02°57'13.6"N, 105°50'47.4"E, Anambas: Pulau Jemaja: Teluk Tiru, northern edge of bay, near southern tip of Tanjung Linang, fringing coral reef, coll. THH, Adrim, Mantor, Agus, Yusri, Mags, Anjo, Tek, CSC, CIS, 12 Mar.2002.

Measurements (in mm). – CL, 3.1; carapace and rostrum,

4.8; telson, 2.10; eye: stalk, 0.86, cornea, 0.48; first pereiopod: dactyl, 0.32, chela, 0.67, carpus, 1.72, merus, 1.63, ischium, 0.69; left second pereiopod: dactyl, 0.33, chela, 0.90, carpus, 2.99, merus, 2.03, ischium, 1.49; third pereiopod: dactyl, 0.37, propodus, 1.99, carpus, 1.82, merus, 2.24, ischium, 1.05; length of eggs, 0.5-0.6.

Distribution. – Duke of York Islands, Papua New Guinea, and Queensland, Australia; associated with crinoids. Previously reported from Indonesian waters at Seram Island (Bruce, 1983a).

Remarks. – The specimen agree with the original description of *Periclimenes attenuatus* Bruce, 1971, except for the following aspects: rostrum with 4 dorsal teeth and 1 small sub-apical ventral tooth; telson with 2 pairs of dorso-lateral spines located at 0.4 and 0.7 of the telson length respectively. *Periclimenes attenuatus* Bruce, 1971 is a rare species, which has been recorded only from shallow water (not more than 15 m in depth) of Indonesia to Northeast Australia. It may be recorded here for the first time north to the equator.

Periclimenes grandis (Stimpson, 1860)

Anchistia grandis Stimpson, 1860: 39.

Periclimenes (Ancylocaris) grandis - Kemp, 1922: 210, figs. 58, 59, pl. 7: fig. 10.

Periclimenes grandis - Bruce, 1975: 23, fig. 1; Chace & Bruce, 1993: 112; Müller, 1993: 84; Li, 1997: 238; 2000: 186, fig. 235; 2001: 82.

Material examined. – 2 males, 2 females, 4 ovigerous females, Site EA-ZJ09, 04°15.90'N, 108°12.27'E, Natuna: NE coast of Pulau Panjang, NW Pulau Bunguran, 17 Mar.2002.

Distribution. – Wide distribution in Indo-West Pacific, from Red Sea to Mozambique, eastward to Japan, Great Barrier Reef, and Marshall Islands. Previously reported from Indonesian waters at Sumatra, Lesser Sunda Islands (Holthuis, 1952, 1978).

Remarks. – This species is very close to *Periclimenes elegans* (Paulson, 1875) in the *P. grandis* species group sensu Kemp (1922). All the present specimens have only 1 distal spine

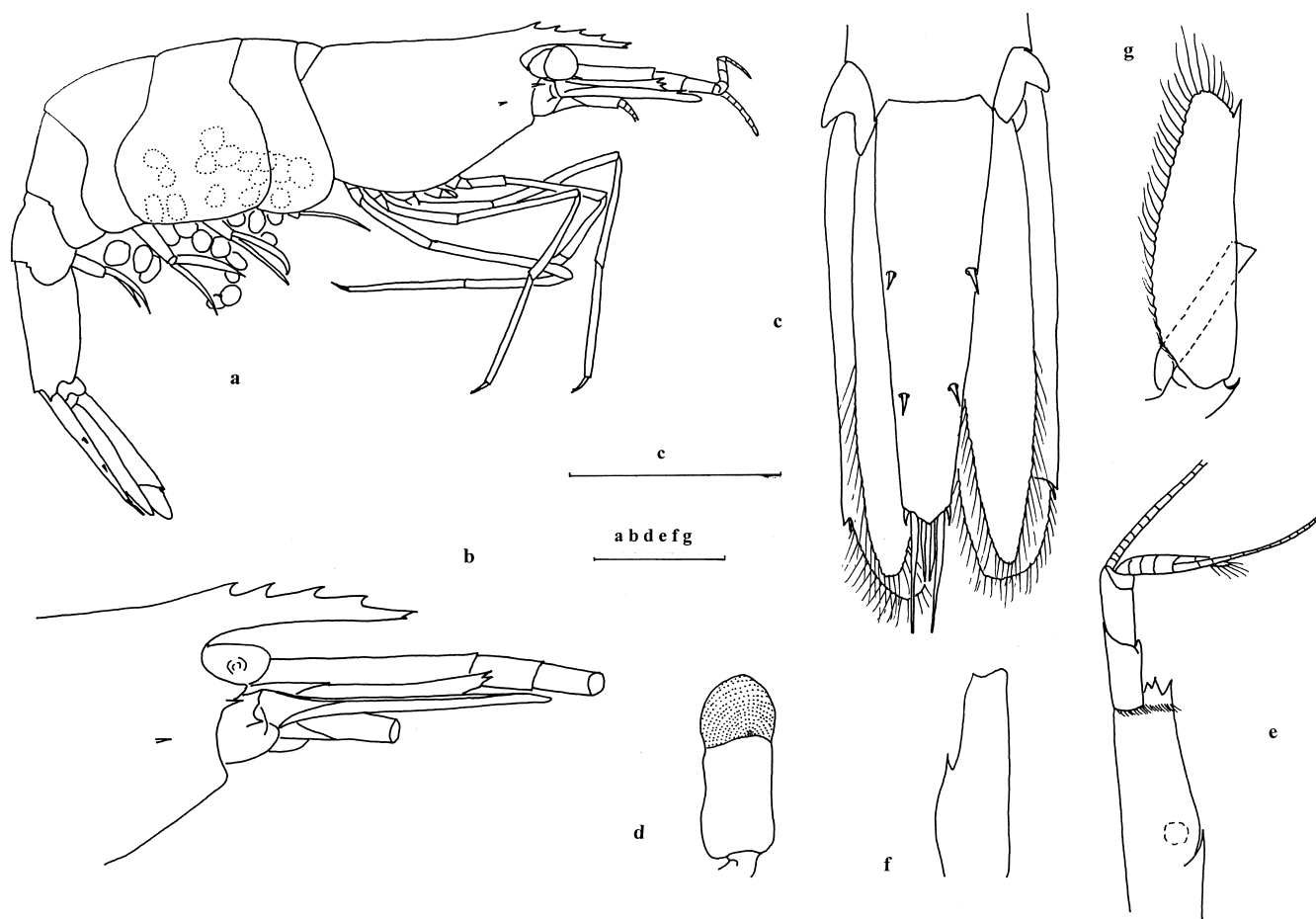


Fig. 1. *Periclimenes attenuatus* Bruce, 1971. a, body, lateral view; b, anterior carapace, lateral view; c, tail-fan, dorsal view; d, right eye, dorsal view; e, right antennula, dorsal view; f, first segment of antennular peduncle, medium view; g, right antenna. Scale = 2 mm (a); 1mm (b-g).

on the carpi of the second pereopods and the carpi are distinctly shorter than the palms, and their scaphocerites are 4 times as long as wide, identical to *P. grandis*. *P. elegans* has always 2 distal spines on the carpus of the second pereopod, and the carpus is subequal to the palm, the scaphocerite is relatively narrow, about 4.5 to 5.5 times as long as wide.

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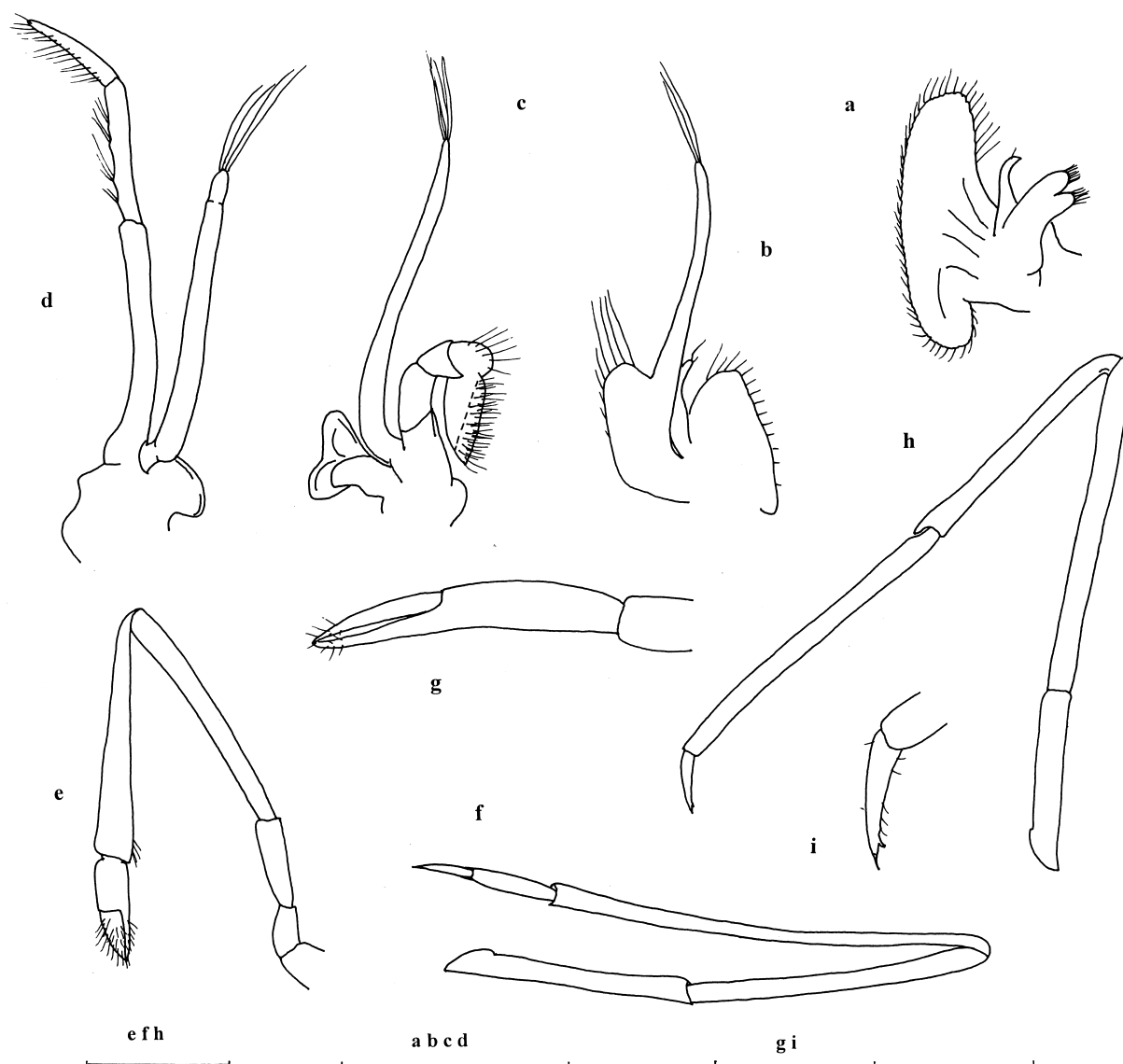


Fig. 2. *Periclimenes attenuatus* Bruce, 1971. a, right second maxilla; b, right first maxilliped; c, right second maxilliped; d, right third maxilliped; e, left first pereopod; f, left second pereopod; g, chela of left second pereopod; h, left third pereopod; i, dactyl of left third pereopod. Scale = 1 mm (a-f, h); 0.5 mm (g, i).

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