

## The freshwater crab fauna (Crustacea: Brachyura) of the Philippines. V. On a new genus and species of potamid from Palawan island, Philippines

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### Abstract

A new genus and new species of terrestrial potamid crab (*Carpomon pomulum*) is described from the island of Palawan in the Philippines. This new genus can easily be distinguished from all other Philippine potamids in its smooth and inflated carapace, no trace of an epibranchial tooth, extremely low postorbital cristae, and stout and twisted male first gonopod.

### Introduction

During a recent trip to the Bernice P. Bishop Museum (BPBM) in Honolulu, Hawaii, the second author examined an unusual potamid crab specimen collected from the island of Palawan in the Philippines in 1960. This specimen differed markedly from all known Philippine and Southeast Asian crab species in its very smooth carapace, without any trace of granulation or striation, no trace of an epibranchial tooth, and an unusual male first gonopod structure. It is here referred to a new genus and new species.

### Materials and methods

The terminology used here follows Ng (1988). Measurements, in millimetres, are of the carapace width and length respectively. The abbreviations G1 and G2 refer to the first and second male gonopod respectively.

#### *Taxonomy*

Family Potamidae Ortmann, 1896

*Carpomon*, new genus

*Diagnosis.* Carapace transversely ovoid, dorsal surface very smooth, swollen on branchial, gastric and

intestinal regions, cervical grooves very shallow, H-shaped groove shallow but discernible. Frontal margin gently sinuous; anterolateral margin strongly convex, with distinct cristae; no trace of epibranchial tooth; external orbital angle acutely triangular. Epigastric lobes indistinct. Third maxilliped exopod with well developed flagellum, flagellum about half width of third maxilliped merus. Cheliped outer surface smooth. Abdomen broadly triangular. G1 stout, terminal segment bent outwards, distal part subtriangular in shape. G2 slender, ca. 0.6 times length of basal segment.

*Type species.* *Carpomon pomulum*, new species, by present designation.

*Etymology.* The genus name is derived from an arbitrary combination of the Greek word 'karpos' for fruit (alluding to its swollen carapace) and *Potamon*. Gender neuter.

*Remarks.* Four genera of potamids have been reported from the Philippines, viz. *Isolapotamon* Bott, 1968 (Mindanao), *Insulamon* Ng & Takeda, 1992 (Palawan), *Mindoron* Ng & Takeda, 1992 (Mindoro), and *Ovitamon* Ng & Takeda, 1992 (Marinduque and Luzon). *Carpomon* can easily be differentiated from *Isolapotamon*, *Insulamon* and *Mindoron* by having the dorsal surface of the carapace strongly swollen



Figure 1. *Carpomon pomulum* new genus, new species, holotype, male (31.0 by 25.7 mm) (BPBM 5575). Dorsal view.

without any traces of granulation or striation, and the anterolateral margin with no trace of an epibranchial tooth. The G1 structure of *Carpomon* is somewhat similar to that of *Mindoron* but their very different carapace structure argues against their close relationship. In addition, the anterior thoracic sternites (sternites 1–4) of *Carpomon* are proportionately more elongate compared to those of *Mindoron* (see Ng & Takeda, 1992: Figure 6A). The G1 structures of *Isolapotamon* and *Insulamon*, on the other hand, are very different (see Ng & Takeda, 1992; Ng & Tan, 1998). *Carpomon* is perhaps closest to *Ovitamon* in the general shape of the carapace and smoother dorsal surface, but can be distinguished in having no epibranchial tooth; very low epibranchial cristae; a proportionately shorter flagellum on the third maxilliped exopod and a proportionately much stouter and shorter G1 (see Ng & Takeda, 1992). Although the epibranchial tooth in *Ovitamon* species is often low, they are nevertheless discernible as the postorbital cristae is often distinct, at least where it meets the anterolateral margin. The external orbital teeth of *Ovitamon* species are also broadly triangular (versus acutely triangular in *Carpomon*).

The swollen and smooth carapace of *Carpomon* strongly resembles those of Indo-China and Thai potamid taxa like *Pudaengon* Ng & Naiyanetr, 1995, *Thaipotamon* Ng & Naiyanetr, 1993, and *Thaiphusa* Ng & Naiyanetr, 1993, but these are very different with regards to their third maxilliped and G1 struc-

tures (Ng & Naiyanetr, 1993, 1995). Their similar carapaces, however, strongly suggest that *Carpomon* is also a genus of terrestrial crabs.

*Carpomon* also resembles the Chinese potamid genus *Nanhaipotamon* Bott, 1968 with respect to the carapace morphology. However, *Nanhaipotamon* differs from *Carpomon* in having a prominent epibranchial tooth; pterygostomial region granulated; G1 terminal segment not bent and twisted (see Ng & Dudgeon, 1992). Dai (1997) recently revised the genus *Nanhaipotamon*.

*Carpomon pomulum*, new species (Figures 1 & 2)

*Material examined.* Holotype male (31.0 by 25.7 mm) (BPBM 5575), Philippines: Palawan, 12 miles south of Tarumpatao, about 500 m asl, coll. L. Quate, 1 Jul. 1960.

*Diagnosis.* Carapace ovoid, dorsal surface very smooth, glabrous; branchial, gastric and intestinal regions swollen; anterolateral margin strongly convex, with smooth cristae not reaching posterolateral margin; epibranchial tooth absent; posterolateral margin strongly converging towards posterior carapace margin; posterior carapace margin gently convex outwards. Cervical grooves very shallow, continuous to base of exorbital angle; H-shaped groove shallow. Frontal margin gently sinuous; external orbital angle small, acutely triangular. Epigastric lobes indistinct,

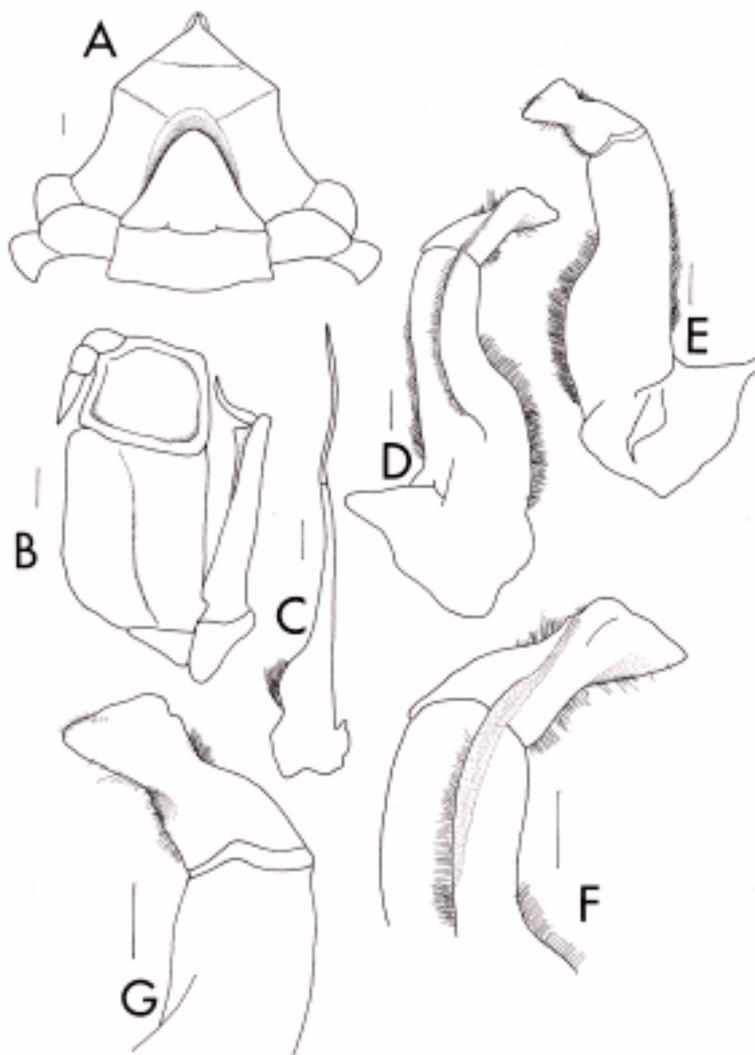


Figure 2. Figure 2. *Carpomon pomulum* new genus, new species, holotype, male (31.0 by 25.7 mm) (BPBM 5575). A. Sternum, last abdominal segment and telson; B. Left third maxilliped; C. Left G2; D–G, Left G1, in ventral (D, F) and dorsal (E, G) views and with the terminal segment (F, G) magnified.

very low, separated by narrow, shallow groove, continuous with postorbital cristae. Postorbital cristae weak, directly above orbits; orbital region very narrow. Third maxilliped exopod reaching mid-length of merus, with well developed flagellum about half width of third maxilliped merus. Cheliped asymmetrical, outer surfaces smooth; carpus with sharp spine in inner distal margin, low granule present at base of spine; merus with two rows of cristae ventrally, finely granulated; fingers slightly longer than palm. Ambulatory legs not elongate, smooth, unarmed, slender, second pair longest. Abdomen broadly triangular, telson triangu-

lar, second to sixth abdominal segments gradually converging towards telson. G1 stout, distal part of terminal segment triangular, twisted dorsally. G2 long, well developed distal segment, about 0.6 times length of basal segment.

*Etymology.* The word 'pomulum' is Latin for 'little apple'. Gender neuter.

*Remarks.* *Carpomon pomulum* is very similar to *Ovitamon arcanum* Ng & Takeda, 1992, with respect to its swollen and smooth carapace. *Ovitamon*

*arcanum* can be differentiated from *C. pomulum* by having an low epibranchial tooth, a broadly triangular external orbital angle, length of third maxilliped exopod flagellum being the same length as that of the merus, and a cylinder-shaped G1 terminal segment.

*Remarks.* The potamid crab diversity of the Philippines remains poorly known (see Ng & Takeda, 1992). Until the present study, only one species, *Insulamom unicorn* Ng & Takeda, 1992, has been recorded from Palawan. The parathelphusid fauna for the island, on the other hand, is much better known, with five species [*Parathelphusa palawanensis* (Bott, 1969), *P. saginata* Ng & Takeda, 1993, *P. obtusa* (Bott, 1969), *P. rasilis* Ng & Takeda, 1993, and *P. parvula* Ng & Takeda, 1993] recorded thus far (see Ng & Takeda, 1993).

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