

**BARUNA SINENSIS, A NEW CAMPTANDRIINE CRAB  
FROM TAIWAN (CRUSTACEA: DECAPODA:  
BRACHYURA: OCYPODIDAE)**

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**ABSTRACT.** - A new species of camptandriine crab from Taiwan is described. It differs from other *Baruna* species in the form of the anterolateral margin of the carapace, position of granulation on the outer surface of the chela in the male, structure of the male first gonopod, and form and granulation of the cheliped carpus.

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**INTRODUCTION**

At present, four species of *Baruna* Stebbing, 1904 are known: *B. socialis* Stebbing, 1904 (type species), *B. trigranulum* (Dai & Song, 1986) (see Ng, 1992, for discussion of authorship), *B. mangromurphia* Harminto & Ng, 1991, and *B. minuta* Harminto & Ng, 1991. The latest revision on the genus carried out by Harminto & Ng (1991) showed that *B. socialis*, the type species of the genus, is a senior subjective synonym of *Leipocten sordidulum* Kemp, 1915. They distinguished the four *Baruna* species by carapace features, structure of the male first pleopod, form of the anterolateral margin of the carapace, spination on the third and fourth ambulatory legs, granulation of the ambulatory ischia-basis and granulation on the male chela.

In this paper, a new species collected from Taiwan estuaries, *Baruna sinensis*, is described. This species is distinguished from other *Baruna* species in the form of the anterolateral margins of the carapace, position of the line of granulation on the outer surface of the chela in the male, structure of the apical process of the male first gonopod, and form and granulation on the carpus, particularly in the male.

The abbreviation G1 is used for the male first gonopod. Measurements are in mm (millimeters) and are of the carapace length and breadth respectively. Specimens are deposited in Department of Zoology, Academia Sinica, Beijing (AS); National Taiwan Ocean University (NTOU), Keelung, Taiwan; Department of Zoology, Taiwan Museum (TM), Taipei, Taiwan,

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## TAXONOMY

OCYPODIDAE ORTMANN, 1894  
CAMPTANDRIINAE STIMPSON, 1858

*Baruna* Stebbing, 1904

*Baruna sinensis*, new species

Figs. 1-3

*Leipocten sordidulum* - Dai et al., 1986:445, fig. 249(1). - Dai & Yang, 1991:488, fig. 249(1). - Huang et al., 1992:150, fig. 10.

**Material examined.**- Holotype male (ZRC. 1995.928, ex-NTOU 1994041895) (3.9 mm x 5.1 mm), Pei-men, Tainan County, Taiwan, sandy mud with shell, coll. J. F. Huang, 18 Apr.1994. - Allotype female (ZRC. 1995.929, ex-NTOU 1994041808) (4.6 mm x 6.0 mm), data same as Holotype.

Paratype - 4 males, 14 females, data same as Holotype. - 1 male (2.7 mm x 3.3 mm), 1 female (3.8 mm x 4.9 mm) (AS), Jianmei, Longhai, Fujian, China, 13 Mar.1974 - 1 male (5.6 mm x 7.0 mm), 1 female (6.5 mm x 8.4 mm), Pei-men, Tainan County, Taiwan, coll. J. F. Huang, 7 Jan.1994.

**Description.**- Holotype male. Carapace about 1.4 times broader than long, regions ill-defined, branchial region sparsely covered with coarse granules, interspersed with short, black, stiff setae, particularly on posterior branchial region, lateral margins slightly inflated, coarsely granular, anterolateral margin with 2 weak, granulated teeth, inclusive of external supraorbital angle, third "tooth" present in the form of enlarged granule. Supraorbital margin finely granular. Front weakly bilobed, with thick covering of setae, anterior epigastric region sparsely granulated, with short, transverse ridge on either side, visible when denuded. Front, together with supraorbital and anterolateral margins with continuous pigmented rim, ending around posterolateral margin. Posterolateral margin faintly beaded.

Exterior of third maxillipeds sparsely setose, ischium and merus subequal in length measured along inner edge; ischium endognath quadrangular, anterior edge weakly concave, exognath width slightly less than half width of endognath; inner edge of merus curving outwards anteriorly such that a triangular space is formed between the anterior halves of the meri, outer edge of merus sinuous, anterior portion curved outwards; palp 3-segmented.

Palm of chela large, bulbous, outer surface with median line of rounded granules, triangular indentation present on distal edge of inner palm surface adjacent to movable finger; tips of fingers spoon-shaped, middle of cutting edge of movable finger with large molariform tooth, dorsal edge and surrounding are with large round granules interspersed with setae, proximal ventral edge granular. Ambulatory legs with dense covering of long setae, surface granular; fourth ambulatory leg shortest, held above third ambulatory leg, bottom edge of ischia-basis with group of large granules, anterior edge of merus coarsely granular, proximal third of posterior edge with transverse row of 3 large spines, 2 consecutive spines present distally; distal end of propodus with 2 small spines posteriorly; dactylus weakly curved inwards.

Abdomen with segments 2 and 3 fused; G1 strongly recurved, tuft of long, stiff setae present subapically, single pointed subapical process present.

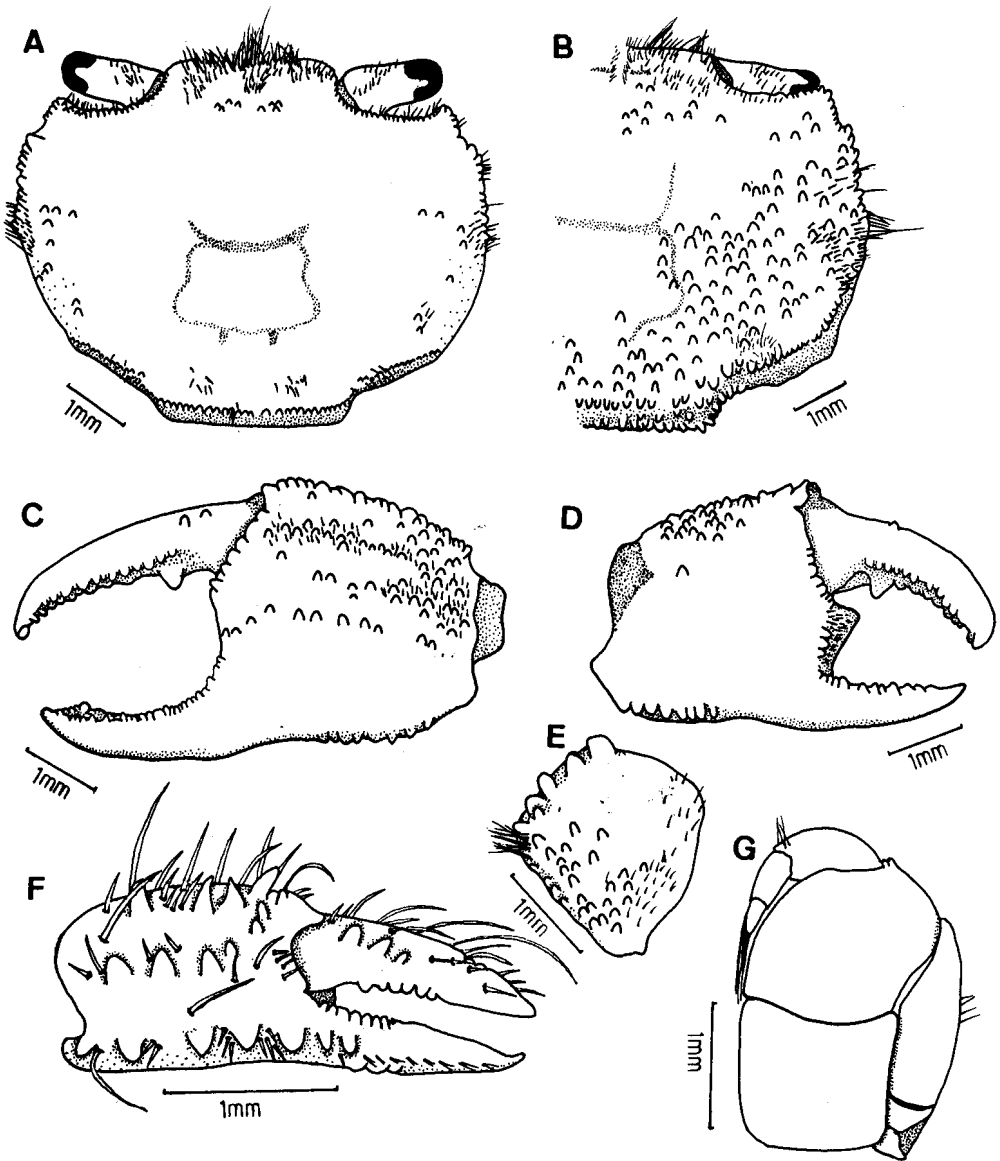


Fig. 1. *Baruna sinensis*, new species, paratype male (NTOU) (5.6 x 7.0 mm), paratype female (6.5 x 8.4 mm). A, dorsal view of male carapace; B, dorsal view of female carapace; C, male left cheliped, outer surface; D, male left cheliped, inner surface; E, male right cheliped carpus; F, female right cheliped, outer surface; G, male third maxilliped, outer surface.

Allotype female. — Branchial regions and lateral margins of carapace more coarsely and densely granulated compared to that of male. Lateral margins slightly more inflated. Chela coarsely granulated, particularly along edges, outer surface with 2 rows of large moderately-spaced granules; lower row extending halfway through to tip of immovable finger, upper edge of movable finger with a few large granules. All abdominal segments free. Other non-sexual characters similar to male.

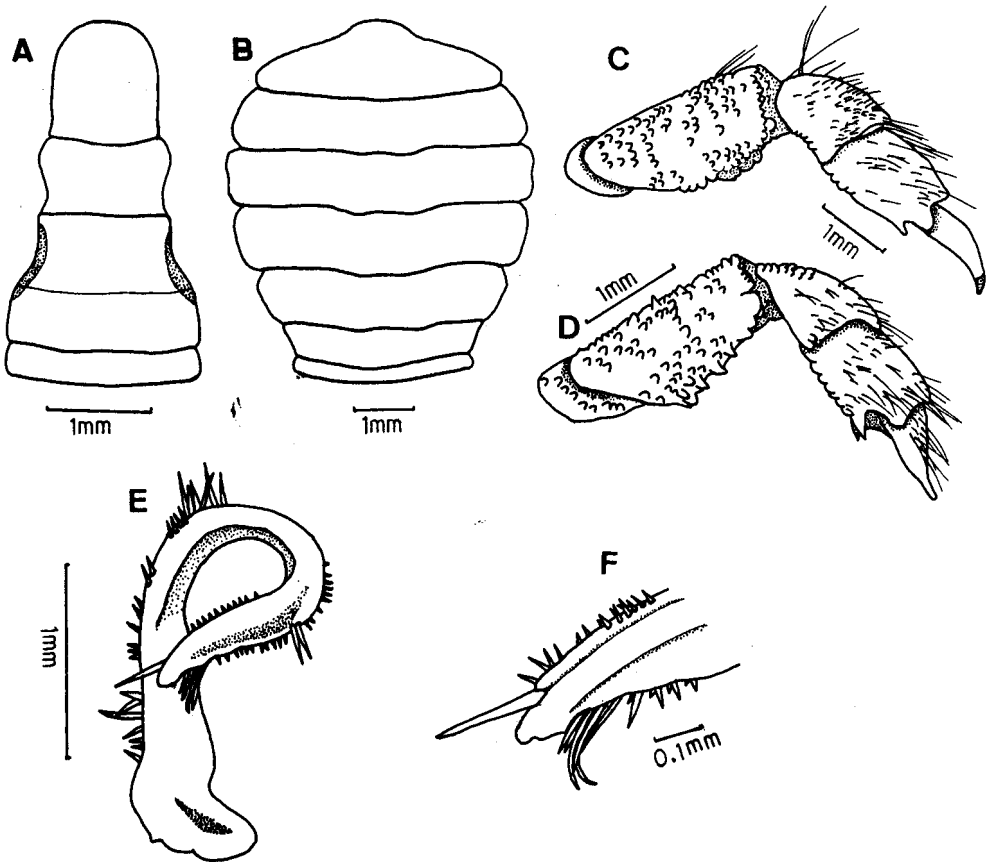


Fig. 2. *Baruna sinensis*, new species, paratype male (NTOU) (5.6 x 7.0 mm), paratype female (6.5 x 8.4 mm). A, male abdomen; B, female abdomen; C, male right third ambulatory leg; D, male right fourth ambulatory leg; E, right G1; F, right G1, apex.

**Remarks.** - There are several adult differences between *B. sinensis* and its closest species, *B. socialis*. In *B. sinensis*, the anterolateral margins have two weak, granular lobes whilst in *B. socialis*, the anterolateral margin is divided into three distinct granular lobes. The outer surface of the male chela of *B. sinensis* has a median transverse row of large granules. In *B. socialis*, this row of granules is closer to the dorsal edge of the chela, well above the median line. A "comb" of three close-set teeth is present on the posterior margin of the basis fourth ambulatory leg in *B. socialis* but this is absent in *B. sinensis*, which instead, has a group of rounded granules.

In larger males, an additional transverse row of granules above the median one is visible on the outer surface of the cheliped palm. Also, the inner margin of the cheliped carpus in larger males has a more coarsely granular outer surface as compared to that in smaller males. In general, females of *Baruna* species have more well-developed anterolateral lobes and/or granules as compared to the males (see Harminto & Ng, 1991). This is true for *B. sinensis*. It also appears that the carapace anterolateral granules and lobes in this species become more well-developed as the size of the specimen increases.

The first author examined a male and a female specimen identified by Professor Dai Aiyun as *Leipocten sordidulum* Kemp, 1915 (= *B. socialis*), from Fujian in mainland China. These

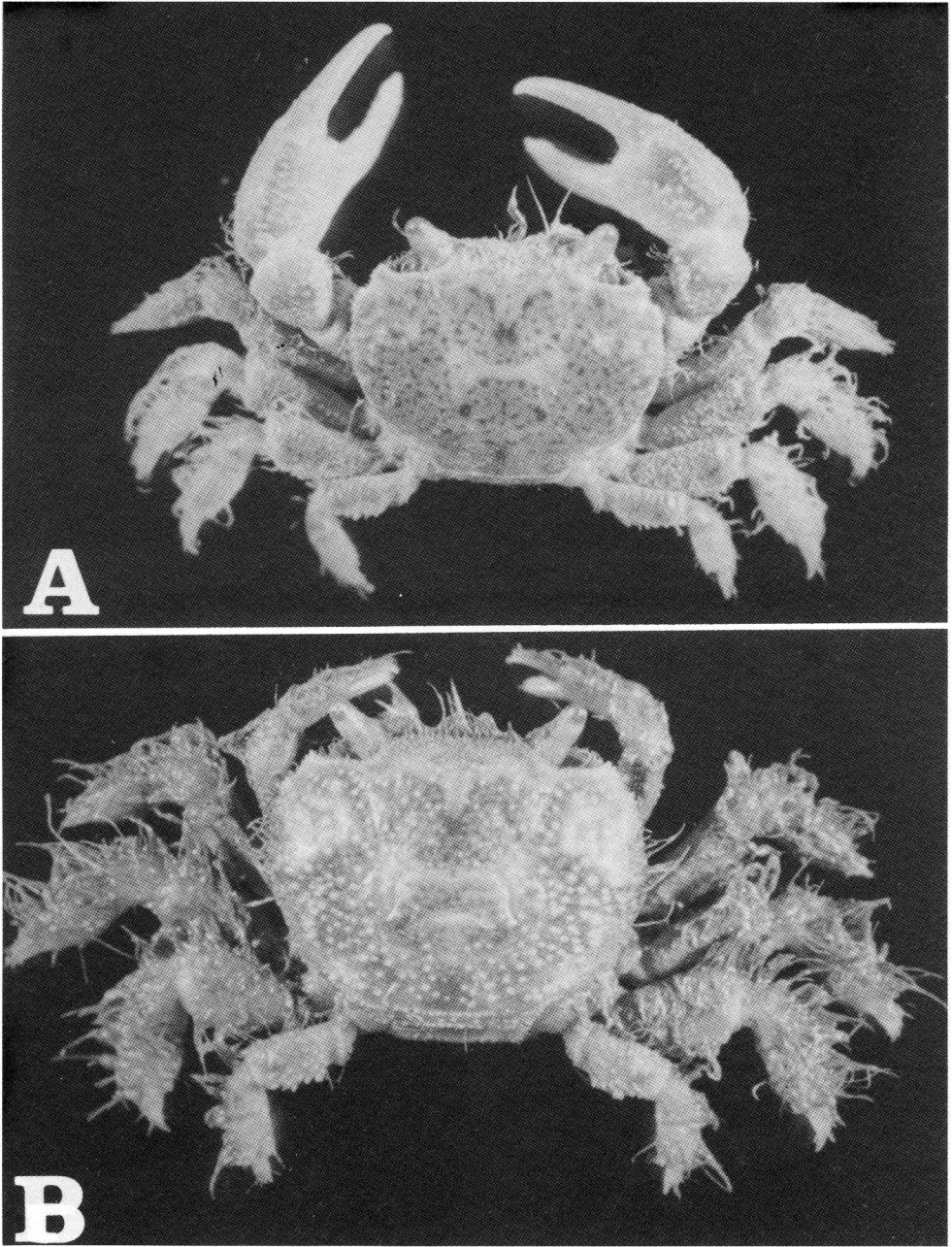


Fig. 3. *Baruna sinensis*, new species, A, paratype male (NTOU) (5.6 x 7.0 mm); B, paratype female (6.5 x 8.4 mm).

were the specimens utilised by Dai et al. (1986) and Dai & Yang (1991) in the description of "*L. sordidulum*" from China, although in the reports, no material was listed (A-Y. Dai, pers. comm. to P. K. L. Ng). The specimens are very small and in poor condition, with all appendages missing. It is thus difficult to confirm their identity. However, the anterolateral margins in the male have weak, rounded teeth as in *B. sinensis* rather than the well-formed teeth found in *B. socialis*. The proximity of the localities of these specimens and those from

Taiwan further supports the possibility of their conspecificity. Until more specimens are obtained from mainland China, the authors tentatively recognise the Chinese as specimens belonging to *B. sinensis*.

For *B. sinensis*, Huang et al. (1992), stated that "... this species (as *Leipocten sordidulum*) lives in the sandy mud of estuaries". Dai & Yang (1991) mentioned that the slow-moving species was found in mud and sand along the seashore.

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