



Text-fig. 2. *Cryptochirus trii* FIZE et SERÈNE.—A, B: ♀ infested by a *Sacculina* (NSMT-Cr 6443-3). C-E: ♂ (NSMT-Cr 6443-5). A, entire animal; B, left third maxilliped in abdominal view; C, entire animal; D, distal six segments of abdomen; E, left first pleopod in abdominal view. Scales for A, C, D=2 mm, scale for B=1 mm, scale for E=0.5 mm.

of carapace bent downward; dorsum moderately convex, and thickly covered with conical granules which are prominent and more or less spiniform on anterior part; hepatic region separated from gastric and branchial regions by a shallow oblique furrow; branchial region divided into three parts by two oblique furrows, the anterior of which is shorter and shallower than the posterior; anterior and median subdivisions of branchial region confluent with gastric region without any indication of furrows; posterior part of gastric region indistinctly separated from cardio-intestinal region by a very shallow furrow.

Front moderately concave and armed with spines. Supraorbital border concave; its internal angle provided with a large spine, and external angle with some spines. Front-orbital border nearly equal to posterior border of carapace and a little wider than half the greatest width of carapace. Proximal part of eyestalk hidden under carapace in dorsal view. Basal segment of antennule well developed and protruded beyond internal orbital angle and eyestalk, being armed with several spinules along margins and on upper surface. Third maxilliped as figured.

Both chelipeds not stout, equal in size and shape; merus nearly as long as twice its height, and its upper and lower surfaces covered with minute granules; carpus and palm covered with minute granules and fine setae mainly on upper borders, upper border of palm nearly equal to movable finger and shorter than twice the height of palm; fingers entire on cutting edges, with tips scarcely crossing each other.

First ambulatory leg a little longer and stouter than cheliped, being covered with spinules and short hairs. Second leg shorter than the first, and third leg generally resemble the second, but slightly shorter. Fourth leg slenderer than the third.

Male. Smaller than female. Dorsum thickly covered with minute granules, but smoother than in female; regions more indistinctly demarcated; anterior part of carapace moderately bent downward. Supraorbital border deeply excavated to be V, and eyestalk visible dorsally; internal orbital angle with spinules. Both chelipeds stout and equal in size; palm shorter than its height and nearly as long as movable finger; both fingers each with an indistinct blunt tooth at proximal part of cutting edge. Abdomen elongate, with seven segments, first segment being visible in dorsal view. First pleopod rather slender and fringed with sparse longish setae at its external surface.

Material examined. One ovigerous female (2.5×3.5 mm), one female (2.4×3.6 mm), one female infested by a *Sacculina* (3.8×5.2 mm), one young female (1.7×2.7 mm) and one male (1.9×2.9 mm) were collected on Apr. 29, 1979 at Taketomi-jima Island, Yaeyama Group, Ryukyu Islands about 6 m deep. All the specimens (NSMT-Cr 6444-1~5) were collected from one coral block. Four ovigerous females (NSMT-Cr 6546-1, 2, 3.0×4.2 mm, 2.7×3.8 mm; 6547, 3.1×4.8 mm; 6548, 2.8×4.1 mm) were collected on Jul. 1~8, 1976 at Miyahohama, Chichi-jima Island, Ogasawara Islands.

Host. The host corals recorded by the original authors are *Echinopora lamellosa*

(ESPER) [Jap. name: Ryukyu-kikka], *E. gemmacea* LAMARCK, *E. rosularia* (LAMARCK) and *E. tertia* GARDINER, the last two of which may be synonymous with *E. lamellosa* as rightly mentioned by them. The specimens at hand were also collected from *E. lamellosa*.

The opening of pit is circular, and its diameter is a little shorter than one and half times the carapace breadth. The pit is not deep, the largest case of the present specimens is about thrice the carapace length.

Distribution. Hitherto known only from Nhatrang, Viet Nam (FIZE and SERÈNE, 1955, 1957).

Acknowledgements

Mr. Teruo FUKUDA of the Marine Park Reserch Station at Kuroshima Island kindly presented us some interesting specimens for study. Mr. Akio KOJIMA sent us some coral blocks, one of which was represented on plate II. The junior author's cordial thanks are due to Dr. Ryôsuke ISHIKAWA of Tokyo Metropolitan University for giving him opportunity to make this study.

This study is supported in part by the Grants-in-aid (nos. 064206 and 334035) from the Ministry of Education, Science and Culture.

References

- BARNARD, K. H., 1955. Additions to the fauna-list of South African Crustacea and Pycnogonida. *Ann. S. Afr. Mus.*, 43: 1-107.
- BORRADAILE, L. A., 1902. Marine crustaceans. III. The Xanthidae and some other crabs. In GARDINER, J. S., The Fauna and Geography of the Maldive and Laccadive Archipelagoes, (1): 237-271.
- CALMAN, W. T., 1900. On a collection of Brachyura from Torres Straits. *Trans. Linn. Soc. London*, (Zool.), 8: 1-49, pls. 1-3.
- CHILTON, C., 1911. The Crustacea of the Kermadec Islands. *Trans. Proc. N.Z. Inst.*, 43: 544-573.
- EDMONDSON, C. H., 1925. Marine zoology of tropical Central Pacific. Crustacea. *Bull. Bernice P. Bishop Mus.*, (27): 1-62.
- 1933. *Cryptochirus* of the Central Pacific. *Occ. Pap. Bernice P. Bishop Mus.*, 10(5): 1-23.
- FIZE, A. and R. SERÈNE, 1955. Note préliminaire sur quatre espèces nouvelles d'hapalocarcinidés avec quelques remarques au sujet du *Cryptochirus rugosus* EDMONSON. *Bull. Soc. Zool. Fr.*, 80: 379-382.
- and ——— 1957. Les hapalocarcinidés du Viet-Nam. *Mém. Inst. Ocean. Nhatrang*, (10): 1-202, figs. 1-43, pls. 1-18.
- HELLER, C., 1861a. Synopsis der im rothen Meer vorkommenden Crustaceen. *Verh. Zool.-Bot. Ges. Wien*, 11: 1-32.
- 1861b. Beitrage zur Crustaceen-Fauna des rothen Meeres. *Sitz. Math.-Nat. Cl. Akad. Wissen.*, 43: 297-374.
- HENDERSON, J. R., 1906. On a new species of coral-infesting crab taken by the H. I. M. S. 'Investigator' at the Andaman Islands. *Ann. Mag. Nat. Hist.*, (7), 18: 211-219, pl. 8.

- HIRO, F., 1937. Studies on the animals inhabiting reef corals, I. *Hapalocarcinus* and *Cryptochirus*. *Palao Trop. Biol. St. Stud.*, 1: 137-154, pls. 4-6.
- MCCAIN, J. C. and S. L. COLES, 1979. A new species of crab (Brachyura, Hapalocarcinidae) inhabiting pocillopolid corals in Hawaii. *Crustaceana*, 36: 81-89.
- MILNE-EDWARDS, A., 1862. Fauna carcinologique de l'île Bourbon. *Ann. Sci. Nat., Zool.*, (4), 17: 362.
- NOBILI, G., 1907. Ricerche sui crostacei della Polinesia. Decapodi, stomatopodi, anisopodi e isopodi. *Mem. Acad. Sci. Torino*, (2), 57: 351-430, pls. 1-3.
- PAUL'SON, O., 1961 (1875). Studies on Crustacea of the Red Sea with notes regarding other Seas. Part I. Podophthalmata and Edriophthalmata (Cumacea). English translation of the original Russian publication. The Israel Program for Scientific Translations, Jerusalem, pp. 164, pls. 21.
- RATHBUN, M. J., 1937. The oxystomatous and allied crabs of America. *Bull. U. S. Natn. Mus.*, 166: 1-278.
- RICHTERS, F., 1880. Decapoda. In MÖBIUS, K., Beitrage des Meeresfauna der Insel Mauritius und der Seychellen, pp. 139-178, pls. 15-18.
- SAKAI, T., 1976. Crabs of Japan and the Adjacent Seas. Tokyo, Kodansha Co., pp. xxix+773 +461+16, pls. 251.
- SERÈNE, R., 1962. Species of *Cryptochirus* of EDMONDSON 1933 (Hapalocarcinidae). *Pac. Sci.*, 16: 30-41.
- 1966. Note sur la taxonomie et la distribution géographique des Hapalocarcinidae (Decapoda-Brachyura). *Proc. Symp. Crust. Ernakulam*, (1): 395-398.
- SHEN, C. J., 1936. Notes on the family Hapalocarcinidae (coral-infesting crabs) with descriptions of two new species. *Hong Kong Nat., Suppl.*, (5): 21-26, pl. 2.
- UTINOMI, H., 1944. Studies on the animals inhabiting reef corals, III. A revision of the family Hapalocarcinidae (Brachyura), with some remarks on their morphological peculiarities. *Palao Trop. Biol. St. Stud.*, 2: 687-731, pls. 3-5.

Explanation of Plates

Plate II

- Figs. A-C. *Cryptochirus coralliodytes* HELLER. A, B, ovig. ♀ (NSMT-Cr 6702-1). Breadth 4.2 mm, length 6.0 mm. C, ♂ (NSMT-Cr 6703-2). Breadth 2.7 mm, length 4.1 mm.
- Figs. D, E. Entrances (D) and vertical section (E) of pits bored in *Platygyra* sp. Right pit was occupied by *Cryptochirus coralliodytes* HELLER, ovig. ♀ (NSMT-Cr 6704-1), but left pit by *Favicola rugosus* (EDMONDSON), ovig. ♀ (NSMT-Cr 6705-3).

Plate III

- Figs. A-C. *Cryptochirus edmonsoni* FIZE et SERÈNE. A, B, ovig. ♀ (NSMT-Cr 6437-1). Breadth 3.3 mm, length 5.4 mm. C, ♂ (NSMT-Cr 6437-10). Breadth 1.9 mm, length 3.1 mm.
- Figs. D, E. Entrance (D) and vertical section (E) of pit bored in *Psammocora exesa* DANA. The inhabitant is *Cryptochirus edmonsoni* FIZE et SERÈNE, ovig. ♀ (NSMT-Cr 6443-1).

Plate IV

- Figs. A-E. *Cryptochirus trii* FIZE et SERÈNE. A, B, ovig. ♀ (NSMT-Cr 6443-2). Breadth 2.4 mm, length 3.6 mm. C, ♂ (NSMT-Cr 6443-5). Breadth 1.9 mm, length 2.9 mm. D, E, ovig. ♀ (NSMT-Cr 6443-1) staying in pit of *Echinopora lamellosa* (ESPER).

摘 要

ケブカサンゴヤドリガニ属 (*Cryptochirus*) は、紅海から採集されたケブカサンゴヤドリガニ (*C. coralliodytes*) を模式種として、HELLER (1961) により創設された。サンゴヤドリガニ類の中で最もよく知られているサンゴヤドリガニ (*Hapalocarcinus marsupialis*) (1属1種) の雌が、樹枝状サンゴに瘤を作るのに対し、ケブカサンゴヤドリガニ属のカニは雌雄とも主に塊状サンゴに棲管を形成する。このような生態と関連し、サンゴヤドリガニが比較的扁平な形態をもつのに対し、ケブカサンゴヤドリガニ属のカニは歩脚を縮めると円筒形に近い形となり、頭部は下垂して蓋状を呈する。

ケブカサンゴヤドリガニ属に含まれる種として、これまでに11種、3変種が記載された。このうち、5種、1変種は別属へ移され、3種、2変種はその独立性に疑問がある。結局、現段階では、ケブカサンゴヤドリガニ、ミゾケブカサンゴヤドリガニ (新称) (*C. edmonsoni*)、マルミケブカサンゴヤドリガニ (新称) (*C. trii*) の3種がこの属の構成種ということになる。

これら3種はいずれも日本から採集され、寄主となるサンゴの分布域ではまれでないようであり、特に、ケブカサンゴヤドリガニは奄美、沖縄地方などではごく普通に見ることができる。

