

SARCOTRETES SCOPELI, A LERNAEID COPEPOD NEW TO NORWAY

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ABSTRACT

Sarcotretes scopeli, parasitic on *Benthosema glaciale*, is recorded for the first time in Norway. 3.6% of the catch from the Bergen area and 1.9% from Sognefjorden was infested. The parasite seems to retard the growth and hinder maturation of the gonads of the host.

During a study of *Benthosema glaciale* (REINHARDT) from western Norway, many specimens were found to be infested by the parasitic copepod, *Sarcotretes scopeli* (JUNGERSEN).

S. scopeli has been recorded from the Atlantic between 48°15' N and 70°41' N. The record nearest to Norwegian waters is from the Faroe Islands (JUNGERSEN 1911a; YAMAGUTI 1963). *S. scopeli* has also been recorded from the Pacific coast of California, but it is uncertain if the host was *B. glaciale* (BOLIN 1939).

A key to the species of *Sarcotretes* is given by WILSON (1917).

Of 871 specimens of *B. glaciale*, one year or older, taken in Byfjorden and Herdlefjorden in the Bergen area in 1967—1970, 31 were infested with *S. scopeli*. Samples were taken at monthly intervals, and infested specimens were found in January, February, March, May, July, September, October, and December.

Of 105 specimens of *B. glaciale* from Sognefjorden taken in September 1969, two had *S. scopeli*. Of 290 specimens from Hardangerfjorden taken in September and October 1969 and 179 from Sunnmøre taken in November 1969, none was infested.

The degree of infestation in Byfjorden and Herdlefjorden 1967—1970 was 3.6%, and in Sognefjorden 1.9%. JUNGERSEN (1911a, b) found 1.8% of a collection of approximately 1,800 *B. glaciale* from the North Atlantic to be infested. The degree of infestation in Byfjorden and Herdlefjorden is therefore very high.

No seasonal cycle in infestation could be found, which may indicate that *S. scopeli* has a perennial life cycle.

Most of the copepods were attached dorsally, but some were found ventrally. One of the infested specimens from Byfjorden had two parasites. This seems to be the first record of two adult *S. scopeli* on one host.

Of the infested specimens taken in Byfjorden and Herdlefjorden 1969—1970, 13 were males, 9 females, and 3 juveniles. The ratio between infested males and females does not differ significantly from that in the total catches.

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The age distribution of the infested specimens of *B. glaciale* and in the total catches is given in Table 1. The standard length of the infested specimens ranged between 19 and 61 mm.

Table 1. Age distribution of *B. glaciale* infested by *S. scopeli* in Byfjorden and Herdlefjorden 1967–1970.

Age group	Infested specimens	Total catch	Percentage infestation
0	0	118	0
I	8	522	1.5
II	15	174	8.6
III	7	120	5.8
IV	1	51	2.0
V	0	4	0

Table 2 shows the mean lengths of the infested specimens and in the total catches, and the difference between these two values. *B. glaciale* parasitized by *S. scopeli* were on average 2.8% shorter than uninfested specimens of the same age.

Table 2. Difference in length between infested and uninfested specimens of *B. glaciale* from Byfjorden and Herdlefjorden.

Age group	Infested specimens		Total catch ī mm	Difference	
	N	ī mm		mm	%
I	8	31.56	32.31	0.75	2.3
II	15	45.50	46.35	0.85	1.9
III	7	52.36	55.18	2.82	5.1
IV	1	59.0	61.5	2.5	4.2

Infestation by *S. scopeli* seems to hinder maturation of the host's gonads. None of the infested specimens showed signs of maturity, though the external sex characters had developed.

The decrease in infestation after age group II (see Table 1), may suggest that infested specimens of *B. glaciale* have a higher mortality rate than do uninfested ones.

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