A Report on Four Unrecorded Anomuran Species (Crustacea, Decapeda) from Korea

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韓國 未記錄 異尾類(甲殼綱 十脚目) 4種에 關한 報告

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摘 要

著者들은 1969年부터 1975年 사이에 濟州島 및 南海에서 채집된 異尾類標本 중에서 Uroptychus scandens Benedict, Pomatocheles jeffreysii Miers, Paguristes seminudus Stimpson, Cryptolithodes expansus Miers 등 4種이韓國 未記錄이었으므로 이들을 記載 報告한다.

Among the specimens collected from Jeju(Quelpart) Island and South Sea of Korea, 4 anomuran species (*Uroptychus scandens* Benedict, *Pomatocheles jeffreysii* Miers, Inguistes seminatus Stinipson and Cryptolithodes expansus Miers) are proved to the unrecorded ones from Korea. The authors are going to describe these four species.

The authors are deeply grateful to Dr. Sadayoshi Miyake in Japan for his kindness to help us to identify *Paguristes seminudus* and *Pomatocheles jeffreysii*, and also to Dr. B. J. Rho in Ewha Womans University who gave us the specimen of *Cryptolithodes expansus*.

Family Chirostylidae

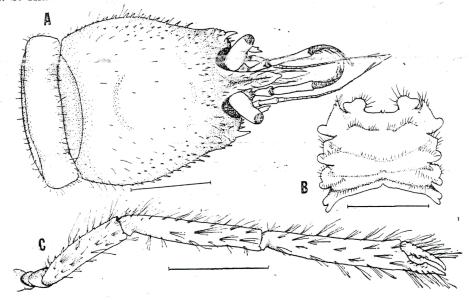
1. Uroptychus scandens Benedict, 1903

Korean name: Badajoreum-saeuajaebi(바다조름 새우아재비) (Text-fig. 1.)

Uroptychus scandens Benedict, 1903, p.298 (cited from Balss, 1913).—: Balss, 1913, pp. 23, 27, figs. 19, 20.—: Yokoya, 1933, p. 68.—: Miyake, 1967, p. 634, fig. 1040.—: Miyake & Baba, 1967, p.227, fig. 2.

Materials examined

11 合合 (Length of carapace=cl: 2.4mm-3.0mm excluding rostrum, breadth of carapace=cb: 2.7mm-3.5mm), 8 早早 (all ovig.) (cl: 2.8mm-3.4mm excluding rostrum, cb: 3.5mm-4.4mm) from Seogwipo, Jeju Island in February 8, 1971 by H. S. Kim.



Text-fig. 1. Uroptychus scandens Benedict, male. A, Anterior part of the body; B, Sternum, C, Right cheliped. Scale lines: A and B, 2mm; C, 5mm.

Description

The breadth of carapace is broader than the length excluding rostrum. The surface of carapace ornamented with fine spinules and hairs. Lateral margin armed with many spines and hepatic region extruded in both directions. Gastric regions are slightly elevated. Rostrum is large and triangular. Its margin is hairy and minutely serrated. Anterior lower part of the pterigostomian region is spinous. Thoracic sternum is broader than the length.

The second abdominal segment is quadrate. The third through sixth segment are rounded and elongated, and their margins provided with long hairs. The telson is small and asymmetrical, surrounded by serrated margin with long hairs.

The chelipeds are unequal, long and slender with hair tufts. Ambulatory legs are hairy, dactyli are ornamented with spines and carpi are the shortest and curved downward.

Eye-stalks are comparatively slender, slightly narrower in the middle. The cornea is brown or brownish yellow in specimen preserved in alcohol.

The antennular peduncle reaches much beyond the antennal peduncle and stouter than that of antenna. Commensal with *Leioptilus fimbriatus*, a kind of sea pen.

The color of specimen is brownish yellow after preservation in alcohol.

Distribution

Korea(Jeju Island), Japan (Yagoshima bay, Sagami bay, East of Bosyu, Suruga Bay, Bungo Strait), East China Sea, Kei Is.

Family Pylochelidae

2. Pomatocheles jeffreysii Miers, 1879

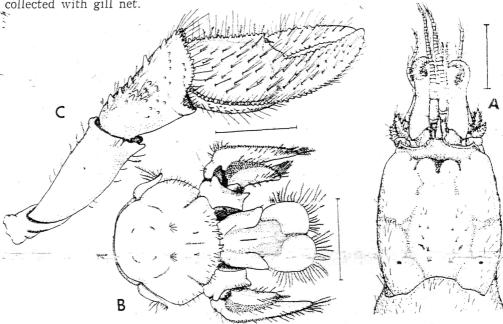
Korean name: Bbuljogae-jibge(뿔조개집계) (Text-fig. 2.)

Pomatocheles jeffreysii Miers, 1879, pp. 49-51, pl. 3, fig. 2.

Mixtopagurus jef freysii: Balss, 1913, pp. 35-36, text-fig. 25, pl. 2, fig. 1.—: Yokoya, 1933, p. 71.

Materials examined

1♀ (cl: 8.0mm, cb: 3.8mm), 1♂ (cl: 7.9mm, cb: 3.6mm) from Beomseom Islet off Seogwipo, Jeju Inland in February 7, 1971 by H. S. Kim. All specimens were collected with gill net.



Text-fig. 2. Pomatocheles jeffreysii Miers, male. A, Anterior part of the body; B, Telson; C, Right cheliped. Scale lines: 2mm.

Description

The almost naked animal is elongated and slender. The anterior portion of carapace is calcified and the posterior portion is membranous. The former can be distinguished from the latter by the postfrontal and lateral suture. The hairs scattered here and there on the dorsal surface of the carapace. The apex of the rostrum is rounded, minutely serrated and hairy.

The first and the last segment of abdomen are small, the second segment and the

following four segments are subequal.

The telson, and the endopodite and the exopodite of the sixth abdominal appendage furnished with branched hairs. The ophthalmic scale is small, eye-stalk is stout and naked. A transparent line runs from cornea to the base on the upper outer surface of eye-stalk.

Basipodite and scaphocerite of the antenna armed with fine acute spines.

Chelipeds are stout, outer surface of the palm is flat and ornamented with hairs, the margins of the palm serrated, inner margin straight, and outer margin is rounded.

The outer surface of the carpus and outer margin of the merus of cheliped armed with spines.

The ambulatory legs are long and slender, their outer margins of the meri and the carpi armed with spines. The distal end of dactyli of the fourth and fifth legs ornamented with many fine spinules.

The animals are inhabiting in scaphopod shells.

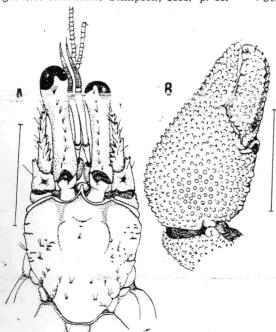
Distribution

Korea (off Seogwipo, Jeju Island), Japan (Honshu: West of Sagami Bay and West of Oki Is., Kyushu: Near Nagasaki and Bungo Strait).

Family Diogenidae

3. Paguristes seminudus Stimpson, 1858

Korean name: Balgasungi-ginnunjibge(발가숭이 진눈집게) (Text-fig 3.) Paguristes seminudus Stimpson, 1858, p. 85.——: Stimpson, 1907, p. 213.



Text-fig. 3.

Faguristes seminudus Stimpson, male. A, Anterior part of the body; B, Left chela. Scale lines: 5mm.

Material examined

 $1 \odot$ (cl. 11.4mm, cb. 7.9mm) from Seogwipo, Jeju Island in December 12, 1969. by H. S. Kim.

Description

Carapace is almost naked. The anterior region of the carapace is punctuated on the dorsal surface and armed with minute spines. The punctuated points are filled with hair tufts. Posterior region of the carapace is swollen a little and wrinkled with rare tufts of hairs.

Rostrum is acute and slender. Orbital and frontal margin ornamented with thick ridge. The eye-stalks are unequal, long and stout, with a row of hair tufts on the dorsal surface. Ophthalmic scales are slender and sharp like the spines. The scaphocerites of the antennae are very large and armed with a few spines.

The left cheliped is larger than the right one in our specimen. Outer surface of the palm and the merus ornamented with spines. Movable and immovable finger closed without gap. The first and the second ambulatory legs are long and slender, the carpi and propodi of them armed with spines on upper margin. The third ambulatory legs are much shorter than the first and second ones.

Telson is asymmetrical, left lobe is more expanded.

Abdomen is brownish yellow while carapace, cheliped and ambulatory legs are yellowish white in specimen preserved in alcohol.

Distribution

Korea (Sogwipo, Jeju Island), Japan (Kagosima Bay).

Family Lithodidae

4. Cryptolithodes expansus Miers, 1879

Korean name: Nalgae-eorige(날개어리케) (Text-fig. 4.)

Cryptolithodes expansus Miers, 1879, p. 47.—: Rathbun, 1902, pp. 32-33, fig. 1.—: Bales, 1913, pp. 73-80, fig. 55, pl. 1, figs. 6, 6--: Yokoya, 1928, p. 759.—: Maka rov, 1938, pp. 287-289 (English, pp. 271-273), figs. 112, 113.—: Yamaguchi & Yamada, 1955, p. 133.—: Miyake, 1957, p. 91; 1967, p. 650, fig. 1107.

Material examined

1 (cl. 4.55mm, excluding rostrum, cb. 9.24mm) from near Oryug-do Islet (off Haeundae, Busan) in April 25, 1975 by B. J. Rho.

Description

The transversely oval carapace is areolate distinctly with the peripheral winglike expansions. The right part of the carapace is broader than the left. The tuberculated surface of the carapace punctuated minutely. The punctuated parts are filled with serae which have mushroom like end. Its gastric region and cardiac region are highly extruded. The margin of the carapace ornamented with tubercles. The rostrum of our specimen is broken on its right side end. The right cheliped

Text-fig. 4. Cryptolithodes expansus Miers, maic. A, Antennae, antennules and eyes; B, Abdomen; C, Right chela. Scale lines: A, 5mm; B and C, 10mm.

is much larger than the left. Its outer surface ornamented with tubercles. Small gap is left at the base of fingers when closed.

The flat ambulatory legs are naked and slender. The meri of them are the longest segment and their posterior surface grooved longitudinally.

The second abdominal segment is devided into two lobes which are characteristically broad and hollowed in the middle parts.

Scaphocerite of the antenna expanded broadly. Eye-stalk slitely curved upward, upper surface grooved, base of inner margin angled, but its outer part rounded.

Distribution

Korea (Busan), Japan (Hakodate, Mutsu Bay, Goast of Sanriku, Toyama Bay).

REFERENCES

Balss, H., 1913. Ostasiatische Decapoden I. Die Galatheiden und Paguriden. Abh. Math. Kl. K. Bayer Akad. Wiss., München, II, Suppl. 9: 1-85, pls. 1-2.

Makarov, V.V., 1938. Anomura. in: A.A. Shtakelberg (ed.), Fauna of the USSR, Zoological Institute of the Academy of Science of the USSR. Crustacea 10 (3), Anomura, 1-289, pls. 1-5. (English translation, published for the National Science Foundation, Washington, D. C. by the Israel Program for Scientific Translations, Jerusalem, 1962, 1-283).

Miers, E.J., 1879. On a collection of Crustacea made by Capt. H. C. St. John. R.N. in the Corean and Japanese Seas. *Proc. Zool. Soc. London*, 18-61, pls. 1-3.

Miyake, S., 1957. Anomuran decapod fauna of Hokkaido, Japan. J. Fac. Sci. Hokkaido Univ., Ser. 4, Zoology, 13 (1-4): 85-92.

- Miyake, S., 1967. Anomura. *in:* New Illustrated Encyclopedia of the Fauna of Japan, vol. 2, 2nd edition, 630-652. Hokuryu-kan Publishing Co. LTD (in Japanese).
- Miyake, S. & K. Baba, 1967. Galatheids of the East China Sea (Chirostylidae and Galatheidae, Decapoda, Crustacea). J. Fac. Agric., Kyushu Univ., 14 (2): 225—246.
- Rathbun, M.J., 1902. Japanese stalk-eyed crustaceans. Proc. U.S. Nat. Mus., 26: 23-55.
- Stimpson, W., 1858. Prodromus descriptionis animalium evertebratorum, quae in expeditione ad Oceanum Pacificum Septentrionalem, a Republica Federata missa, Cadwaldaro Ringgold et Johanne Rodgers ducibus, observavit et descripsit. VII. Proc. Acad. Nat. Sci. Philadelphia, 225-252.
- Stimpson, W., 1907. Report on the Crustacea (Brachyura and Anomura) collected by the North Pacific Exploring Expedition, 1853-1856. *Smithsonian Miscellaneous Collections*, 49:1-240, pls. 1-26.
- Yamaguchi, E. & M. Yamada, 1955. Marine invertebrates of North Japan Hokkai-kyoik-uhyoronsha, Sapporo, 1-189. (in Japanese).
- Yokoya, Y., 1928. Report of the biological survey of Mutsu Bay. 10. Brachyura and crabshaped Anomura. Sci. Rep. Tohoku Imp. Univ., Ser. 4, Biology, Sendai, Japan, 3(4): 757-784.
- Yokoya, Y., 1933. On the distribution of decapod crustaceans inhabiting the continental shelf around Japan, chiefly based upon the materials collected by the S. S. Sôyô-Maru, during the years 1923-1930. J. Coll. Agric. In p. Univ. Tokyo, 12 (1): 1-226.