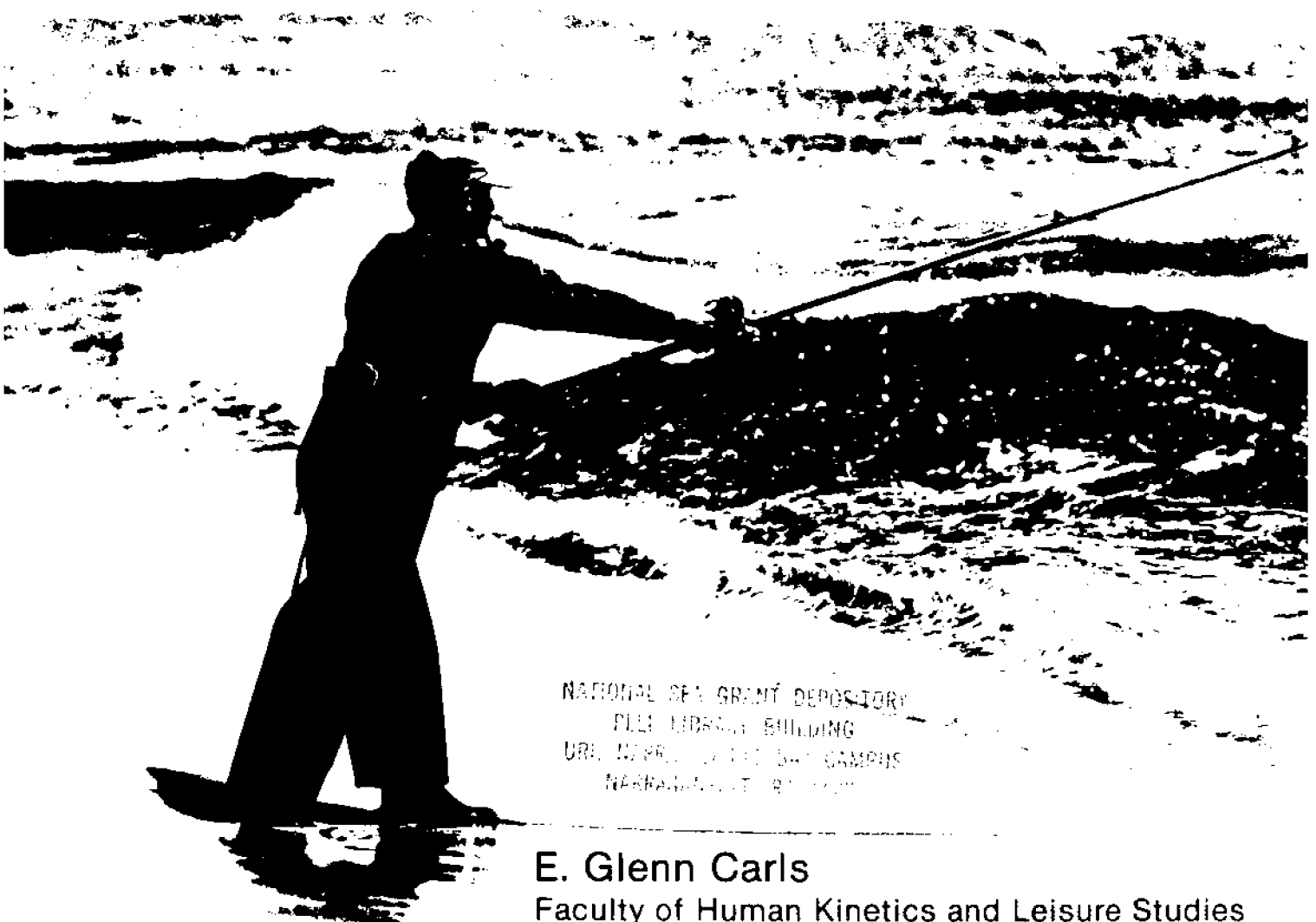


New York Sea Grant Report Series

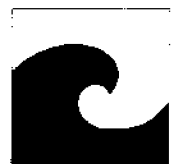
LONG ISLAND SURF FISHERMEN: 1975



NATIONAL SEA GRANT DEPOSITORY
FISH LIBRARY BUILDING
URR. W. P. B. 1000 CAMPUS
NARRAGANSETT, R.I. 02882

E. Glenn Carls
Faculty of Human Kinetics and Leisure Studies
University of Waterloo, Ontario

Regina F. Bresnan
Department of Recreation Education
State University of New York
College at Cortland



LOAN COPY ONLY

LONG ISLAND SURF FISHERMEN: 1975

E. Glenn Carls

Faculty of Human Kinetics and Leisure Studies
University of Waterloo, Ontario

Regina F. Bresnan

Department of Recreation Education
State University of New York
College at Cortland

NATIONAL SEA GRANT DEPOSITORY
FILE LIBRARY BUILDING
URI, NARRAGANSETT BAS CAMPUS
NARRAGANSETT, RI 02882

This research was sponsored by the New York
Sea Grant Institute under a grant from the
Office of Sea Grant, National Oceanic and
Atmospheric Administration (NOAA), US Depart-
ment of Commerce.

NYSG-RS-79-21

CONTENTS

	Page
TABLES	ii
ABSTRACT	4
INTRODUCTION	5
METHODS	6
RESULTS	9
Demographic Characteristics	9
Fishing Characteristics	12
Attitudes, Opinions, Values	19
SUMMARY AND CONCLUSIONS	32
REFERENCES	34
APPENDIX	35

TABLES

	Page
1. Distribution of Survey Sample over Four Study Locations	7
2. Age Distribution of Survey Respondents	7
3. Comparison of Median Ages for Long Island Surf Fishermen and the Residents of Nassau County, Suffolk County, and New York City	8
4. Sex Distribution of Survey Respondents	8
5. Place of Residence of Survey Respondents	8
6. Occupation of Survey Respondents	10
7. Comparison of Occupations Between Long Island Surf Fishermen and the Residents of Nassau County, Suffolk County, and New York City	11
8. Income Distribution of Survey Respondents	13
9. Comparison of Average Family Incomes Between Long Island Surf Fishermen and the Residents of Nassau County, Suffolk County, and New York City	13
10. Number of Years of Participation in Surf Fishing	14
11. Comparison of Average Years Fishing Experience Between Long Island Surf Fishermen and Fishermen Surveyed in Three Other Studies	15
12. Preferred Months of the Year for Surf Fishing	16
13. Frequency of Participation	18
14. Duration (Days) of the Surf Fishing Trip	18
15. Duration (Hours) of the Surf Fishing Day	20
16. Where Long Island Surf Fishermen Fish Most Often	21
17. Reasons for Selecting Fishing Location	21
18. Daily Time Preference for Participation	22
19. Reasons for Daily Time Preference	22
20. Number of Anglers Reporting Catches	23
21. Use of Catch	23

22.	Frequency of Participation with Other Groups of Individuals.....	24
23.	Values Associated with Surf Fishing.....	25
24.	Factors Considered in Making a Surf Fishing Trip	27
25.	Factors Contributing to the Overall Enjoyment of the Fishing Trip	28
26.	Comparison of Long Island Surf Fishermen and Texas Shark Fishermen on Factors Contributing to Overall Enjoyment of the Fishing Experience	29
27.	Response to the Possibility of a Salt Water Fishing License on Long Island	31

ABSTRACT

The objectives of this study were to (1) develop a demographic profile of Long Island surf fishermen, (2) evaluate the attitudes and opinions of surf fishermen toward selected planning and management issues, and (3) examine certain psycho-social and environmental factors that contribute to the surf fishing experience. Data were collected through a survey of surf anglers during the summer and fall of 1975. Results of the investigation identify the surf fisherman demographically and reveal patterns of activity participation, attitudes, values, and opinions that may be useful in the management of coastal recreation resources.

INTRODUCTION

Long Island's south shore not only is significant to New York State sport fishing, but also offers some of the best surf angling on the Atlantic coast. Surf fishermen see themselves as distinct from boat, pier, and other kinds of fishermen, as the "purists" among salt water sport fishermen. They frequently seek out the more remote stretches of shoreline and use an angling style and type of equipment that are unique.

During the summer and fall of 1975, a survey of surf fishermen was conducted to provide more concrete information about Long Island surf fishermen to use in recreational planning and management of the coastal zone. The study had three primary objectives:

1. to develop a demographic profile of Long Island surf fishermen;
2. to evaluate the attitudes and opinions of surf fishermen toward selected planning and management issues; and
3. to examine certain psycho-social and environmental factors that contribute to or detract from the surf fishing experience.

METHODS

Data were collected by a survey of surf fishermen at four major Long Island locations: Jones Beach, Robert Moses State Park, Smith County Park, and Montauk State Park. These sites were selected as the most popular surf fishing locations (Ryan, 1972; Briggs, 1962; and Briggs, 1965) and those that would provide the most efficacious sampling opportunities. Sampling occurred on randomly selected Fridays, Saturdays, and Sundays throughout July, August, September, and October of 1975. Table 1 shows the sampling distribution across the four locations. Differences in total frequency indicate differences in the total numbers using the various sites, weather conditions on sampling days, and other similar factors.

On a given sampling day, at each location, an attempt was made to survey all surf fishermen present who were sixteen years of age or older. A total of 580 questionnaires were distributed, 350 were returned, and 263 were completed and suitable for analysis.

TABLE 1
DISTRIBUTION OF SURVEY SAMPLE OVER FOUR STUDY LOCATIONS

Location	No. of Respondents	Percentage
Jones Beach	64	24.3
Robert Moses State Park	31	11.8
Smith County Park	63	24.0
Montauk State Park	<u>105</u>	<u>39.9</u>
TOTAL	263	100.0

TABLE 2
AGE DISTRIBUTION OF SURVEY RESPONDENTS

Age Group	Number	Percentage
16-19	8	3.0
20-29	72	27.4
30-39	69	26.3
40-49	61	23.1
50-59	37	14.1
60-69	15	5.7
70 and over	<u>1</u>	<u>0.4</u>
TOTAL	263	100.0

Mean = 38.5

Standard Deviation = 12.3

Range = 61.0

TABLE 3
 COMPARISON OF MEDIAN AGES FOR LONG ISLAND SURF FISHERMEN AND
 THE RESIDENTS OF NASSAU COUNTY, SUFFOLK COUNTY, AND NEW YORK CITY

Location	Median Age
Long Island	36.5
Nassau County	30.9
Suffolk County	26.3
New York City	32.4

TABLE 4
 SEX DISTRIBUTION OF SURVEY RESPONDENTS

Sex	Number	Percentage
Male	248	94.3
Female	14	5.3
No response	<u>1</u>	<u>0.4</u>
TOTAL	263	100.0

TABLE 5
 PLACE OF RESIDENCE OF SURVEY RESPONDENTS

Location	Number	Percentage
Suffolk County	110	41.8
Nassau County	84	31.9
New York City	47	17.9
Upstate New York	3	1.2
Other	12	4.6
No response	<u>7</u>	<u>2.7</u>
TOTAL	263	100.1

RESULTS

Results of the survey are divided into three main groups associated with major components of the questionnaire (Appendix A): (1) demographic characteristics (items 17-21), (2) fishing characteristics (items 1-12), and (3) attitude, opinion, and values measurements (items 13-16). These are, in turn, related to the primary study objectives cited previously.

Demographic Characteristics

To develop a profile of surf fishermen characteristics, survey respondents were asked to report certain items of personal information. Specifically, items 17 through 21 of the questionnaire measured the variables age, sex, place of residence, occupation, and income.

AGE

Surf fishing is not, nor would one expect it to be, an age specific activity. It cannot be described as an activity for either the young or old exclusively. Keeping in mind that those under sixteen years of age were not included in the survey, Table 2 shows a generally even distribution of respondents across the age groups. The average fisherman was 38.5 years old ($\bar{x} = 38.5$), and the oldest respondent recorded an age of 76 years.

By way of comparison, Table 3 shows the average ages of Long Island surf fishermen and the average ages of Nassau County, Suffolk County, and New York City residents. Even though the average reported age of surf fishermen is higher than other fishermen, there is no basis for concluding that this is a consistent trait. The difference is most likely explained by the exclusion of those sixteen years of age and younger from the sample.

SEX

Survey results show (Table 4) that surf fishing on Long Island is largely a male oriented activity. Of the total, 94.3 percent of all respondents were male.

PLACE OF RESIDENCE

The summary figures in Table 5 indicate that Long Island surf fishing is largely a local/regional phenomenon. Although a few respondents reported addresses in upstate New York and other out-of-state locations, more than 90 percent came from the two Long Island counties, Nassau and Suffolk, and New York City. Except on an intra-regional basis, surf fishing does not appear to be a major tourist attraction.

TABLE 6
OCCUPATION OF SURVEY RESPONDENTS

Occupation	Number	Percentage
Professional, technical, and kindred workers	70	26.6
Managers and administrators	23	8.7
Sales workers	30	11.4
Clerical and kindred workers	00	0.0
Craftsmen and kindred workers	21	8.0
Operatives (except transport)	2	0.8
Transport equipment operatives	12	4.6
Laborers (except farm)	54	20.5
Farmers and farm managers	2	0.8
Farm laborers and foremen	15	5.7
Service workers (except private household)	4	1.5
Private household workers	7	2.7
Student	11	4.2
Retired	10	3.8
No response	<u>1</u>	<u>0.4</u>
TOTAL	263	100.0

TABLE 7

COMPARISON OF OCCUPATIONS BETWEEN LONG ISLAND SURF FISHERMEN
AND THE RESIDENTS OF NASSAU COUNTY, SUFFOLK COUNTY, AND NEW YORK CITY

Occupation	Long Island surf fishermen	Nassau County*	Suffolk County*	New York City*
Professional, technical, and kindred workers	26.6	15.1	18.4	15.7
Managers and administrators	8.7	10.5	9.6	7.8
Sales workers	11.4	8.6	8.3	7.3
Clerical and kindred workers	0.0	17.5	17.4	27.1
Craftsmen and kindred workers	8.0	9.7	15.6	10.2
Operatives (except transport)	0.8	5.0	8.9	11.0
Transport equipment operatives	4.6	22.6	3.9	3.9
Laborers (except farm)	20.5	5.2	4.0	3.3
Farmers and farm managers	0.8	0.05	0.3	0.03
Farm laborers and foremen	5.7	0.06	0.3	0.05
Service workers (except private household)	1.5	0.06	0.3	0.05
Private household workers	2.7	1.0	0.7	1.3

* Source: 1970 U.S. Census

OCCUPATION

Analysis of occupational data was based on the U.S. Census Bureau standard list of occupations. Results of the survey (Table 6) are compared with U.S. Census findings (1970) in Table 7. One of the major differences is found in the category "clerical and kindred workers." No respondents from the surf fisherman study fell into this category. The low proportion of women in the sample and the high percentage of women in these jobs may explain this difference. Other notable differences include the relatively higher number of surf fishermen respondents in the categories "professional, technical and kindred workers" and "laborers (except farm)." These are more difficult to interpret but suggest cultural associations that may warrant further study.

INCOME

Long Island surf fishermen family incomes generally reflect the income levels of the Long Island region; surf fishermen have a higher average income than New York City, Nassau, and Suffolk County residents (Table 9). This difference is partially accounted for by the higher proportion of respondents from Suffolk and Nassau Counties (Table 5), but it also suggests a positive correlation between income and participation in surf fishing that goes beyond place of residence.

Fishing Characteristics

Several survey questions (numbers 1-12, Appendix A) were concerned with the nature of the fishing trip and participation in the activity by survey respondents.

YEARS OF PARTICIPATION

Long Island surf fishermen ranged from beginners to those who had been involved in the sport for more than fifty years (Table 10). The average surf fisherman had surf-fished for eleven and one-half years ($\bar{x} = 11.5$). One of the more important findings, however, is that the largest number of respondents (40.7%) had fished for five years or less. Whether this finding represents a trend to increasing numbers of participants or whether surf fishermen characteristically participate for a few years and then drop out could not be determined by this study.

In comparison with three other studies of fishermen, Long Island surf fishermen were found to have the least experience (Table 11). Assuming that data from the four comparison studies are truly comparable (i.e., data collection methods, etc.), there is no immediate explanation for this difference. One possibility, as noted above, is that Long Island surf fishing may be growing in popularity and attracting more new participants.

TABLE 8
INCOME DISTRIBUTION OF SURVEY RESPONDENTS

Income	Number	Percentage
5,000 or less	9	3.4
6,000 to 10,999	26	9.9
11,000 to 15,999	68	25.8
16,000 to 20,999	17	26.6
21,000 to 25,999	35	13.4
26,000 to 30,999	6	2.2
31,000 to 35,999	7	2.7
36,000 to 40,999	5	1.9
41,000 to 45,999	2	.8
46,000 to 50,999	7	2.7
More than 50,999	1	.4
No response	<u>27</u>	<u>10.3</u>
TOTAL	263	100.1

Mean = \$18.3 thousand

Standard Deviation = 10.759

TABLE 9
COMPARISON OF AVERAGE FAMILY INCOMES BETWEEN LONG ISLAND SURF FISHERMEN
AND THE RESIDENTS OF NASSAU COUNTY, SUFFOLK COUNTY, AND NEW YORK CITY

	Mean Income (Thousands)
Long Island Surf Fishermen	\$18.3
Nassau County	17.6 *
Suffolk County	13.4 *
New York City	11.6 *

* Source: 1970 U.S. Census

TABLE 10
 NUMBER OF YEARS OF PARTICIPATION IN SURF FISHING

Years	Number	Percentage
0- 5	107	40.7
6-10	52	19.8
11-15	30	11.4
15-20	38	14.4
21-25	13	5.0
26-30	8	3.2
31-35	6	2.3
36-40	4	1.5
41-45	2	.8
46-50	2	.8
50 or more	<u>1</u>	<u>.4</u>
TOTAL	263	100.0

Mean = 11.5

Median = 8.4

Standard Deviation = 10.8

Range = 54 years

TABLE 11
 COMPARISON OF AVERAGE YEARS FISHING EXPERIENCE
 BETWEEN LONG ISLAND SURF FISHERMEN
 AND FISHERMEN SURVEYED IN THREE OTHER STUDIES

Study	Years of Experience
Long Island Surf Fishermen	11.5
Six Northeastern States ¹	26.0
N.Y. Fresh Water Fishermen ²	24.0
Texas Shark Fishermen ³	19.0

¹Source: Bevins, et.al. (1968)

²Source: Moeller and Engelken (1972)

³Source: Graefe and Ditton (1976)

TABLE 12
 PREFERRED MONTHS OF THE YEAR FOR SURF FISHING

Month	Number	Percentage of Total Sample
January	6	2.3
February	11	4.2
March	54	20.5
April	142	54.0
May	183	69.6
June	203	77.2
July	206	78.3
August	223	84.8
September	240	91.3
October	223	84.8
November	173	65.8
December	22	8.4

PREFERRED FISHING MONTHS

Table 12 shows that there is a marked preference among surf fishermen for fishing during the spring, summer, and fall months. The winter months of December, January, and February were preferred by few fishermen. Preferences begin to improve during March and gradually increase to the peak period from August through October. This preference pattern approximates the migration movements of the most popular fish species (e.g., striped bass and bluefish) and the increased opportunity for catching fish.

FREQUENCY OF PARTICIPATION

Surf fishermen were asked to indicate the frequency of participation during their peak fishing season, i.e., when they were most involved in the activity. It is assumed that for most fishermen the personal fishing season coincides with the peak fishing months listed in Table 12. The figures in Table 13 show that most fishermen (60.1%) participate once or twice a week during the peak season with a significant percentage (24.3%) indicating that they fish almost every day.

DURATION (DAYS) OF THE SURF FISHING TRIP

The duration of the surf fishing trip is relatively short. More than fifty percent (52.9%) of the respondents reported trips of only one day, and 35 percent reported overnight or weekend trips. Only 7.2 percent indicated that they took extended vacation trips of three or more days.

DURATION (HOURS) OF THE SURF FISHING DAY

While some surf fishermen participate for all or most of the day, most respondents indicated much lower participation times. On the day of the survey, the average fisherman participated for just over five hours ($\bar{x} = 5.2$).

LOCATION PREFERENCES

Responses to the question of where respondents fished most often are difficult to interpret. While Jones Beach (33.8%), Smith County Park (31.9%), and Montauk State Park (37.6%) received the highest percentages of preference, these also represent the general distributions of respondents in the sample (Table 1). It seems most likely, however, based on other indicators of locational preference (e.g., nearness to home, access to beach, etc.), that most fishermen concentrate their fishing activity at one major location rather than moving from location to location.

REASONS FOR SELECTING FISHING LOCATION

In response to the question, "Why did you pick this location rather than any other location?" two factors predominated: (1) the merits or reputation of the area for fishing and (2) the nearness of the area to the respondent's home.

TABLE 13
 FREQUENCY OF PARTICIPATION

Frequency	Number	Percentage
Almost every day	64	24.3
Once or twice a week	158	60.1
Once every two weeks	23	8.7
Once a month or less	15	5.7
No response	<u>3</u>	<u>1.1</u>
TOTAL	263	99.9

TABLE 14
 DURATION (DAYS) OF THE SURF FISHING TRIP

Duration	Number	Percentage
One day trip only	139	52.9
Overnight or weekend trip	92	35.0
Trip lasting three or more days	19	7.2
No response	<u>13</u>	<u>4.9</u>
TOTAL	263	100.0

DAILY TIME PREFERENCE

A previous study by Briggs (1965) on Long Island from Jones Inlet to Shinnecock Inlet shows evidence of greater catches per effort among surf anglers fishing at night than during the day. Based on this observation, surf fishermen in this study were asked their preference for day or night fishing. Table 14 shows an almost even split between those preferring day fishing (30.0%), those preferring night fishing (32.3%), and those with no preference (36.9%).

When asked why they preferred a given time, the greatest number (Table 19) said that the fishing was better during that time. The reason for a time preference, then, is that anglers believe the fishing is better, whether in fact it is or is not.

NUMBER OF ANGLERS REPORTING CATCHES

If the results of this study are an indication, surf fishing is not a highly productive activity in terms of fish caught. Of the total, only 7.6 percent of the sample reported catching striped bass, 6.1 percent caught bluefish, 0.8 percent caught flounder, and 4.9 percent caught a variety of other species. As expected, however, striped bass and bluefish were the principal species caught, consistent with Briggs' (1965) findings. Since this study was not intended as an accurate creel census, however, these results should be taken only as a rough indication of fishing success rather than an absolute measure of number and species caught.

USE OF CATCH

Nearly all respondents (92.0%) reported that they keep their catch for eating. This finding is higher than but consistent with the results of a study of Rhode Island salt water sport fishermen (Brown, 1969).

PARTICIPATING WITH OTHERS

Surf fishing appears to be a mixed social experience. Individual fishermen at different times fish alone, with family, or with other friends on a generally equal basis (Table 22). The most notable finding is that surf fishermen seem to disassociate their work relationships and their fishing relationships. They were most emphatic in indicating that they "never" fish with occupational associates (53.6% compared to less than 25% in each of the other categories).

Attitudes, Opinions, Values

The remaining items deal with the angler's response to the entire fishing experience. These findings correspond to questions 13-16 in the questionnaire.

TABLE 15
DURATION (HOURS) OF THE SURF FISHING DAY

Hours	Number	Percentage
1	5	1.9
2	30	11.4
3	43	16.3
4	41	15.6
5	33	12.5
6	38	14.4
7	5	1.9
8	19	7.2
9	2	0.8
10	11	4.2
11	0	0.0
12	14	5.3
13	1	0.4
14	4	1.5
15	2	0.8
16	1	0.4
17	0	0.0
18	0	0.0
19	0	0.0
20	0	0.0
21	0	0.0
22	0	0.0
23	0	0.0
24	1	0.4
No response	<u>13</u>	<u>4.9</u>
TOTAL	263	100.0

Mean = 5.2

Standard Deviation = 3.48

Median = 4.5

TABLE 16
WHERE LONG ISLAND SURF FISHERMEN FISH MOST OFTEN

Location	Number	Percentage of Total
Jones Beach	89	33.8
Robert Moses State Park	20	7.6
Smith County Park	84	31.9
Montauk State Park	99	37.6
Other	31	11.8

TABLE 17
REASONS FOR SELECTING FISHING LOCATION

Reason	Number	Percentage of Total
Merits of area for fishing	104	39.5
Overall environmental merits of area	26	9.9
Multiple family uses of area	6	2.3
Familiarity with area	6	2.3
Nearness to home	108	41.1
Accessibility	14	5.3
Other	4	1.5
Don't know	5	1.9

TABLE 18
DAILY TIME PREFERENCE FOR PARTICIPATION

Time	Number	Percentage
Day	79	30.0
Night	85	32.3
No preference	97	36.9
No response	<u>2</u>	<u>.8</u>
TOTAL	263	100.0

TABLE 19
REASONS FOR DAILY TIME PREFERENCE

Reason	Number	Percentage of Total
Better fishing	79	30.0
Family related	5	1.9
Job related	5	1.9
Privacy	7	2.7
Weather conditions	27	10.3
Other	17	6.5
No response	123	46.8

TABLE 20
NUMBER OF ANGLERS REPORTING CATCHES

Species	Number of Anglers	Percentage of Total
Striped bass	20	7.6
Bluefish	16	6.1
Flounder	2	0.8
Other	13	4.9

TABLE 21
USE OF CATCH

Use	Number	Percentage
Keep for eating	242	92.0
Give away	11	4.2
Sell	1	0.9
Release	7	2.7
No response	2	0.8
TOTAL	263	100.0

TABLE 22
 FREQUENCY OF PARTICIPATION
 WITH OTHER GROUPS OR INDIVIDUALS

Group	Always	Usually	Sometimes	Never	No Response
Alone	18 (6.8%)	64 (24.3%)	116 (44.1%)	55 (20.9%)	10 (3.8%)
Family	34 (12.9%)	50 (19.0%)	109 (41.4%)	60 (22.8%)	10 (3.8%)
Occupational associates	5 (1.9%)	21 (8.0%)	79 (30.0%)	141 (53.6%)	17 (6.5%)
Other friends	32 (12.2%)	61 (23.2%)	112 (42.6%)	41 (15.6%)	17 (6.5%)

TABLE 23
VALUES ASSOCIATED WITH SURF FISHING

Category	Number	Percentage of Those Responding
1. Situation change	18	7.4
2. Self-orientation		
a) Euphoria-tension dynamic	68	28.1
b) Integrative responses	10	4.1
3. Fishing situation		
a) Person-environment	67	27.7
b) Catching fish	51	21.1
c) Other relationships	<u>28</u>	<u>11.6</u>
TOTAL	242	100.0

VALUES

In a study of sport fishermen who use boats, Spaulding (1970) measured values associated with the fishing experience by asking the question, "What would you miss most about going fishing if you had to stop doing it?" This question and Spaulding's approach to the study of values were replicated in the study of Long Island surf fishermen. Responses were assigned to one of six categories as defined in the original Rhode Island investigation. These are:

1. Situation change. Responses assigned to this category were those indicating a change of activities, change of pace, escape from routine, and the peace of mind associated with the change.
2. Self-orientation; euphoria-tension dynamic. Responses in this category relate to both the tension and release of tension associated with the fishing experience.
3. Self-orientation; integrative responses. Indications of personal integrative responses such as being able to think things through, getting a fresh look at things, lack of worry, and the like.
4. Fishing situation; relationship of person to environment. Active and passive relationships between the fisherman and the environment.
5. Fishing situation; relationship of person to act of catching fish. The suspense, anticipation, and challenge before catching fish; the act of catching fish; the relaxation, let-down, and feeling of accomplishment after catching fish.
6. Fishing situation; other relationships. Mention of attributes of the environment such as peace, quiet, and beauty of nature; interpersonal relationships expressed as concern with friends, family, or solitude.

Results of this study indicate that surf fishermen fish for a number of reasons besides catching fish. Most of the comments made by fishermen were associated with either the "euphoria-tension dynamic" (28.1%) or "fishing situation; relationship of person to environment" (27.7%). These were followed in order by the other four categories, as shown in Table 23. Catching fish is important, of course, but the implication of these findings is that surf fishermen also fulfill other values.

A direct comparison of these results with those of Spaulding is not possible because of differences in analysis. It is worth noting, however, that "self-orientation; euphoria-tension dynamic" and "self-orientation; integrative responses" ranked first and last respectively in both studies. This might suggest a common set of values among all fishermen, regardless of fishing style or location.

FACTORS CONSIDERED IN MAKING A SURF FISHING TRIP

Consideration of many factors determine whether or not a surf fishing trip is made. A few of the more important items were examined in this study. Based on the results shown in Table 24, the factors which can be divided into three major groups when ranked, "access to the shore" (64.6%), the "expectation of catching fish" (46.8%), and "reputation of the fishing waters" (45.6%) are

TABLE 24
FACTORS CONSIDERED IN MAKING A SURF FISHING TRIP

Factor	Not Very Important	Fairly Important	Very Important	No Response
Travel distance	124(47.1%)	96(36.5%)	38(14.4%)	5(1.9%)
Cost of trip	129(49.0%)	93(35.4%)	34(12.9%)	7(2.7%)
Nearby lodging	205(77.9%)	23(8.7%)	16(6.1%)	19(7.2%)
Nearby restaurants	211(80.2%)	19(7.2%)	14(5.3%)	19(7.2%)
Expectation of catching fish	58(22.1%)	73(27.8%)	123(46.8%)	9(3.4%)
Reputation of fishing waters	48(18.3%)	83(31.6%)	120(45.6%)	12(4.6%)
Other family activities	176(66.9%)	53(20.0%)	14(5.3%)	20(7.6%)
Camping facilities	164(62.4%)	44(16.7%)	41(15.6%)	14(5.3%)
Available nightlife	227(86.3%)	13(4.9%)	6(2.3%)	17(6.5%)
Access to shore	52(19.8%)	35(13.3%)	170(64.6%)	6(2.3%)

TABLE 25
FACTORS CONTRIBUTING TO THE OVERALL ENJOYMENT OF THE FISHING EXPERIENCE

Factor	Not Very Important	Fairly Important	Very Important	No Response
Privacy while fishing	72(27.4%)	116(44.1%)	65(24.7%)	10(3.8%)
Clean water	7(2.7%)	43(16.3%)	210(79.8%)	3(1.1%)
Natural beauty of the area	33(12.5%)	89(33.8%)	137(52.1%)	4(1.5%)
Size of fish caught	97(36.9%)	99(37.6%)	59(22.4%)	8(3.0%)
Number of fish caught	126(47.9%)	82(31.2%)	44(16.7%)	11(4.2%)
Pleasant companions	50(19.0%)	67(25.5%)	140(53.2%)	6(2.3%)
Weather conditions	87(33.1%)	84(31.9%)	83(31.6%)	9(3.4%)
Fight put up by fish	50(19.0%)	88(33.5%)	120(45.6%)	5(1.9%)

TABLE 26
 COMPARISON OF LONG ISLAND SURF FISHERMEN AND TEXAS SHARK FISHERMEN
 ON FACTORS CONTRIBUTING TO OVERALL ENJOYMENT
 OF THE FISHING EXPERIENCE

Factor	Rank Order L.I. Surf Fishermen	Rank Order Texas Shark Fishermen
Clean water	1	3
Pleasant companions	2	2
Natural beauty of the area	3	7
Fight put up by fish	4	1
Weather conditions	5	5
Privacy while fishing	6	4
Size of fish caught	7	6
Number of fish caught	8	8

W = .8085

clearly considered more important than the others. A second group that seems to be fairly important but by no means critical for most anglers includes "camping facilities" (15.6%), "travel distance" (14.4%), and "cost of trip" (12.9%). Those factors that were of little importance included "nearby lodging" (6.1%), "nearby restaurants" (5.3%), "other family activities" (5.3%), and "available nightlife" (2.3%).

FACTORS CONTRIBUTING TO THE OVERALL ENJOYMENT OF THE FISHING EXPERIENCE

Item 15 in the questionnaire was included to examine those factors that contribute to the total fishing experience. Responses to the previous question (Table 24) show that the act of fishing and catching fish is essential to the activity, but responses to this question (Table 25) show that several other factors are also important elements of the activity. In fact, based on a rank ordering of percentages in the "very important" response category, the factors "size of fish caught" and "number of fish caught" ranked last (rank 7 and rank 8). First ranked are (1) clean water, (2) pleasant companions, and (3) natural beauty of the area. In fourth place is the fight put up by the fish (4), followed by weather conditions (5), and privacy while fishing (6).

These results (Table 25) were compared to data from a study of Texas shark fishermen (Graefe and Ditton, 1976). In Table 26, the eight factors common to both studies are rank-ordered according to importance. Using Kendall's coefficient of concordance (W) to compare the two sets of ranks, a relatively high level of agreement (W = .8095) was found between the two groups of fishermen. This means that, in general, Long Island surf fishermen and Texas shark fishermen value the same factors and conditions of the fishing experience. The most notable exceptions occurred in the rankings for the fight put up by the fish and the natural beauty of the area. Shark fishermen were more interested in the first than the latter. While the two groups have similar expectations, we can assume that differences between the activities create differences in valued characteristics.

SALT WATER FISHING LICENSE

A license is not required now for salt water fishing in New York State. An effort was made in this study to determine surf fishermen opinions about salt water fishing licensing. Table 27 shows clearly that the majority of respondents (53.2%) were opposed to a license, and most of the remainder (41.8%) indicated they might favor a license depending on how the license fees were used.

The respondents were also asked if a salt water license were required, how should the fee money be spent. Most respondents (62.0%) thought that the money should be earmarked for salt water fishing purposes only. The remainder was generally divided between expenditure of funds for general conservation (17.5%) and for fishing only (14.1%).

TABLE 27
RESPONSE TO THE POSSIBILITY OF A SALT WATER FISHING LICENSE ON LONG ISLAND

	Number	Percentage
1. Favor license?		
a. <u>No.</u> , do not favor under any circumstances	140	53.2
b. <u>Might favor</u> depending on what the license fee was used for	110	41.8
c. <u>Yes</u> , favor the plan under any circumstances	11	4.2
d. No response	<u>2</u>	<u>0.8</u>
TOTAL	263	100.0
2. If license required, how should revenue be spent?		
a. For general state purposes	2	0.8
b. For general N.Y. State Conservation fund	46	17.5
c. For fishing only (salt or fresh water)	37	14.1
d. For salt water fishing only	163	62.0
e. No response	<u>15</u>	<u>5.7</u>
TOTAL	263	100.0

SUMMARY AND CONCLUSIONS

Returning to the original objectives of the study, it is possible, on the basis of these results, to draw certain conclusions regarding the nature of Long Island surf fishermen. These identify the surf fisherman demographically and provide some insights into his interests and opinions.

Demographic Characteristics

Long Island surf fishermen are predominantly male and they are largely local or regional residents. With more than 90 percent of all surf fishermen coming from the Long Island and New York City region, surf fishing is not a major tourist activity that draws participants from remote, out-of-state locations. Intra-regional travel (e.g., New York City to Montauk) may be important, however, in certain localities.

Surf fishing is not specific to any age or occupational group, except that the sample of Long Island surf fishermen seemed to have a higher proportion of professionals, technicians, and farm laborers than the general population. The surf fishermen sampled also had relatively high family incomes, which may be typical of new participants.

Activity Characteristics

It was found that, on the average, Long Island surf fishermen have participated in the activity for fewer years than fishermen surveyed in other studies. Several explanations might be offered for this phenomenon, but without previous participation data we cannot identify any specific trend. The most likely explanation seems to be that the number of surf fishermen is growing as a result of rising levels of disposable income, free time, mobility, and total population. This, we know is true of other outdoor recreation activities. On the national level, the 1970 National Survey of Fishing and Hunting found an increase of more than a million salt water fishermen between 1976 and 1970. If Long Island surf fishing is part of this trend, more new surf fishermen can be expected in the future.

When do surf fishermen fish? The most preferred months are March through November, which generally coincide with the movements and availability of the most popular game species of fish caught in the surf. During the peak fishing season, most surf anglers fish once or twice a week with a notable percentage (24.3%) fishing almost every day. For the most part these were only day trips or overnight/weekend trips, a finding that holds with the regional residency pattern of survey respondents. While some anglers prefer fishing at night and some prefer fishing during the day, no predominant daily time preference was found.

Surf fishing is not a highly productive activity in terms of number or pounds of fish caught. Only a small percentage of the sample reported catching fish. For the most part, however, what is caught is eaten. While the expectation of catching fish is important to fishermen, other qualities of the total experience are also important. Some of these have been examined in other sections of this report.

Finally, there is variety in what constitutes a fishing group or party. Sometimes the surf angler fishes alone, sometimes with family, and sometimes with friends. It is clear, however, that his fishing time is separate from his work time, and occupational associates are rarely included in the fishing party.

Attitudes, Opinions, Values

The question of why fishermen fish is important to the planner and manager of coastal resources. This study and others conducted with a variety of salt and fresh water fishermen have found that many factors are involved in the decision to fish and many factors determine whether the fishing experience is a successful one.

Surf fishing is a variable and personal experience as shown by the results of the questionnaire item on values based on the work of Spaulding and his study of Rhode Island fishermen. Some fishermen seek a change of routine; others find satisfaction in the challenge or aesthetics of the environment. For whatever personal reason, it was also found that size and number of fish caught are relatively unimportant in the total experience. Other factors, such as clean water, pleasant companions, and the natural beauty of the fishing area were of greater value to the individual fisherman. These are contingent, of course, upon some reasonable expectation of catching fish. Among the more important factors in deciding whether or not to make a fishing trip were access to shore, the expectation of catching fish, and the reputation of the fishing waters. As a general conclusion, then, it seems clear that the future of surf fishing on Long Island depends on two primary conditions: (1) protecting the basic resource (i.e., the availability of game species of fish and access to the shoreline) and (2) planning and management that considers those environmental and psycho-social variables that contribute to the overall quality of the surf fishing experience.

REFERENCES

- Bevins, M.I.; Bond, R.S.; Corcora, T.J.; McIntosh, K.D.; and McNeil, R.J. Characteristics of Hunters and Fishermen in Six Northeastern States. University of Vermont, Agric. Exp. Stn. Bull. 656, 1968.
- Briggs, Philip T. "The Sport Fishery In The Surf On The South Shore Of Long Island From Jones Inlet To Shinnecock Inlet." New York Fish and Game Journal 12 (January 1965): 31-47.
- Briggs, Philip T. "The Sport Fisheries of Great South Bay and Vicinity." New York Fish and Game Journal 9 (January 1962): 1-36.
- Brown, Edgar Sheffield Jr. "Socio-economic Aspects of Salt Water Sport Fishing On The South Shore of Rhode Island." M.S. thesis, University of Rhode Island, 1969.
- Bryan, Richard C. The Dimensions of a Salt-water Sport Fishing Trip or What Do People Look for in a Fishing Trip Besides Fish? Vancouver: Environment Canada, Fisheries and Marine Service, Southern Operations Branch, Pacific Region (PAC/T-71-1), n.d.
- Graefe, Alan R. and Ditton, Robert B. Recreational Shark Fishing on the Texas Gulf Coast: An Exploratory Study of Behavior and Attitudes. MFR Paper 1175. From Marine Fisheries Review, Vol. 38, No. 2, February 1976.
- Moeller, George H. and Engleken, John H. "What Fishermen Look For In A Fishing Experience." Journal of Wildlife Management 36 (October 1972): 1253-7.
- Ryan, Richard C. "Enjoying Long Island." The Conservationist (August-September 1972): 24-25.
- Spaulding, Irving A. "Occupational and Free-Time Activities: Euphoria Tension Levels and Selected Influencing Factors." University of Rhode Island. Agricultural Experimental Station. Bulletin 393, 1967.
- Spaulding, Irving A. "Occupation, Recreation and Phasic Commutation: Selected Rhode Island Sport Fishermen." University of Rhode Island. Agricultural Experimental Station. Bulletin 405, 1971.
- Spaulding, Irving A. "Selected Rhode Island Sport Fishermen and Their Fishing Activity." University of Rhode Island. Agricultural Experimental Station. Bulletin 403, 1970.
- U.S. Department of the Interior, Bureau of Outdoor Recreation. The 1970 Survey of Outdoor Recreation Activities. Washington, D.C.: U.S. Government Printing Office, 1970.

APPENDIX
SURVEY QUESTIONNAIRE

A Survey of Long Island
Surf Fisherman

A study conducted by the
State University of New York
at Cortland and the
New York Sea Grant Institute

Your answers to the following questions will help us
develop a composite picture of Long Island surf fishermen.
You need not sign this questionnaire. All answers are confidential.

Thank you for your cooperation.

1. Approximately how long have you been a surf fisherman?
 years

2. During which of the following months do you go surf fishing? (Check one or more)

<input type="checkbox"/> January	<input type="checkbox"/> July
<input type="checkbox"/> February	<input type="checkbox"/> August
<input type="checkbox"/> March	<input type="checkbox"/> September
<input type="checkbox"/> April	<input type="checkbox"/> October
<input type="checkbox"/> May	<input type="checkbox"/> November
<input type="checkbox"/> June	<input type="checkbox"/> December

3. During your peak fishing season, how often, on the average, are you likely to go surf fishing?
 - (1) Almost everyday
 - (2) Once or twice a week
 - (3) Once every two weeks
 - (4) Once a month or less

4. When you go surf fishing, what is usually the nature of your total trip?
 - (1) One-day trip only
 - (2) Overnight or week-end trip
 - (3) Trip lasting three or more days

5. If you stay one or more nights for a surf fishing trip what type of accommodations are you most likely to use?
 - (1) Never stay overnight
 - (2) Camping
 - (3) Motel
 - (4) Housekeeping cabin
 - (5) Stay with friends or relatives
 - (6) Other: (Please specify) _____

6. Where do you surf fish most often? (e.g., Jones Beach, Montauk)
7. Why did you pick this location rather than any other location?
8. a. Do you prefer to surf fish during the day or during the night?
____ (1) Day
____ (2) Night
____ (3) No preference
b. Why do you prefer this time?
9. Approximately how long did you fish today?
____ hours
10. Please record your catch today by kind (species) and number of fish.
(Example: 3 Stripers, 3 Blues)
11. What do you do with the fish you catch?
____ (1) Keep for eating
____ (2) Give away
____ (3) Sell
____ (4) Release or return to the ocean
____ (5) Feed to pets
12. How often do you go fishing with each of the following individuals or groups?
a. Alone
____ (1) always
____ (2) usually
____ (3) sometimes
____ (4) never
b. Family
____ (1) always
____ (2) usually
____ (3) sometimes
____ (4) never

12. cont.

- | | |
|----------------------------|-------------------|
| c. Occupational Associates | d. Other Friends |
| ___ (1) always | ___ (1) always |
| ___ (2) usually | ___ (2) usually |
| ___ (3) sometimes | ___ (3) sometimes |
| ___ (4) never | ___ (4) never |

13. What would you miss most about going fishing if you had to stop doing it?

14. When you are thinking about making a trip to go surf fishing, how important are each of the following factors? Please circle one number for each factor.

	Not Very Important	Fairly Important	Very Important
a. Distance to travel	1	2	3
b. Cost of the trip	1	2	3
c. Lodging facilities nearby	1	2	3
d. Restaurants nearby	1	2	3
e. Expectation of catching fish	1	2	3
f. Reputation of fishing waters	1	2	3
g. Other family activities in the area	1	2	3
h. Camping facilities nearby	1	2	3
i. Nightlife available in the area	1	2	3
j. Access to shore	1	2	3

15. When you surf fish, how important are each of the following factors for your total enjoyment? Please circle one number for each factor.

	Not Very Important	Fairly Important	Very Important
a. Privacy while fishing	1	2	3
b. Clean fishing waters	1	2	3
c. Natural beauty of the area	1	2	3
d. Size of fish caught	1	2	3
e. Number of fish caught	1	2	3
f. Pleasant companions	1	2	3
g. Weather conditions	1	2	3
h. Fight put up by fish	1	2	3

16. There has been talk over the years of requiring all salt water fishermen on Long Island to buy a fishing license.

a. Would you favor such a plan?

___ (1) No, do not favor under any circumstances

___ (2) Might favor depending on what the license fee was used for

___ (3) Yes, favor the plan under any circumstances

b. If for some reason a fishing license was required (even though you may not agree with it), how do you think the money should be used?

___ (1) For general state purposes

___ (2) For the general New York State Conservation fund

___ (3) For fishing only (salt or fresh water)

___ (4) For salt water fishing only

PLEASE ANSWER THE FOLLOWING QUESTIONS ABOUT YOURSELF:

17. What is your age?

___ years

18. What is your sex?

___ Male

___ Female

19. Where do you live?

City/Town

State

20. What type of work do you do? (Example: Salesman, Laborer, Carpenter, etc.)

21. Please circle the number below that best describes your TOTAL HOUSEHOLD INCOME, before taxes, in thousands of dollars.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50 Or Over

Thank you for taking the time to complete this questionnaire.

Your cooperation is greatly appreciated.

Please use the remainder of this page for other comments or suggestions you may have.