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Results of 19 February 1979 Sea Sampling Trip

Aboard F/V Friesland

by
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On 19 February 1979, Paul Wood (Research Fishery Biologist of the Northeast Fisheries Center) made a sea sampling trip aboard the F/V Friesland out of Point Judith, RI. Because of inclement weather, only a single tow was made approximately 70 kilometers (38 nautical miles) south of Point Judith ($40^{\circ}57'N$, $71^{\circ}24'W$). A total of 31 bushels of yellowtail flounder was caught (8 bushels of large, 9 bushels of medium, and 14 bushels of small discarded). The tow duration was 1 hour and 20 minutes. Assuming a mean weight of 32 kilograms (70 lb) per bushel, a catch rate of 409 kg per hour or 9.8 metric tons per day (24 hours) of marketable yellowtail flounder is indicated. This catch rate is much higher than the catch rate indicated for Southern New England by interviews in 1978 (1.8 tons per standard day fished) and it is about twice the catch rate observed for years of peak abundance during the 1960's.

The size composition of the catch was sampled (2 bushels of large, 1 bushel of medium, and 0.5 bushels of discarded small). The results are given in Table 1. A cull point of about 30 cm (12 inches) is indicated. Nearly 45% of the catch by weight and 70% by numbers was discarded. Note that the Friesland was using a smaller cod end mesh than is now required in the directed groundfish (including yellowtail flounder) fishery. In any case, a discard rate of 70% in numbers results in a significant loss in long-term yield.

The length frequency of the catch and the autumn 1978 Southern New England length frequency from the bottom trawl survey are plotted in Figure 1. Prerecruits in the autumn survey (about 22 cm) have now grown to about 25 cm as indicated by the R/V Friesland. The 1978 survey prerecruit abundance was about double the 1977 value. This same cohort of fish represent a large proportion of the R/V Friesland catch.

Table 1. Length frequency samples. The percent of the catch sampled is given in parentheses.

Length (cm)	Large (25%)	Med (11%)	Small (3.6%)	Total
18				
19			2	56
20			2	56
21			2	56
22			2	56
23			3	84
24			10	280
25			16	448
26			10	280
27			11	308
28			8	224
29			5	140
30		2	11	326
31	1	12	5	252
32	2	13	1	153
33	14	18		218
34	16	27		307
35	21	4		120
36	13			52
37	9	1		45
38	5			20
39	2			8
40	2			8
41	3			12
42	1			4
43	0			0
44	1			4
45	1			4
46	1			4

FIGURE 1

