63. *On a Fresh-water Nemertean from Hokkaido.*¹⁾

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In 1913 I. Ikeda reported on a fresh-water nemertean from Hiroshima, Japan proper, under the name of *Stichostemma grandis*. Okugawa²⁾ (1932) stated that the worm is abundantly found in rice-fields almost all over Japan. Miyashita³⁾ (1932) gave a brief ecological note on the worm occurring in the vicinity of Tokyo in 1931. In rice-fields and ponds, especially in chalybeate water, about the city of Sapporo, Hokkaido, a fresh-water nemertean belonging to the genus *Prostoma* is commonly found from April to November. The temperature of water in which the worm lives was approximately 15°–30°C and the pH was always 7.

The worm, when fully extended, is 12–25 mm long and 0.5–0.7 mm wide. The body is covered with a layer of epithelium consisting of ciliated cells and glandular cells of two types. The head is demarcated from the posterior part of the body. The number of eyes is exceedingly variable, but the normal seems to be six, arranged in three pairs. Among the specimens observed by me about 70% were provided with 10–20 eye-spots distributed in the head region. In small specimens the number of eyes is generally four. In the head region are found a pair of cephalic grooves and ciliated pits which are situated between the first and second pairs of eyes. Behind the third pair of eyes is found a constriction. Frontal organs are situated at the tip of the head. Sensory spines are present at the anterior end of the head, in the anal region, and on the lateral side of the body. The brain located a little behind the third pair of eyes, consists of two ganglion-masses connected by a commissure. Cephalic glands extend posteriorly, but

1) Contribution No. 47 from the Zoological Institute, Faculty of Science, Hokkaido Imperial University.

2) Dobutsugaku Zasshi, vol. 44, p. 70.

3) Dobutsugaku Zasshi, vol. 44, p. 328.

barely reach the brain. Gonads number more than 70 pairs in well-developed specimens, situated alternately in position with the caeca of the intestine. The male gonads ripen a little earlier than the female. Eggs are generally found in worms of 12–25 mm length, but rarely also in young specimens 5–7 mm in length. Colour of the worm is generally yellowish red or flesh-colour, but occasionally white, green-yellow, pale-yellow, dirty yellow brown, red-brown or dark-red.

The worm is closely related to *Prostoma graecense* found in Europe and also to *Prostoma grandis* (Ikeda) in Japan proper. The main differences in these three forms are given in the following table:

A

B

Prostoma graecense ;

A. Anterior portion.

B. Posterior portion.

	Maximum body length	Colour.	Sensory spines.	Eyes.	Cephalic gland.	Number of gonads.	Hermaphroditism.
<i>P. graecense</i>	12 mm.	yellowish-brown or reddish- brown.	present.	variable (normal 6).	reaching the brain.	about 35 pairs.	male and female elements ripen simultaneously.
<i>Prostoma</i> of Sapporo	25 mm.	yellowish red or reddish- brown.	present.	variable (normal 6).	barely reaching the brain.	about 60 pairs.	male and female elements ripen almost simul- taneously.
<i>P. grandis</i>	35 mm.	bright yellow- ish red.	absent.	6, 5, 4.	not reaching beyond the 2nd pair of eyes.	about 80 pairs.	male and female elements ripen simultaneously.

As regards these morphological points shown in the table, the nemertean of Sapporo stands in an intermediate position between *P. graecense* and *P. grandis*. Therefore the writer was at first inclined to reduce these three forms to the European species, *P. graecense*. However, according to Ikeda *P. grandis* is not furnished with sensory spines at all. Such being the case, the species should be for the present time kept separate from the European and the Hokkaido worms. Though somewhat different in body length, relative length of the cephalic gland and number of gonads, the nemertean of Sapporo is probably referable to the European species, *P. graecense*.

In conclusion the writer tenders cordial thanks to Professor Tohru Uchida for the preparation of the paper. Under him further studies of the life-habits of the species are now being made.