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New Record of Majoid Crab *Xenocarcinus conicus* (Crustacea: Decapoda: Epialtidae) from Korea

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ABSTRACT

A female crab of *Xenocarcinus conicus* (A. Milne Edwards, 1865) was collected from Munseum, Jejudo Island. The genus *Xenocarcinus* is recorded newly in Korean brachyuran fauna. The present specimen has broader and shorter rostrum and eleven sharp teeth on the inner border of dactylus of the first ambulatory leg. Korean epialtid fauna now consists of eight species of four genera.

Key words: New record, *Xenocarcinus conicus*, Epialtidae, Decapoda, Korean fauna

INTRODUCTION

The majoid crabs of the family Epialtidae including twelve genera (Davie, 2002) are characterized by a sunken orbit and short and often immobile eyestalks and many species have a prominent beaked rostrum (Griffin and Tranter, 1986).

Five species, *X. truncatifrons* Balss, 1938, *X. monoceros* Sakai, 1938, *X. depressus* Miers, 1874, *X. tuberculatus* White, 1874 , *X. conicus* (A. Milne Edwards, 1865), of the genus *Xenocarcinus* White, 1847 are distributed in the Indo-West Pacific. Of these, *X. conicus* and *X. tuberculatus* are widespread in the Indo-West Pacific (Griffin and Tranter, 1986).

Four species of the genus *Xenocarcinus* have been recorded in Japan: *X. conicus*, *X. depressus*, *X. monoceros*, *X. tuberculatus* (Sakai, 2004). Only *X. depressus* is recorded in China (Dai and Yang, 1991). *X. conicus* is the species of the genus from Korean water by the present study.

The specimen was preserved in 70% ethyl alcohol and deposited in the Laboratory of Systematic and Molecular Evolution, Seoul National University (SNU). The abbreviation "cl" refers to carapace length from the tip of rostrum of the posterior dorsal margin of the carapace. Drawings were made with the aid of camera lucida. Terminology mostly follows that of Griffin (1966).

SYSTEMATIC ACCOUNTS

Superfamily Majoidea Samouelle, 1819

Family Epialtidae Macleay, 1838

Genus [1]**Xenocarcinus* White, 1847

[2]****Xenocarcinus conicus* (A. Milne Edwards, 1865) (Fig. 1)**

Hueniodes conica A. Milne Edwards, 1865, p. 145.
Xenocarcinus tuberculatus (not White, 1847): Alcock, 1895, p. 192; Stephensen, 1945, p. 109.
Xenocarcinus tuberculatus var. *alcocki* Laurie, 1906, p. 371.
Xenocarcinus depressus: Gordon, 1934, p. 70.
Xenocarcinus nakazawai Sakai, 1938, p. 325; Sakai, 1976, p. 213; Miyake, 1983, p. 38.
Xenocarcinus alcock: Sakai, 1965, p. 92.
Xenocarcinus conicus: Griffin and Tranter, 1986, p. 100.

Material examined. 1♀ (cl 10.52 mm), Munseum, Jejudo Island, 19 Apr. 2002 (S.H. Kim).

Description. Carapace (Fig. 1A). Elongated oval, dorsal surface somewhat depressed; regions indefinite, median gastric and branchial regions faintly inflated, former with curled fairs on either side, without any tubercles contrary to *X. tuberculatus*, latter with indistinct tubercle at junction of anterior-lateral and posterior-lateral borders; cardiac region flat, two tubercles side by side. Posterior border subtruncate, with indistinct tubercle on either lateral angle.

Rostrum (Fig. 1A). Very long, beak-shaped, somewhat depressed, thickly covered with fine tomentum, its tip being bifurcated. Orbits rounded, not very deep, eyes large; intercalated lobe distinct. Basal segment of antenna narrowed at tip, its anterior-external angle armed with indistinct tooth; flagellum very slender, short. Ridge of pterygostomial region with three tubercles.

Merus of external maxilliped at anterior-external angle with narrowed at tip.

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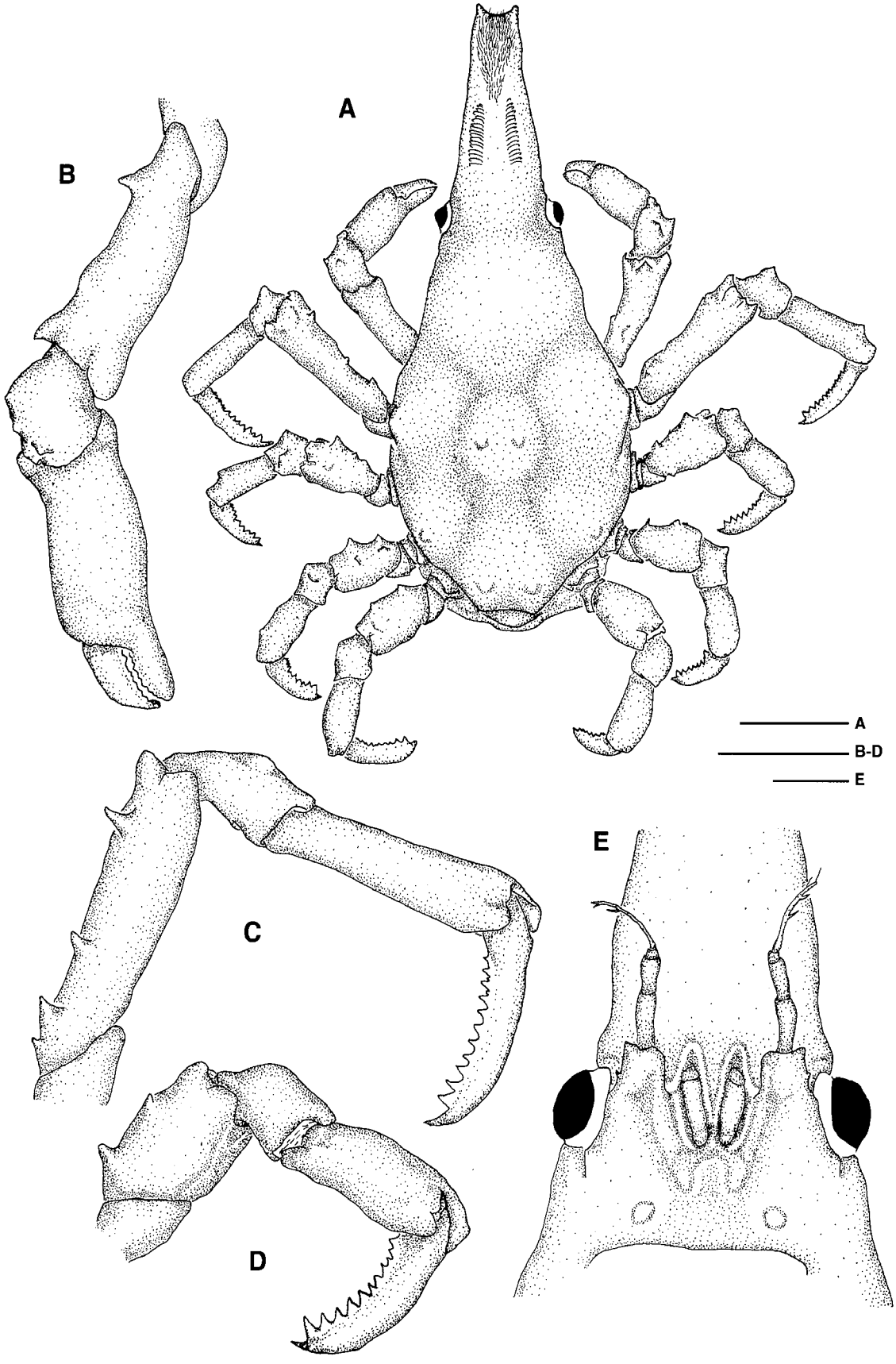

Fig. 1. *Xenocarcinus conicus* (A. Milne Edwards, 1865), female. A, whole animal, dorsal view; B, outer view of left cheliped; C, first ambulatory leg; D, fourth ambulatory leg; E, front of carapace and orbit, ventral view. Scales bars=4 mm (A-E).

Chelipeds (Fig. 1A, B). Not stouter, longer than any ambulatory legs; merus with three spines on anterior border, with spine on posterior border near distal end; carpus and propodus unarmed, not much depressed; fingers not gaping, prehensile edges indistinctly denticulated.

Ambulatory legs (Fig. 1A, C, D). First pair longer than total length of carapace and rostrum; merus with four acuminate teeth along superior border; carpus obtuse tooth in middle of superior border; dactylus slightly curved, eleven sharp teeth on its inner border, larger three or four distal ones. Other three pairs of legs (Fig. 1A); each merus with three more or less distinct teeth. Teeth of dactylus eight in number; distal three or four prominent.

Abdomen of female. First and last segments freely movable; second to sixth fused, sometimes suture line between second and third segments distinct.

Distribution. Korea, West-Indian Ocean, Red Sea, Sri Lanka, Malaya, Banda Islands, Kai Islands, and Japan.

Remarks. Korean *X. conicus* is agreed quite well with *X. conicus*. The rostrum of Korean female crab is about half the postrostral carapace length as *X. conicus*, a broader rostrum and an indistinct tooth on the anterolateral angle of the basal antennal article. But the Korean *X. conicus* has small tubercles side by side on the cardiac region and eleven sharp teeth on the inner border of the first pair of ambulatory legs.

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REFERENCES

Alcock, A.W., 1895. Materials for a carcinological fauna of India. No. 1. The Brachyura Oxyrhyncha. J. Asiatic Soc. Bengal, 64: 157-291.

Dai, A.Y. and S.L. Yang, 1991. Crabs of the china seas. Springer-verlag, New York, pp. 1-608.

Davie, P.J.F., 2002. Crustacea: Malacostraca: Eucarida (part 2). Decapoda- Anomura, Brachyura. Zool. Cat. Australia, 19.3B: 276-335.

Gordon, I., 1934. Crustacea Brachyura. *In* Résultats Scientifique du voyage aux Indes Orientales Néerlandaises de LL. AA. RR. de Prince et la Princesse Léopold de Belgique. Mém. Mus. R. Hist. Nat. Belgique, hors-série, 3(15): 1-78.

Griffin, D.J.G., 1966. The marine fauna of New Zealand: spider crabs, family Majidae (Crustacea, Brachyura). N.Z. Dept. Sci. Ind. Res. Bull., 172: 1-111.

Griffin, D.J.G. and H.A. Tranter, 1986. The Decapoda Brachyura of the Siboga Expedition, Part VIII. Majidae. Siboga Exped. Monogr., 39(C4): 1-335.

Laurie, R.D., 1906. Report on the Brachyura collected by Professor Herdman, at Ceylon, in 1902. *In* W.A. Herdman, Report to the Government of Ceylon on the Pearl Oyster Fisheries of the Gulf of Manaar with supplementary reports upon the Marine Biology of Ceylon by other Naturalists, Part 5, Suppl. Rep., 40: 349-432.

Milne-Edwards, A., 1865. Description de quelques Crustacés Nouveaux appartenant à la tribu des Maiens. Annls Soc. Entomol. France, (4)5: 133-147.

Miyake, S., 1983. Japanese Crustacean Decapods and Stomatopods in color. Hoikusha Publishing Co. Ltd., 2: 1-277, pls. 1-64.

Sakai, K., 2004. Crabs of Japan. World biodiversity Database CD-ROM Series.

Sakai, T., 1938. Studies on the Crabs of Japan, 3. Brachygnatha, Oxyrhyncha. Yokendo Co., Tokyo, pp. 193-364.

Sakai, T., 1965. The Crabs of Sagami Bay. Muruzen Co., Tokyo, pp. 1-206 (In English), pp. 1-92, pls. 1-100 (In Japanses).

Sakai, T., 1976. Crabs of Japan and the Adjacent Seas. Kodansha Ltd., Japan, pp. 1-773.

Stephensen, K., 1945. The Brachyura of the Iranian Gulf. Danish Sci. Invest. in Iran, Copenhagen, pt. IV, pp. 57-237.

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