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Parasitäre Copepoden an Alopias superciliosus (Lowe, 1839) aus dem Atlantischen Ozean

Parasitic Copepoda on Alopias superciliosus (Lowe, 1839) from the Atlantic Ocean

Abstract

Acht Haie (*Alopias superciliosus*) aus dem Atlantischen Ozean wurden in der Zeit von 1980-1985 untersucht. Es wurden insgesamt 6 Arten von Copepoden vorgefunden: *Pandarus satyrus* Dana, 1852; *Dinemoura discrepans* Cressey, 1967; *Echitrogaleus denticulatus* Smith, 1874; *Nessipus borealis* (Steenstrup et Lütken, 1861); *Briaka alopiæ* Cressey, 1966; *Pagina tunica* Cressey, 1964.

Alopias superciliosus occurs in the littoral zone, and further away from land in tropical and subtropical waters. Its range has not yet been finally fixed. What information there is on the occurrence of Copepoda on *A. superciliosus* /3, 4, 6/ as compared with other known species of shark is very incomplete.

Material and method

Material was collected from 8 specimens of *A. superciliosus* caught in the Atlantic. The sharks were kept in the ship's refrigerator, but on being brought ashore were thawed and examined. The Copepoda were preserved in 70% ethanol.

Results

Pandarus satyrus Dana, 1852

Location on host: skin and pectoral fins.

This parasite occurred on the pectoral fins in large clusters similar to those observed by BENZ/1/ in the shark *Prionace glauca*.

Infestation: Table I

Distribution: In this study the species was found on sharks from the Georges Bank fishing grounds. This parasite is widespread throughout the world.

Dinemoura discrepans Cressey, 1967

Location on host: fins

Infestation: Table I

Distribution: This species was found in fishing grounds 10°03'N-32°49'W and 05°35'N-39°15'W. The description of the species is based on specimens from the Indian Ocean (from *Alopias vulpinus* and *A. superciliosus*) and the Pacific Ocean (from *A. superciliosus*). The available literature gives no information on the occurrence of this parasite in the Atlantic.

Echitrogaleus denticulatus Smith, 1874

Location: pectoral fins

Infestation: Table I

Distribution: a widespread parasite. In this study it was found in fishing grounds 05°35'N-39°15'W

Nessipus borealis (Steenstrup et Lütken, 1861)

Location: gills and fins

Infestation: Table I

Distribution: The infested sharks came from fishing grounds 00°56'N-24°30'W and 04°35'S-26°47'W. Wilson/7/ describes the host as "a large oceanic shark". Hewitt/5/ found a single male specimen on the body surface of an *Isurus oxyrinchus* taken east of New Zealand.

Briaka alopiæ Cressey, 1966

Location: gills

Infestation: Table I

Distribution: The infested sharks came from fishing grounds 13°53'N-29°20'W; 06°50'N-38°11'W and 09°50'N-32°55'W. This copepod has been recorded in the Atlantic and Indian Oceans.

Pagina tunica Cressey, 1964

Location: Pectoral and caudal fins

Infestation: Table I

Distribution: The infested shark came from fishing grounds 12°10'N-30°15'W. This parasite has already been recorded in the Indian and Pacific Ocean. The present study indicates that this copepod occurs on *Alopias superciliosus* not only in the Indian and Pacific Oceans/3, 4/, but in the Atlantic as well.

Discussion

6 copepod species were collected from *Alopias superciliosus*. In the available literature, there was no information on whether *Echitrogaleus denticulatus* or *Nessipus borealis* are parasites of the shark species *Alopias superciliosus*. The copepods *Dinemoura discrepans* and *Pagina tunica* have not so far been recorded in the Atlantic either. Parasites of the species *Pandarus satyrus* were present on the pectoral fins in clusters. Why this should be so is probably due to environmental factors. BENZ/1/ is of the opinion that these copepods concentrate here to avoid being eaten by remoras, which are well-known for their body-cleaning activities on sharks. The autor, however, agrees only in part with BENZ's view/1/. The pectoral fins are indeed a safe spot where copepods can hide from remoras. But the characteristic clusters into which these copepods arrange themselves is probably due to the action of water currents on the constantly moving pectoral fins.

Literature

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NUMBER OF FISH INFESTED BY COPEPODS

Parasite	Number of fish		Intensity ind.
	examined	infested	
<i>indanus satyrus</i>	8	2	27-63
<i>memoura discrepans</i>	8	5	1-28
<i>ntregaleus denticulatus</i>	8	1	2
<i>stipus borealis</i>	8	2	1-8
<i>uaka alopias</i>	8	6	1-19
<i>agina kumica</i>	8	1	17

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