Bull. Inst. Zool., Academia Sinica **22**(2): 261-267 (1983)

REPORT ON THE SCYLLARID LOBSTERS (CRUSTACEA : DECAPODA : SCYLLARIDAE) FROM TAIWAN

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(Received March 19, 1983)

Jiuan-Jiuan Hwang and Hsiang-Ping Yu (1983) Report on the scyllarid lobsters (Crustacea : Decapoda : Scyllaridae) from Taiwan. *Bull. Inst. Zool., Academia Sinica* **22**(2): 261-267. From April, 1982 to January, 1983, the authors carried on the studies of systematics and distribution of scyllarid lobsters in Taiwan. Eight species of scyllarid lobsters belonging to five genera were found, four of them including *Parribacus antarcticus, Scyllarus cultifer, S. martensii* and *Scyllarides haanii* are newly recorded.

Since Maki and Tsuchiya (1923) and Chang (1965) reported four species of scyllarid lobsters in Taiwan, namely: *Ibacus ciliatus* (Von Siebold, 1824), *I. novemdentatus* Gibbes, 1850, *Scyllarides squamosus* (H. Milne-Edwards, 1837) and *Thenus orientalis* (Lund, 1793), there are no other studies on scyllarid lobsters in Taiwan by local scholars.

This paper is a survey on the other four species, *Parribacus antarcticus* (Lund, 1793), *Scyllarus cultifer* (Ortmann, 1891), *S. martensii pfeffer*, 1881 and *Scyllarides haanii* (Von Siebold 1841) on the Systematics and the distributional ranges.

The specimens used in this study were collected in neritic warers of Taiwan by dredge net. The total length of body (TL) measures from the anterior extremity of the distal squame of the outer antenna to the end of the telson, and the length of the carapace (CL) measures in the middle line.

SYSTEMATIC ACCOUNTS

Key to the genera of the Scyllaridae from Taiwan

1. The anterior edge of carapace is more or less wider than its posterior edge and in subsquare shape and the lateral edge with incisa.....2
   The anterior edge of carapace is much wider than it posterior edge and in trapezoid shape and the lateral edge has no incisa. Orbits are located on the anterolateral of carapace.....*Thenus*
   The anterior edge of carapace is equal in length with the posterior edge and in rectangular shape.....3
2. The orbits are located near the central part of anterior edge of carapace..*Ibacus*
   The orbits are located between the rostrum and anterolateral of carapace...*Parribacus*
   The end of terminal segment of antenna has incisa.....*Scyllarus*
   The end of terminal segment of antenna has no incisa.....*Scyllarides*

Genus *Ibacus* Leach, 1815

Key to the species of *Ibacus* from Taiwan

1. The lateral edge of carapace is armed with eleven teeth ..... *I. ciliatus*
2. The lateral edge of carapace is armed with seven teeth ..... *novemdentatus*

1. *Ibacus ciliatus* (Von Siebold, 1824)

Fig. 1

Ibacus ciliatus, Doflein, 1902: 643; Balss, 1914: 80; de Han, 1916: 65; Parisi, 1917: 12; Maki and Tsuchiya, 1923: 89; Harada, 1965: 36.

Specimen examined: I male, 115 mm TL and 40 mm CL, December 15, 1982, Ta-chi, I-Lan, Hwang and Yu leg.

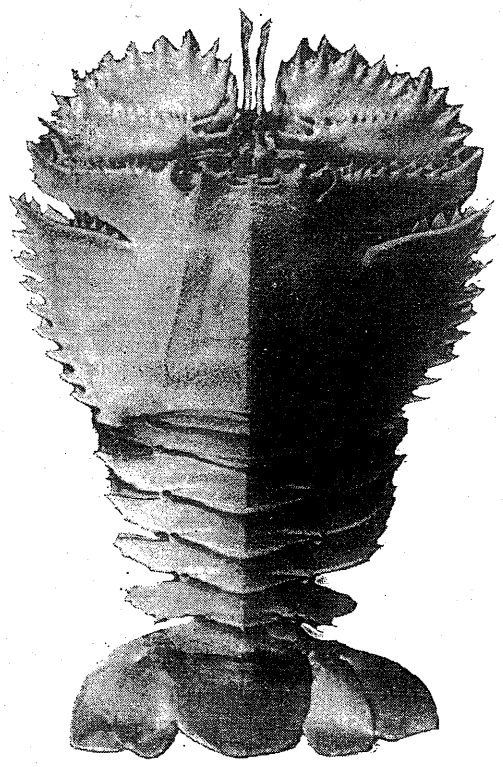

Fig. 1. *Ibacus ciliatus*, 115 mm TL.

Remarks: The species has been reported in detail by many authors, and the present spicmen is in good agreement with their descriptions. The characteristics of this species are as follows: the protuberances on the median carina are not distinct, the posterolateral edge of the carapace is armed with eleven teeth (rarely ten or twelve), the epistome bears a ridgelike process on the ventral surface and two teeth on the anterior margin, and the mandible terminates into three strong spinous processes.

Distribution: This species has been recorded in Japanese, Taiwan and Philippine waters.

2. *Ibacus novemdentatus* Gibbes, 1850

Fig. 2

Ibacus novemdentatus, de Man, 1916: 65; Gee, 1925: 159; Harada, 1965: 36; Harada and Holthuis, 1965: 28.

Ibacus sp. Chang, 1965: 46.

Specimens examined: 2 males, 170 mm, TL and 60 mm, CL, November 20, 1982, Keelung, Hwang and Yu leg.

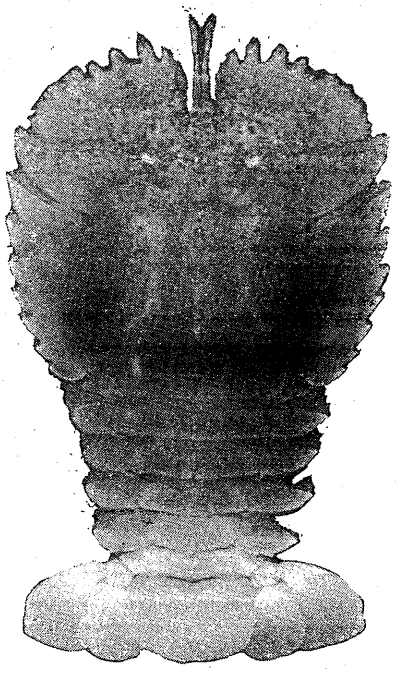

Fig. 2. *Ibacus novemdentatus*, 170 mm TL.

Remarks: This species has been studied in detail by Harada and Holthuis (1965). The general features of this species are very close to *Ibacus ciliatus* (von Seibold, 1824), but can be distinguished by the following characteristics:

1. The median carina on the carapace bears four distinct protuberances on its anterior half.
2. The posterolateral edge of the carapace is furnished with seven teeth (rarely eight or nine).
3. The epistome is armed on its ventral surface with three sharp teeth.
4. The mandible terminates into a row of small teeth and anterior large tooth.

Distaibution: This species distributes in Japanese, Hongkong and Taiwan waters.

Genus *Parribacus* Dana, 1852

3. *Parribacus antarcticus* (Lund, 1973)

Fig. 3

Parribacus antarcticus, Rathbun, 1906: 896; Balss, 1914: 81; Harada, 1965: 37.

Paribacus ursus major, de Man, 1916: 93; Parisi, 1917: 13.

Specimen examined: 1 female, 155 mm TL and 45 mm CL, November 20, 1982, Keelung, Hwang and Yu Leg.

Distribution: The species widely distributes in the Indo Pacific from the Hawaii Islands, Japan, Australia to Mauritius and Reunion.

Genus *Thenus* Leach, 1815

4. *Thenus orientalis* (Lund, 1793)

Fig. 4

Thenus orientalis, Bate, 1888: 66; de Man, 1888: 261; Nobili, 1906: 55; Balss, 1914: 80; Stebbing, 1915: 65; de Man, 1916: 66; Maki and Tsuchiya, 1923: 88; Chang, 1965: 47.

Specimens examined: 1 male, 75 mm TL, 30 mm CL, and 1 female, 205 mm TL, and 75 mm CL, December 28, 1982, Shin-Ta, Kaohsiung, Hwang and Yu leg.

Fig. 3. *Parribacus antarcticus*, 155 mm TL.

Fig. 4. *Thenus orientalis*, 205 mm TL.

Remarks: This species is characterized by the compressed carapace and extremely broad in the front region, the orbit is located on the anterolateral angle of the carapace, the lateral margin and furnished with three dentates, and the median carina on the carapace bears three distinct protuberances on its anterior half.

Distribution: The species distributes in Indian Ocean, Indian Archipelago, Persian Gulf and Red Sea.

Genus *Scyllarus* Fabricius, 1775

Key to the species of *Scyllarus* from Taiwan

1. The median carina of carapace bears two distinct protuberances on its anterior half ..... *Scyllarus cultifer*
2. The median carina of carapace bears no protuberances on its anterior half..... ..... *S. martensii*

5. *Scyllarus cultifer* (Ortmann, 1891)

Fig. 5

Scyllarus cultiferu, Balss, 1914: 80; de Man, 1916: 64; Parisi, 1917: 9; Yokoya, 1933: 46; Harada, 1965: 36.

Specimen examined: 1♂, 85 mm TL and 28 mm CL, October 5, 1982, Keelung, Liu leg.

Remarks: This specise can be easily distinguished from other species of the genus by half of having two distinct protuberances on its anterior the median carina on the carapace.

Distribution: The species has a wide distribution in the Indo-west Pacific region ranging from East Africa to the Malay Archipelago and Japan.

6. *Scyllarus martensii* Pfeffer, 1881

Fig. 6

Scyllarus martensii, Rathbun, 1906: 896; Balss. 1914: 79; de Man, 1916: 84; Estampador, 1937: 496; Haradă, 1965: 36.

Specimens examined: 3 males and 4 ovig. females, 70 mm–80 mm TL and 25 mm–30 mm CL, December 28, 1982, Shin-Ta, Kaohsiung, Hwang and Yu leg.

Fig. 5. *Scyllarus cultifer*, 85 mm TL.

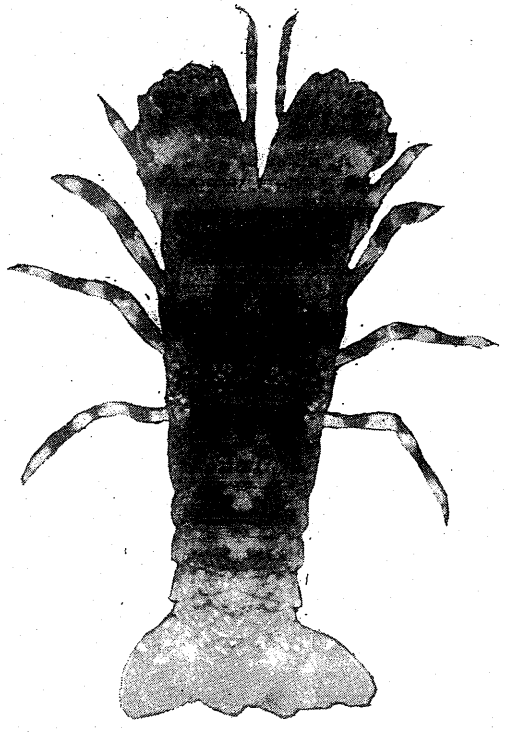

Fig. 6. *Scyllarus martensii*, 70 mm TL.

Remarks: This species is closely related to *Scyllarus gibberosus* (Ortmann, 1891) but can be distinguished by the third abdominal tergum having more prominent than the rest.

Distribution: The species has been reported from Japan, the Philippines and Hawaii Islands.

Genus *Scyllarides* Gill, 1898

Key to the species of *Scyllarides* from Taiwan

1. From the second to the fourth therga of abdomen bear no distinct protuberance. .....*Scyllarides squamosus*
2. From the second to the fourth terga of abdomen bear protuberance .....*S. haanii*

Scyllarides squamosus (H. Milne-Edwards, 1873)

Fig. 7

Fig. 7. *Scyllarides squamosus*, 190mm TL.

Scyllarides squamosus, Rathbun, 1906: 896; Balss, 1914: 79; de Man, 1916: 65; Parisi, 1917: 10; Maki and Tsuchiya, 1923: 91; Harada, 1961: 192; Chang, 1965: 44; Harada, 1965: 36.

Specimens examined: 2 females, 190 mm TL and 70 mm CL, November 20, 1982, Keelung, Hwang and Yu leg.

Distaibution: The species widely distributes in the warm waters of the Indo-west Pacific regions.

8. *Scyllarides haanii* (von Siebold, 1841)

Fig. 8

Scyllarides Haanii de Man, 1916: 65; Parisi, 1917: 10; Harada, 1965: 36.

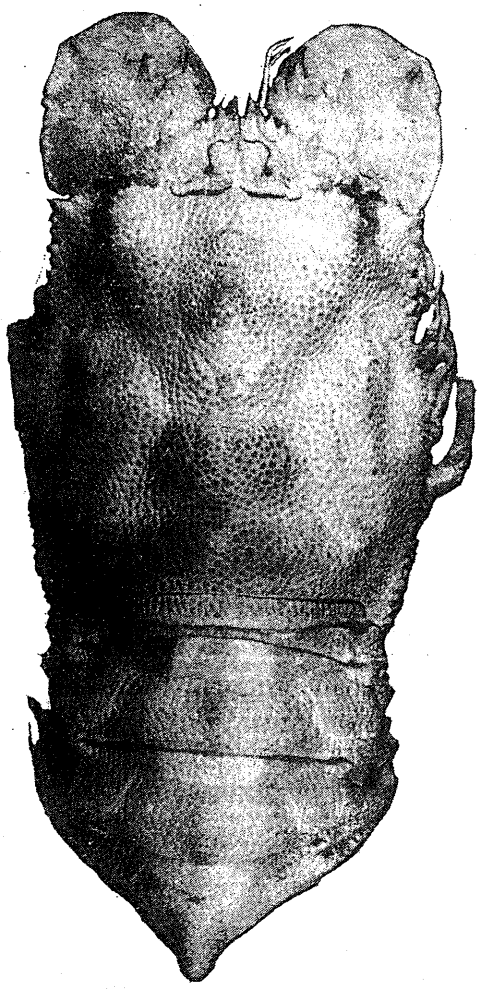

Fig. 8. *Scyllarides hanii*, 505 mm TL.

Specimen examined: 1 female, 505 mm TL and 150 mm CL, January 10, 1983, Su-Aou, I-Lan, Hwang and Yu leg.

Remarks: This species is closely related to *Scyllarides squamosus* (H. Milne-Edwards, 1837) but can be distinguished by having a larger size of the body and bearing distinct protuberances on the second to fourth the fecond to fourth terga.

Rathbun (1906) considered this species probably a variety of *S. squamosus.*

Distribution: The species widely distributes in Indo-west Pacific reagions.

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臺灣之扇蝦科甲殼類報告

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臺灣之扇蝦科分類研究，過去，牧、土屋 (1923) 及張 (1965) 曾報告 *Ibacus ciliatus* (Von Siebold, 1824), *Ibacus novemdentatus* Gibbes, 1850, *Scyllarides squamosus* (H. Milne-Edwards, 1837) 及 *Thenus orientalis* (Lund, 1793) 等三屬四種。

本報告除了上述四種以外，另增列 *Parribacus antarcticus* (Lund, 1793), *Scyllarus cultifer* (Ortmann, 1891), *S. martensii* Pfeffer, 1881 及 *Scyllarides haanii* (Von Siebold, 1841) 等三屬四種。使得臺灣之扇蝦至目前共有五屬八種。