

RESEARCH NOTE***Heterosentis plotosi* (Acanthocephala: Arhythmacanthidae)
from Japanese otter**

The Japanese otter, *Lutra lutra whiteleyi* GRAY, is now just about extinct and an extremely small number of the animals inhabit the south-western coastal region of Shikoku Island, Japan. An adult female otter was found dead on the seashore near Nakamura City, Kôchi Prefecture, in March, 1972, from which a total of seven individuals of *Heterosentis plotosi* YAMAGUTI (Acanthocephala: Arhythmacanthidae) were detected in the small intestine. These worms, two mature and one immature males, and two mature and two immature females, were severely degenerated because the host animal had been placed in the refrigerator for about a month, so that

only one mature male and one immature female worms were barely good for examination. Main dimensions of the parasites are indicated in Table 1.

H. plotosi was first described by YAMAGUTI (1935) on the basis of a single adult male from the small intestine of the shore-fish *Plotosus anguillaris* LACÉPÈDE from the Pacific coast of Wakayama Prefecture. Later, FUKUI and MORISITA (1936) and YAMAGUTI (1939) collected many gravid females of this parasite from the same host fish from Kanagawa and Mie, and also Mie prefectures, respectively. Only a shore-fish *Plotosus anguillaris* has hitherto served as the natural final host.

Table 1. Dimensions of *Heterosentis plotosi* YAMAGUTI, 1935

Host	YAMAGUTI (1935 & 1939)		Present author	
	<i>Plotosus anguillaris</i>		<i>Lutra lutra whiteleyi</i>	
	mature male	mature female	mature male	immature female
Body	2.47×0.57 mm	ca. 4×0.75	3.0×0.57	2.94×0.54
Proboscis	0.18×0.125 mm	0.21×0.13	0.20×0.11	0.26×0.13
Anterior larger hooks	6 spiral rows of 5 each		6 spiral rows of 5 each	
	36-72 μ long	50-87 μ	45-70 μ	45-78 μ
Posterior smaller hooks	14 longitudinal rows of 3-4 each, basal ones paired in each row	14 longitudinal rows of 4-5 each, basal ones obliquely paired in 3 rows	14 longitudinal rows of 3-5 each, basal ones obliquely paired in 9 rows	14 longitudinal rows of 4-5 each, basal ones obliquely paired in 8 rows
	9-18 μ long	12-20 μ	9-19 μ	7-20 μ
Proboscis sheath	0.38×0.12 mm	0.33×0.1	0.23×0.11	0.22×0.11
Testes	0.37-0.4 mm long		0.54-0.55	
Cement glands	6 in number		6	
Floating ovaries	up to 0.15 mm long		up to 0.14	
Outer egg shell	51-60×13-15 μ			

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There may be two infection routes of this parasite to the otter: (1) The otter ingests unknown intermediate host (presumably small crustacean) which contains *H. plotosi* larvae. (2) Accidental infection from ingesting the shore-fish such as *P. anguillaris* which is the natural final host of *H. plotosi*. Stomach content of the present otter revealed many pieces of broken fish-bones. This indicates that the latter infection route is more plausible than the former route. However, IMAIZUMI (1973) observed the otter was polyphagous and was fond of ingesting not only sea fishes but also prawns, sweet potatoes and corn during the night in the coastal regions of Kôchi Prefecture. No conclusion of the infection route to the otter may be formed at the present time.

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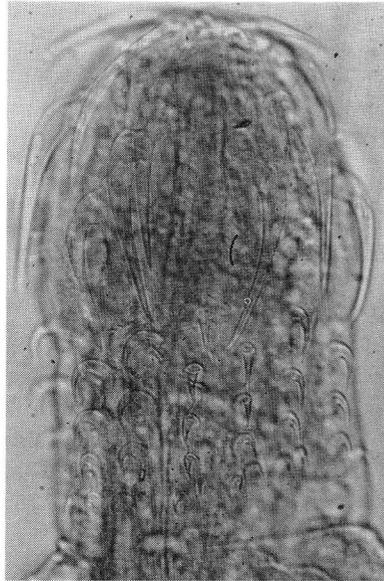


Fig. 1. Proboscis of *Heterosentis plotosi* from Japanese otter