

ANNUAL MEETING - JUNE 1967United States Haddock Sampling
in Subarea 5 in 1966

by

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Haddock age and length data presented to ICNAF by the United States in 1966, as in previous years, are based on samples obtained from U. S. Commercial landings. The same procedures have been used since the 1940's. They were developed out of a need for unbiased information with which to examine the population structure and provide an estimate of the effects of fishing. The resulting data, in part, supplied the necessary information to implement the haddock regulation and allow a basis for evaluating the status of the fishery.

Landings are normally divided into two size categories (scrod and large) and each are sampled separately. Scrod haddock range from about .68 to 1.1 kilograms while large haddock range upward from 1.1 kilograms. A random selection of 100 fish from each size group are measured and the sample weighed. From these samples, stratified subsamples of 15 scrod and 20 large are used to obtain scales. Scales are taken from below the lateral line and behind the second anal fin. Validation of scale reading techniques are given by Kohler and Clark (1958), Clark (1958), and Jensen and Clark (1958).

The desired number of samples as set up in the sampling scheme is five per month from each market category and sampling area. Theoretically, this would mean that 50 samples from Subarea 5 are expected each month. This is not always the case, however. Some sampling areas are fished so seldom that it is next

to impossible to obtain a sample. Seasonal variations in fishing intensity as well as weather conditions sometimes have an adverse effect on the sampling program.

Two hundred twenty-seven age samples and 233 length samples were collected from Subarea 5 landings in 1966 (Tables 1, 2). Of the 22,032 fish measured in 1966, 3,862 were aged. Approximately 95 per cent of the samples came from sampling areas 52 and 53 in 1966. Ninety-three per cent of Subarea 5 landings also came from the same sampling areas.

The procedure used to estimate the length composition of the catch involved the use of length samples and length-weight tables (Clark and Dietsch, 1959). These tables are used to determine the average weight of fish in the samples by sampling area and month. Averages are then divided into the corresponding landed weight of large and scrod by area and month giving total estimated numbers landed. The percentage length composition of samples are then used to obtain length composition of landings by month and area.

Age composition of the catch is derived in a similar manner except large and scrod are combined. The estimated number landed is prorated by percentage age composition of the samples by month, and area. Sampling area calculations are then summarized to give length and age compositions of the catch by division.

Later, age compositions are used in combination with catch per day to give catch per day at age. This is done each quarter to allow a current look at the fishery within a year. Thus, for example, the 1966 age composition data show the 1963 year class as the dominant year class, and it is consistently so throughout the four quarters (Fig. 1). No evidence contrary to this was exhibited in sample data. Two year olds are decidedly less abundant than average and are not expected to contribute significantly to landings in 1967. Four year olds remained at about the same level of abundance while older fish represented but a small part of the catch.

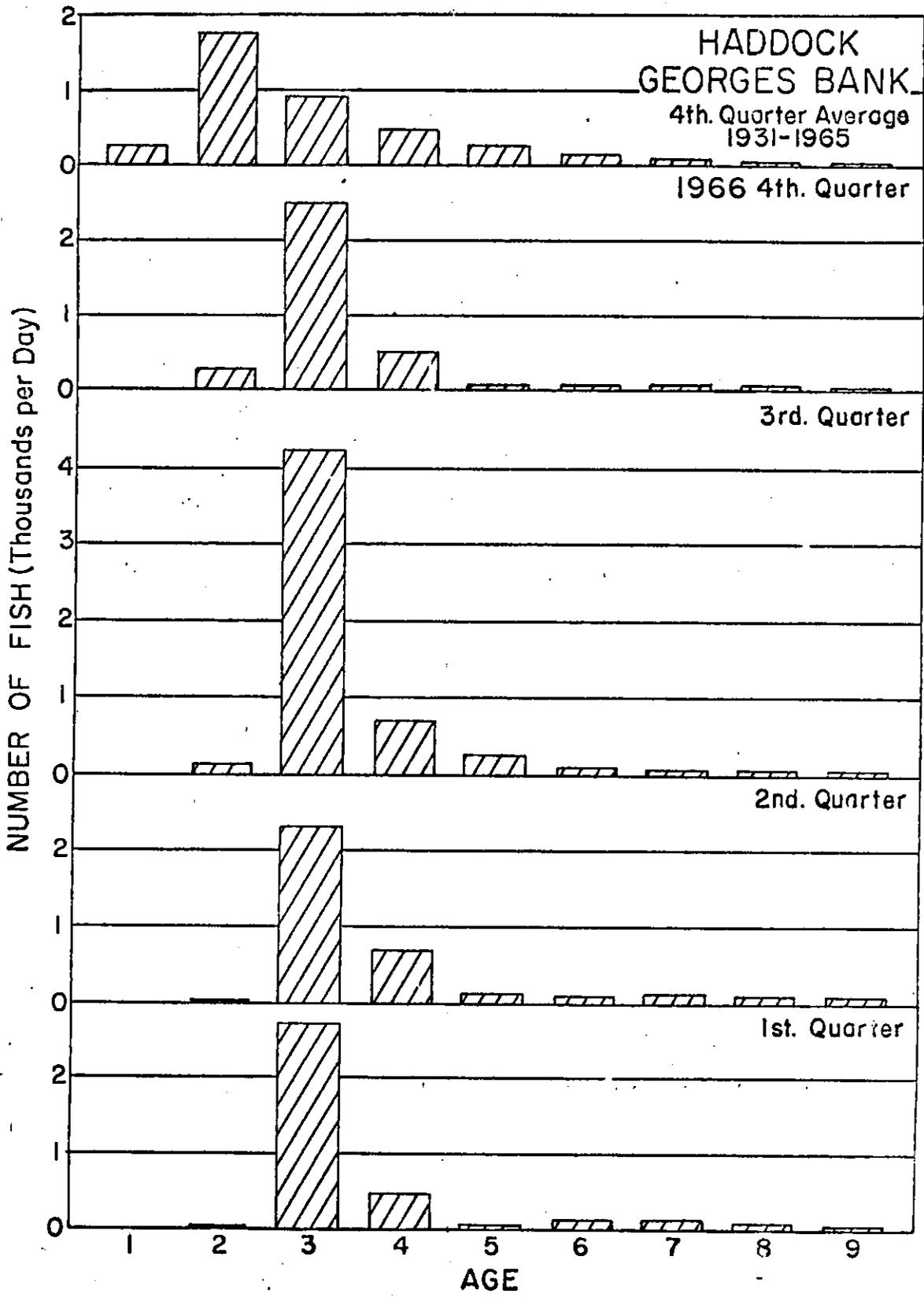
Table 1. -- Haddock U. S. Age Sample Summary for 1966.

	Subdivision 5Z				Subdivision 5Y			Grand Total
	Sampling Areas				Sampling Areas			
	51	52	53	Total	54	55	Total	
Quarter 1								
No. Samples	0	26	23	49	0	0	0	49
No. Readings	0	404	369	773	0	0	0	773
Quarter 2								
No. Samples	0	27	29	56	0	1	1	57
No. Readings	0	448	510	958	0	35	35	893
Quarter 3								
No. Samples	0	28	33	61	0	4	4	65
No. Readings	0	524	567	1091	0	84	84	1175
Quarter 4								
No. Samples	0	31	25	56	0	0	0	56
No. Readings	0	503	418	921	0	0	0	921
Grand Total								
No. Samples	0	112	110	222	0	5	5	227
No. Readings	0	1879	1864	3743	0	119	119	3862

Table 2. - Haddock, U. S. Length Sample Summary for 1966.

	Subdivision 5Z				Subdivision 5Y			Grand Total
	Sampling Areas				Sampling Areas			
	51	52	53	Total	54	55	Total	
Quarter 1								
No. Samples	0	26	23	49	0	0	0	49
No. Fish	0	2483	2237	4720	0	0	0	4720
Quarter 2								
No. Samples	0	27	31	58	0	2	2	60
No. Fish	0	2698	3067	5765	0	150	150	5915
Quarter 3								
No. Samples	0	31	33	64	0	4	4	68
No. Fish	0	2726	3230	5956	0	300	300	6256
Quarter 4								
No. Samples	0	31	25	56	0	0	0	56
No. Fish	0	2666	2475	5141	0	0	0	5141
Grand Total								
No. Samples	0	115	112	227	0	6	6	233
No. Fish	0	10573	11009	21582	0	450	450	22032

Figure 1.



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