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Title	The Fauna of Akkeshi Bay : XV. Gephyrea (With 1 Plate)
Author(s)	OKUDA, Shiro
Citation	北海道帝國大學理學部紀要, 9(2), 221-224
Issue Date	1946-05
Doc URL	https://hdl.handle.net/2115/27056
Type	departmental bulletin paper
File Information	9(2)_P221-224.pdf



The Fauna of Akkeshi Bay

XV. Gephyrea¹⁾

By

Shiro Okuda

Akkeshi Marine Biological Laboratory

(With 1 Plate)

The material of the Gephyreans here dealt with dates mainly from the Zoological Survey of Akkeshi Bay carried out in the summer 1943. An unique specimen of Priapulids collected in 1934 and already recorded in the same year was also treated in the present paper. The Gephyreans here considered were collected from littoral zone, with the exception of *Phascolosoma zenibakense* which was found in a bottom sampler.

The following Gephyreans are now known from Akkeshi Bay.

Priapulidae

Priapulus caudatus (Lamarek)

Echiuridae

Echiurus echiurus (Pallas)

Sipunculidae

Physcosoma scolops (Selenka et De Man)

Phascolosoma zenibakense Ikeda

Dendrostoma hexadactylum Satô

It is noticeable that the present locality of *Priapulus caudatus* is considerably more southern than these hitherto known in Europe.

PRIAPULIDAE

Priapulus caudatus (Lamarek)

(Pl. XXIX, A)

Priapulus caudatus; Okuda,²⁾ 1934, p. 115, figs. 1-3.

1) Contributions to the Akkeshi Marine Biological Laboratory, No. 43

2) Okuda, S. 1934. Occurrence of *Priapulus caudatus* in Northern Japan. Proc. Imp. Acad., vol. 10, no. 2.

Only one specimen was taken from soft muddy ground among rocks in shallow waters at depth about 1 m. Body length 5.9 cm except the caudal appendage measuring 2.3 cm. The species is circumpolar, widely distributed in the northern part of the Atlantic. The species is generally found at depths between 75 and 100 m, seldom at depths greater than 200 m.

ECHIURIDAE

Echiurus echiurus (Pallas)

(Pl. XXIX, B)

Echiurus pallasii; Ikeda,³⁾ 1924, pl. 39, fig. 12.

Several specimens of this species were collected on soft bottom consisting of ooze, mud, clay etc. in *Zostera*-region. The largest specimen measures 94 mm long and 20 mm wide at the broadest portion, while the proboscis or introvert is 14 mm long. The number of the anal hooks seems to be varied to some extent, but the specimens at my disposal bear generally 7 anal hooks in the anterior row and 8 in the posterior row. The specimens examined by Ikeda were obtained from the stomach of a cod caught somewhere in the Okhotsk Sea. According to Wesenberg-Lund⁴⁾ (1939) the species serves as food for flounders, as it has often been found in stomachs of these fishes. The species is widely distributed in the Arctic, Subarctic and boreal regions of the northern hemisphere.

3) Ikeda, I. 1924. Further notes on the Gephyrea of Japan, with descriptions of some new species from the Marshall, Caroline and Palau Islands. Jap. Jour. Zool., vol. 1, no. 2.

4) Wesenberg-Lund, E. 1939. Gephyreans from Swedish waters in the museum of Natural History of Gothenburg. Göteborgs Kung. Vetenskaps- och Vitterhets-Samhälles Hand. ser. B, vol. 6, no. 6.

SIPUNCULIDAE

Physcosoma scolops (Selenka et De Man)

(Pl. XXIX, C)

Physcosoma scolops; Satô.⁵⁾ 1930, p. 11, Pl. 11, figs. 9-10, text-fig. 3.

The species bears a fairly close resemblance to *Physcosoma japonicum*, and I have identified the specimens with the present species with some doubt. The body is 30-50 mm in total length. The introvert is about one-third the entire body. The tentacles are 25-30 in number. The hooks on the introvert are arranged in more than 30 closed rings at the anterior end. The transparent canal-like streak of the hook seems to be variable. The intestinal coil consists of about 15 twists. The characteristic marking on the introvert can not always be detected. The segmental organs are represented by large tubular bodies, dark orange, and the external openings of the organs are situated at the same level with the anus. Two eye spots are visible on the brain. The longitudinal muscle layer is divided into about 23-30 separate bands, several of which are anastomosed. The worm is rather commonly found embedded in the muddy or gravelly bottom between the *Zostera*-region.

Phascolosoma zenibakense Ikeda

(Pl. XXIX, D)

Phascolosoma zenibakense; Ikeda, 1924, p. 29, Pl. 1, fig. 1.

Three specimens were collected from the muddy bottom by dredging at about 10 m depth. The long, slender introverts are entirely protruded from the trunk when the worms are thrown into the preserved fluid. The body is large, well elongated. The trunk of the larger specimen measures about 150 mm long and 8 mm wide at the broadest portion. The introvert is about 50 mm in length. The filamentous tentacles are arranged in about 20 regular radial rows. No hooks are present. As Satô (1924) rightly pointed out for in his

5) Satô, H. 1930. Report of the Biological Survey of Mutsu Bay. 15. Sipunculoidea. Sci. Rep. Tohoku Imp. Univ., vol. 5, no. 1.

specimens the present specimens have also the diverticulum upon the rectum. The presence of the eye-spots on the brain was rather indistinct. The intestinal coil has more than 25 twists. The Polian tubules on the Polian canal are distinctly made out. The species was first recorded by Ikeda from Zenibako, western coast of Hokkaido, and recently has been also known to occur in the northern Pacific coast of Japan.

Dendrostoma hexadactylum Satô

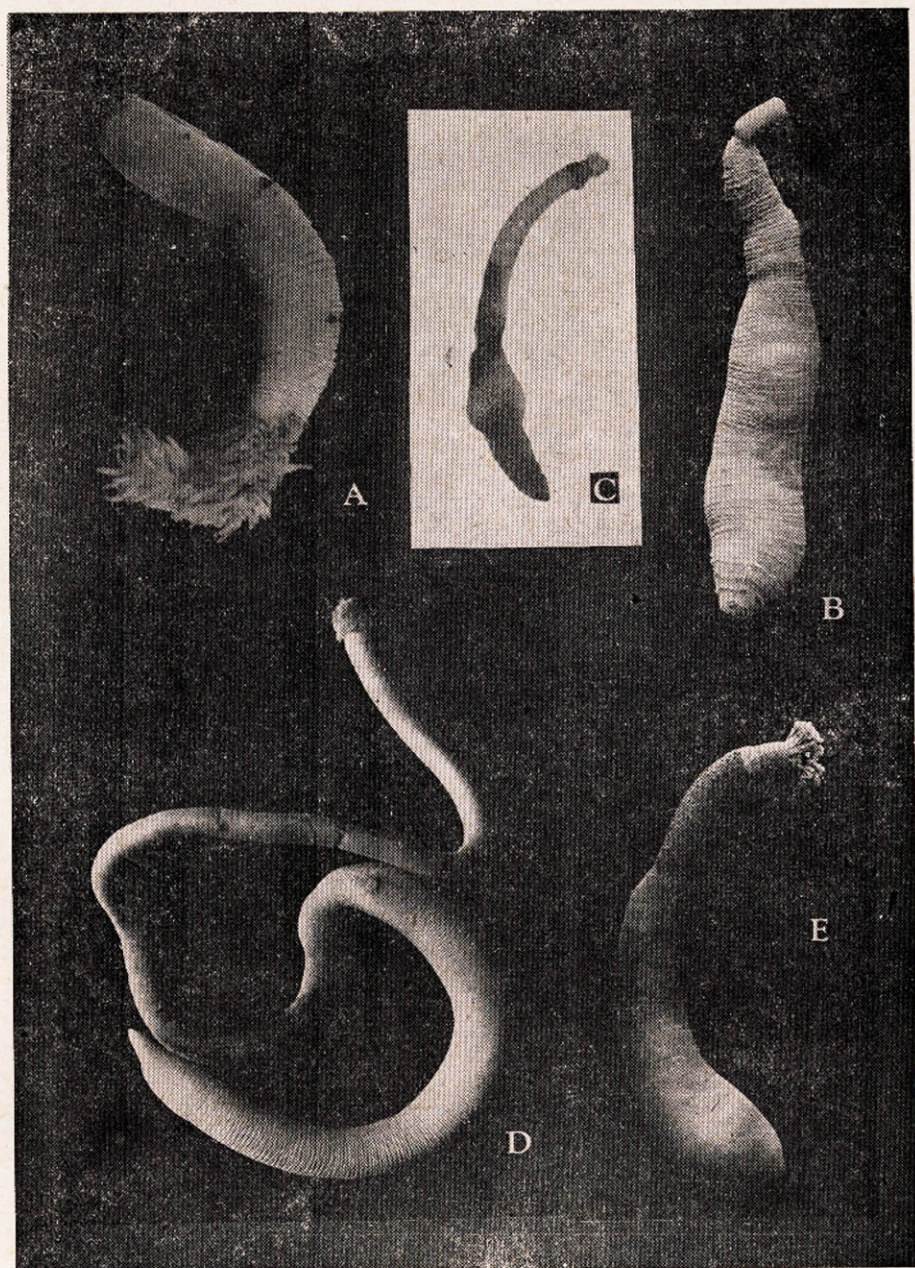
(Pl. XXIX, E)

Dendrostoma hexadactylum; Satô, 1930, p. 28, Pl. 4, figs. 20-24; text-figs. 13-15.

The species is mainly distinguished from the closely allied species, *D. blandum* by the feature of the tentacular crown with six main tentacular stems instead of four as shown in the latter species. The trunk measures 40-45 mm long and 15 mm wide at the posterior swollen portion, while the introvert is about 20 mm by 6 mm. The species is fairly common on the bottom consisting of mud and gravel in shallow waters. The species is previously reported from the northern Pacific coast of Honshu.

Explanation of Plate XXIX

- Fig. A. *Priapulus caudatus* (Lamarck). $\times 1.2$.
Fig. B. *Echiurus echiurus* (Pallas). $\times 1$.
Fig. C. *Physcosoma scolops* (Selenka et De Man). $\times 1.5$.
Fig. D. *Phascolosoma zenibakense* Ikeda. $\times 1.5$.
Fig. E. *Dendrostoma hexadactylum* Satô. $\times 1.5$.
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S. Okuda : Gephyrea of Akkeshi Bay