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Brief Review of Russian Fisheries in Division 3O in 2000-2002

by

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Abstract

The paper contains a brief analysis of operations of Russian fishing vessels and distribution of catch of regulated and unregulated species by 100 m depth interval during directed fishery in Div. 3O.

In 2001-2002 the Russian catch of redfish in that division stabilized at 11 000 tons. Mean daily catch of STM vessels varied from 15.9 to 21.4 tons showing no clear upward or downward trend. Despite the catch rate per hour haul was decreasing between 2000 and 2002, this decline was insignificant. Presently, the increased fishery does not show any adverse impact on the status of Div. 3O redfish.

The evidence available shows that redfish overwhelmingly dominates catches from 300-700 m depth, while by-catch of other fish is insignificant. At shallower depth unregulated species such as skate and hakes are a major part of the catch.

Introduction

There are two species from *Sebastes* genus which occur on the south-western slope of the Grand Bank: *S. mentella* (deep-sea redfish) and *S. fasciatus* (Acadian redfish). Whereas the Acadian redfish predominate in catches, the catch statistics is given for both species together because of their complicated identification. The fishery for redfish in this division is not regulated at present.

The information presented in this paper was prepared as response to the request of the Fisheries Commission to the NAFO Scientific Council for scientific advice on redfish stock management in Div. 3O in 2004. The paper was aimed at studying the catch statistics of Russian vessels, analyzing by-catch of regulated and non-regulated fish species in directed fishery.

Results

In 1991-1993, in the area, the Russian catch of the redfish varied from 4.4 to 6.9 x 10³t. The reduction in international fishing in 1994-1995, perhaps, was caused by the decrease in Russian catch. In 1996-1998, no national fishery was conducted. Since 2000, the Russian fleet renewed redfish fishery in the area. In 2001-2002, the national catch remained at the level of 11 x 10³t.

The main vessels specializing in redfish fishery in Div. 3O are STM trawlers. This type of vessels is characterized by net tonnage of 1 898 registered tons and engine power of 1 760 kW (2 400 h.p.). The main catch of redfish in Div. 3O in 2000-2002 was taken by these vessels (Table 1). At that period the mean daily catch fluctuated from 15.9

to 21.4 t without any pronounced trend of increase or decrease. Though the catch rate per a tow hour decreased in 2000-2002, that reduction was not essential.

By reason of rather short-term period of fishery, the trend of redfish fishing mortality variation is very hard to be revealed so far.

Tables 2-4 give the bathymetric distribution of catches of regulated and non-regulated species in 2000-2002. The data show that in catches at 300-700m depth redfish completely prevailed and the by-catch of the other fish species was negligible. At smaller depth, the bulk of catches was made up by such non-regulated species as skates and hakes. The main Russian fishery for redfish takes place at 350-550 m depth.

According to data obtained from the observers aboard the fishing vessels, redfish 22-25 cm in length were prevailing in the catches (Fig.1). Despite the increase in catch, in 1999-2002, the length distribution of redfish was almost unchanged.

As the data from Canadian (Power and Orr, 2002) and Russian (Vaskov, 2003) surveys showed the estimations of redfish stock were characterized by the essential both year-to-year and seasonal fluctuations with downward and upward trends. In our opinion, the primary factor influencing the fluctuation of estimations is the accessibility of redfish aggregations for research fishing gears, that is connected with daily migrations and vertical fish distribution, as well as the complicated determining pelagic component of the stock. Another important factor is the two side return redfish migrations in the area of the Grand Bank and to Div. 3N, in the first place.

As at present no negative effect of the increased fishery on the redfish stock status in Div. 3O has been noticed, the proposed TAC at 13 000 tons, derived by averaging the historical catch for the period since 1960, is not very objective. In our view, the TAC estimated at 20 000-25 000 tons and based on the recent statistical data is more acceptable as a regulation measure at the present time (Table 5). In case of revealing stable negative effect of the existing level of fishery on the stock status of this species the TAC value must be corrected.

References

- VASKOV, A. A. MS 2003. Distribution of Redfish in Div. 3O based on Data from Russian Trawl Surveys in 1983-1993. NAFO SCR Doc. 03/12, Serial N4818, 13p.
- POWER, D. and D.ORR. MS 2002. Information relevant to the Canadian request to the Scientific Council with respect to the redfish stock in Division 3O. NAFO SCR Doc 02/79, Serial No. N4693, 21 p.

Table 1. Catch rate for vessels of the STM-type (1 760 kW) in Div. 3O by years.

	Year		
	2000	2001	2002
Total catch (t)	2 574	12 075	13 044
Catch f/v STM (t)	366	10 236	8 200
CPUE (t/d)	15.9	21.4	16.5
CPUE (t/h)	1.7	1.6	1.5

Table 4. Distribution of groundfish catch (%) in Div. 3O by 100-m depth range, 2002.

Species	Depth, m									Total
	100	200	300	400	500	600	700	1000	1200	
Yellowtail	0.48	0.21	+							0.01
Witch	1.30	1.81	1.86	0.29	0.43	0.40		1.90	4.14	0.58
Redfish		1.07	43.68	95.24	95.84	93.60	99.84	49.56		85.03
Skate	30.18	24.77	8.27	0.29	0.13	0.16				2.46
Cod	1.92	2.35	3.08	1.07	1.16	1.96	0.16	2.53		1.49
Hake spp.	58.37	64.22	39.05	1.47	1.25	0.26		6.97		8.13
Haddock		0.33	0.59	0.25	0.10	0.01				0.18
Hake silv.		0.83	0.17							0.07
Grenadier		0.06			+			6.97		0.01
Wolfish		0.05	0.11	0.15	0.05	0.03				0.08
A.plaice	7.82	3.42	3.00	1.17	0.68	2.19		4.31		1.46
A.halibut		0.02	0.08	0.06	0.04	0.03				0.04
G.halibut		0.04		0.01	0.07	0.09		27.76	95.86	0.08
Angler		0.72	0.01							0.05
Other		0.17	0.09	+	0.25	1.28				0.33
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 5. Nominal catches by country (tons) of redfish in Div. 3O, 1991-2001. STATLANT 21A.

Country	Year										
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Canada	28	1219	698	1624	177	7255	2554	8972	2344	2206	4869
Cuba	2748	2776	665	0	0	0	0	0	0	0	0
France (SP)	0	0	0	0	0	0	134	266	0	0	0
Japan	226	125	159	0	264	417	285	355	0	0	0
Portugal	3	1468	4794	2918	1935	1635	894	1875	5469	4555	3535
Spain	0	0	0	26	22	338	1245	1884	4549	3838	2314
Russia	4427	5845	6887	60	416	0	0	0	231	2233	11343
S. Korea	129	1935	17	0	0	0	0	0	0	0	0
Estonia	0	0	0	0	0	0	0	0	0	49	0
Total	7561	13368	13220	4628	2814	9645	5112	13352	12593	12881	22061

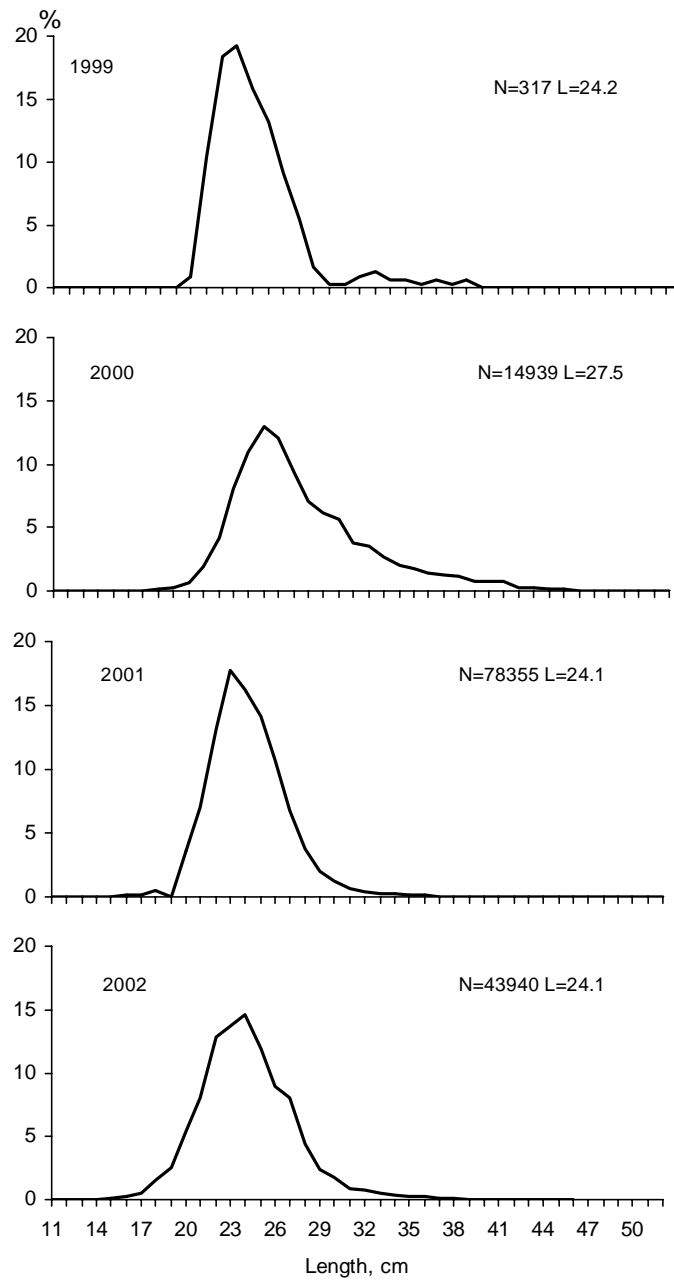


Fig. 1. Length distribution of redfish in Div. 30 in 1999-2002.