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INCIDENCE OF A CYMATHOAN PARASITE ON WHITE SARDINE

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During investigations on the stocks of white sardine, *Escualosa thoracata* from the east and west coasts of India, a large number of fishes were found infected with an unidentified Cymathoan parasite. The place of infection was usually under the gill covers and rarely in the pharynx. The incidence of infection was 66% in a sample from Bombay followed by 18.9% from Gollapalem, Krishna District, Andhra Pradesh (Table 1). Samples from Goa, Mangalore, Calicut and Tuticorin showed a lower percentage of incidence in infection, although the samples were collected nearly for four years, more or less during the same season.

Nair (1951) reported the occurrence of an unidentified cymathoan parasite under the

gill covers of white sardine. Tiwari (1953) described *Agarna malayi* from another clupeid fish, *Nematalosa nasus*.

The parasite was identified as *Agarna* sp., but it is not *A. malayi* Tiwari. Both males and females were recorded and most of the females carried eggs in their brood chambers. In one parasite 40 eggs were found. Two fishes from Bombay and one from Calicut carried two parasites each, one in the pharynx and the second under the gill cover.

In *E. thoracata*, the left ovary and left testis are functional, the right one being atrophied. The fecundity was estimated to be about 8000 eggs which is considered to be low for a clupeid (Devanesan & John,

Table 1. Incidence of infection of *Agarna* sp. on *E. thoracata*.

Place & of collec- tion	Date	Number of fish		Incidence (%)
		Examined	Infected	
Bombay	14th Jan. 75	100	66	66.0
Gollapalem	2nd Feb. 75	116	22	18.9
Goa	29th Dec. 78	60	5	8.3
Mangalore	30th Dec. 78	66	2	3.0
Calicut	1st Jan. 79	69	4	5.7
Tuticorin	4th Jan. 79	65	2	3.0

1941). It has been observed that the presence of parasite results in shrinkage of the single functional gonad which apparently effects the fecundity adversely. The infected fish were thin, when compared to the normal specimens of same length, indicating that the parasite has an adverse effect on the growth of the host.

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 Tiwari, K.K. *Rec. Indian Mus.*, 1953, 50 295-300.

Table 1. Incidence of infection of *Agneta* sp. on *E. thirocota*.

Incidence (%)	Number of fish		Date	Place of collection
	Examined	Infected		
88.0	100	88	14th Jan. 78	Bombay
18.8	118	22	2nd Feb. 78	Gollisalem
8.3	60	5	20th Dec. 78	Goa
3.0	66	2	30th Dec. 78	Mangalore
6.7	69	4	1st Jan. 79	Calicut
3.0	65	2	4th Jan. 79	Tuticorin