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USSR Fishery for the Shortfin Squid in Subarea 4, 1981

by

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Abstract

The abundant appearance of the shortfin squid on the shelf was observed during the second half of June. The size of the shortfin squid quota allocated to the USSR in 1981 was 5 thous. tons. The USSR catch constituted 4.9 thous. tons. The squids were only caught as a by-catch in the hake fishery mainly in July (66% of total catch) at the 100-150 m depth in the shelf edge region between 60° and 64°W.

The size of the quota for the shortfin squid allocated to the USSR in 1981 was 5 thous. tons. The Soviet catch constituted 4.9 thous. tons. The directed fishery was not conducted due to small sizes of the quota. The squids were caught as a by-catch in the hake fishery. The fishing in NAFO Subarea 4 was started in late May and closed on 10 August 1981.

In April and majority of May the shortfin squids were insignificantly found in the catches from commercial vessels. The by-catch of young squid incidentally reached 5-10% on the southwestern slope of Flemish Cap (the 380-400 m depths) and on the Emerald Bank slope only in late May. In 1981 the abundant appearance of squid on the Nova Scotia Shelf was observed later than usual or in the third decade of June. The dense aggregations of squid at this period were recorded at the 120-300 m depths between 60 and 64°W. The squid aggregations usually kept to somewhat greater depths than hake concentrations and were observed in the tongues of the Atlantic warm (10-11°) waters on the shelf.

The hake aggregations, however, were usually associated with the cold part of the tongue or with water temperatures of 7-9°. The quantitative distribution of hake and squids is quite varying and in the given point these species can change each other depending on the water dynamics within some days.

The densest aggregations of squids were observed in July at the depths of 90-160 m, mainly at the 130-140 m depths, between 60 and 63°W, particularly in the areas of canyons. The by-catch of squids constituted 5-15% of total catch (the latter was usually 10-15 tons per a hauling). Early in August the squid aggregations kept to the same area as in July.

During the period from May to the late July the length and weight of squids in the catches increased from 13.7 cm and 55 g to 20.4 cm and 156 g, respectively (Table 1).

The fishing was conducted by the vessels of BMRT-class. The number of vessels ranged from 2 to 18 constituting 14-16 units during the most intensive fishing period. The squid catches were 0.1 to 20 tons per a fishing day, mainly 0.7-7.5 tons. The majority of the quota (66%) was taken in July.

Table 2 presents data on the quota take..

Table 1 Length composition of the shortfin squid

Period	May	June	June	1 ten-day period July	2 ten-day period July
Area	4W	4W	4X	4W	4W
Depth	135-230	120-130	140-220	115-145	105-140
Mantle					
length, cm					
10	0.3				
11	4.7	0.1	0.2		
12	17.3	2.3	2.0		
13	27.0	3.6	3.1	0.1	
14	24.3	22.1	15.5	1.3	0.1
15	15.7	31.6	37.5	3.4	0.3
16	6.3	17.4	27.5	9.0	1.7
17	3.7	6.5	10.5	20.9	4.6
18	0.7	9.1	3.0	27.7	10.1
19		4.0	0.5	19.5	17.9
20		1.9	0.2	8.6	21.8
21		0.7		4.0	19.1
22		0.4		4.6	14.0
23		0.3		0.8	6.6
24				0.3	2.7
25					0.9
26					0.2
No. of sp.	300	700	600	1900	4800
Mean length, cm	13.7	15.6	15.5	18.2	20.4
Mean weight, g	55	75	68	108	156

Table 2 Pattern of the shortfin squid quota take in 1981

	: No. of vessels*	: Catch (% of the size of : the quota)
19 - 31 May	4	1.5
01 - 10 June	11	2.4
11 - 20 June	16	6.2
21 - 30 June	14	9.4
10 - 10 July	14	37.8
11 - 20 July	11	19.8
21 - 31 July	7	8.7
10 - 10 August	2	14.2

* vessels of BMRT-class