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CHARACTERISTIC OF HERRING INFESTED BY  
ANISAKIS LARVAE CAUGHT IN THE GULF OF  
GDAŃSK

K. Strzyżewska, J. Popiel

Morski Instytut Rybacki Gdynia  
Al. Zjednoczenia 1  
Poland

The presence of herring infested by Anisakis larvae was already noted several times in the Baltic. J. Grabda /in press/ found large quantities of Anisakis larvae in herring spawning during spring in the Pomorska Bay. The herring analyzed by her in the summer/autumn season and caught on the same grounds were free from Anisakis. As shown by their otolith character these fishes were completely different from the former ones, they belonged probably to the central Baltic spring spawning sea herring which as is well known migrates to the south during the summer time.

J. Rokicki /1/ and B. Iubieniecki /personal communication/ noted the presence of Anisakis larvae in herring caught in winter and spring in the Gulf of Gdańsk.

In the spring of 1974 unusual high number of Anisakis infested herrings were found in the Gulf of Gdańsk. These herrings were coastal spring spawners near or in spawning condition. /Table 2/. The infested herrings were caught mainly in the western part of the Gulf of Gdańsk; in its eastern part, they were less numerous and almost absent on the spawning grounds of the Vistula Firth. After the spawning season the infested herrings disappeared from the Gulf of Gdańsk.

A sample of 200 herrings caught on 23.3.1974 in the western part of the Gulf of Gdańsk was analysed in respect of: length, age, stage of gonads, number of vertebrae and degree of infestation.

Table 1

Rate of infestation by Anisakis larvae

Length in cm	No of herring	No of infested herring	% of infested herring	No of larvae per herring /range/
20	2		0	
21	1		0	
22	22	4	18	2 - 10
23	53	18	34	1 - 32
24	51	38	75	1 - 24
25	31	29	94	1 - 26
26	17	17	100	1 - 25
27	10	10	100	2 - 13
28	5	5	100	9 - 16
29	6	6	100	13 - 51
30	2	2	100	13 - 30
	200	129		

Table 2

Characteristic of infested herring

Stage of gonads	Nos	Age	Nos	Length per age in cm.	V.S.	Nos.
III	-	3	86	24,3	53	2
IV	22	4	30	25,8	54	4
V	44	5	8	-	55	34
VI	22	6	4	-	56	67
VII	41	7	1	-	57	22
$\Sigma$	129		129			129
Mean						55,8

Table 1 and 2 summarize the results of this analyse. As shown in Table 1 the rate of infestation was very high, and especially so among the larger herrings.

In Table 2 the length per age and the mean number of vertebrae of the infested herrings are shown. Both are different from those normally observed in the Gulf of Gdańsk. The length per age is very large and typical for coastal spring spawners from the Rügen - Pomorska Bay area. Also the V.S. is much larger than ever noted in the Gulf of Gdańsk. /The mean V.S. in the Gulf of Gdańsk ranges between 55.20 and 55.35/.

The results of this analyse thus suggest that in 1974 large numbers of herrings of western origin have spawned in the Gulf of Gdańsk together with local spring-spawners. This may be not exceptional because as pointed before Anisakis larvae, however on a much smaller scale, were noted

already in the Gulf of Gdańsk herring in previous years. The very unusual climatic situation observed during late winter and early spring of 1974 may be a cause for the large scale of this phenomenon observed this year.

R e f e r e n c e

Rokicki J. - Helminths of certain Clupeidae mainly of the herring *Clupea harengus* L., in the South Baltic. - *Acta Parasitologica Polonica* Vol. XXI fasc. 32, Warszawa, 1973.