

CHARACTERISTICS OF THE LABOR FORCE IN QUAHOG HANDRAKING

A. Holmsen
S. Horsley
Resource Economics

CIRCULATING COPY
Sea Grant Depository

LOAN COPY ONLY

Contribution #5 of the
URI Cooperative Extension Service

NOAA/Sea Grant
University of Rhode Island
Marine Memorandum 66



This publication is sponsored by NOAA Office of Sea Grant,
U.S. Department of Commerce, under Grant #NA79AA-D-00096.
The U.S. Government is authorized to produce and distribute
reprints for governmental purposes notwithstanding any
copyright notation that may appear hereon.

Additional copies of this publication are available
from URI, Marine Advisory Service, Publications Unit,
Bay Campus, Narragansett, RI 02882.

The quahog fishery in Rhode Island is characterized by independent fishermen known as handrakers. They harvest quahogs from coastal waters with bullrakes and tongs on a year-round basis using relatively small work skiffs.

The number of license holders in the Rhode Island quahog fishery has varied considerably from year to year over the last couple of decades from a high of approximately 3,000 to under 800. There are reasons to believe that the number of people who acquire a commercial handraking license is related to the state of the economy; that is, the higher the rate of unemployment, the more licenses are bought. In this sense, the quahog industry performs an important function in the state's economy. The number of license holders would also, to some extent, be dependent on income expectations (i.e., catch rates and market prices). During the last several years quahog sets have been very good in Narragansett Bay, and market prices of littlenecks have increased considerably.

The University of Rhode Island conducted a study of the Rhode Island quahog industry during the 1962-63 season which included an analysis of the labor force. Now a survey of the labor force for the 1978-79 season has been completed, and some of the changes which have taken place in those 15 years have become evident.

The total number of individuals holding quahog licenses (including student licenses and licenses for individuals over 65 years of age) more than doubled over this period. While the number increased in all age categories, the average age declined considerably, as can be seen in the following table.

Table I: Age Distribution of Quahoggers in Rhode Island

Age	Percent	
	1962-63	1978-79
Less than 20	11	17
20 - 29	17	30
30 - 39	21	17
40 - 49	18	14
50 - 59	12	9
60 - 64	4	2
65 and over	17	11

The percentage of license holders 29 years of age or younger increased from 28% to 47% of the labor force.

Mail questionnaires were used in both surveys to obtain additional information about the characteristics of the labor force. During the earlier survey questionnaires were mailed to all commercial license holders and resulted in a 42% response rate. The recent survey excluded holders of student licenses and holders of special licenses for people 65 years of age or more, and the response rate was 28%. The lower response rate in the spring of 1980 might be due, at least in part, to the fact that it coincided with both the national census and income tax preparations.

Despite the fact that students and individuals 65 years or older were not included in the 1978-79 study, the figures suggest a significant increase in full-time handrakers. The following table shows what proportion of total income handrakers derived from quahogging.

Table II: Proportion of Total Income Derived from Quahogging

Proportion	1962-1963		1978-1979	
	Number	%	Number	%
No Income	139	17	113	11
Less than 20%	359	44	297	29
About 1/4	81	10	114	11
About 1/2	65	8	135	13
About 3/4	33	4	31	3
Over 90%	138	17	338	33
Total	815	100	1028	100

If we define a full-time handraker as a person deriving at least 75% of his total income from quahogging, and assuming that the sample sizes were adequate, we have 171 full-time handrakers in 1963 and 369 full-time handrakers in 1979, an increase of more than 100%.

A question in the recent survey dealt with the amount of formal education completed by handrakers, which is shown in the following table.

Table III: Education Completed by Handrakers, 1978-79

Education	Number	Percent
Elementary School	10	1
Junior High School	103	10
High School	555	54
Some College Education	205	20
College Degree	123	12
Some Graduate Studies	31	3
Total	1027	100

Whether the handrakers had alternative skills was the subject of another question. While most considered themselves able to find alternative income as skilled workers, 18% considered themselves to have no alternative skills.

Table IV: Alternative Skill by Handrakers 1978-79

Skill	Number	Percent
Skilled labor	780	76
Professional	62	6
None	185	18

If, for some reason, handrakers would be forced out of the quahog industry and had to seek alternative employment, their estimated or expected income would in most cases decline, but some indicated that they could double their income by doing work other than handraking.

Table V: Expected Opportunity Income by Handrakers 1978-79

Alternative Income Relative to Current Income	Number	Percent
Less than 10%	123	12
About 1/4	72	7
About 1/2	236	23
About 3/4	164	16
About the same	195	19
Somewhat more	113	11
Twice as much	124	12

The cost of handraking is rather modest compared to other commercial fishing methods, so the economic factors determining whether an individual will enter the quahog fishery, be it on a part-time or full-time basis, are related to the returns, or gross income. If incomes in the industry should decline, due either to increased closing of areas, reduced catches, or a drop in prices, which handrakers would leave the industry depends to some extent on whether they have a part-time or full-time occupation as well as what alternative income they might have. Many of those who buy a license, but are basically recreational handrakers and do not sell quahogs, would continue regardless of price.

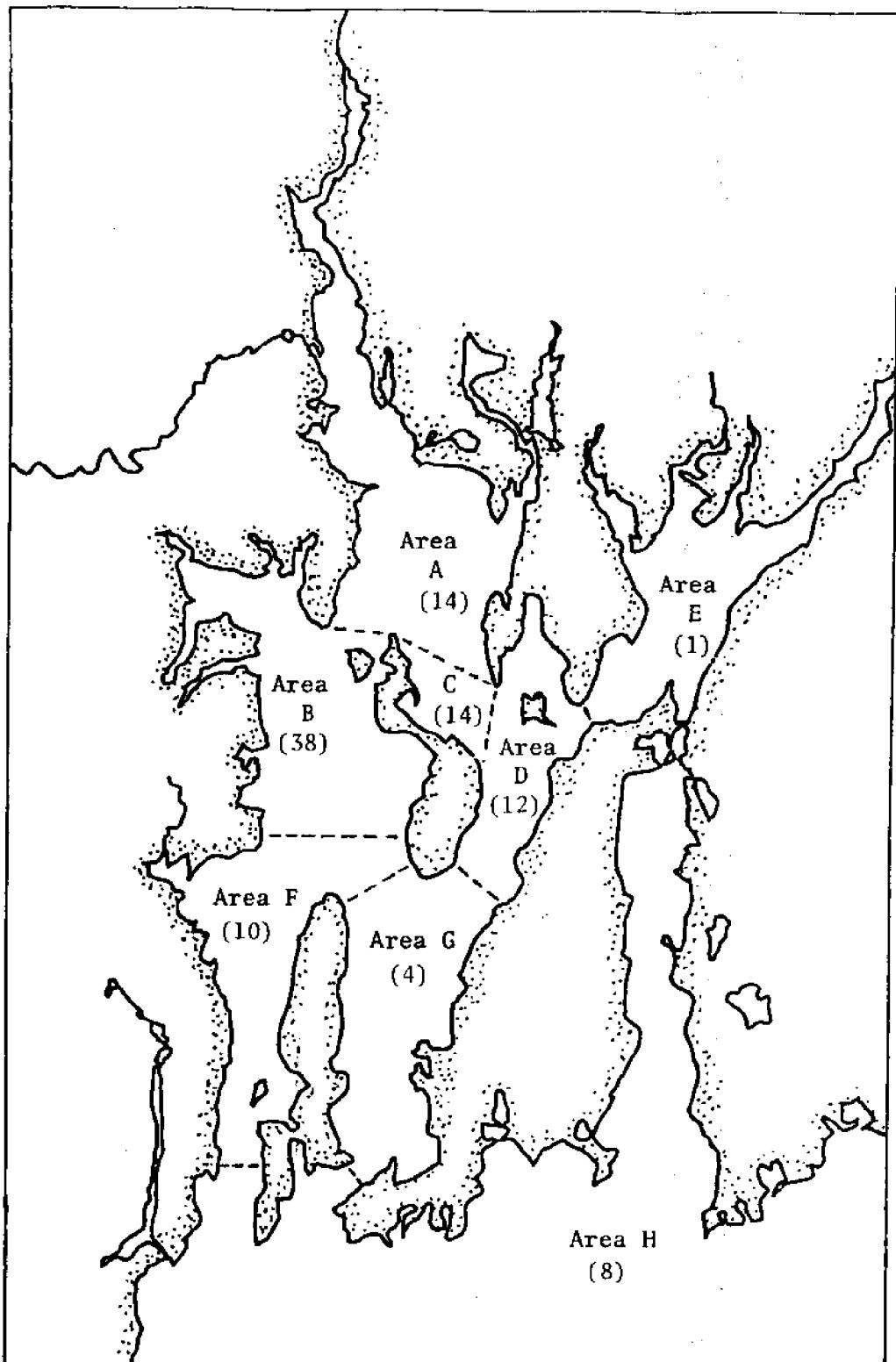
Table VI: Handrakers Who Would Leave the Industry if Income Declined

Drop in Income	Cumulative Number	Cumulative Percent
10%	164	16
25%	472	46
50%	769	79
75%	883	86
90%	955	93

These data indicate that with a drop of about 25% in income, approximately half of the handrakers would leave the industry.

Based on the sample, 69% of Rhode Island's handrakers live on the west shore of Narragansett Bay and 31% on the east shore. As has been the case for a long period of time, the heaviest concentration of quahoggers live in the city of Warwick, which accounts for 22% of the labor force in this industry. Other areas of high concentration are Tiverton, East Greenwich, Portsmouth, and Bristol.

The purpose of the final question in the survey was to determine the relative intensity of quahogging in various areas of Narragansett Bay. Each respondent indicated the percentage of total fishing time spent in the various areas. These figures were adjusted on the basis of percent of income derived from quahogging. The results are shown on the following map.



Percent of Quahogging Effort in Selected Areas of
Narragansett Bay

