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# ALABAMA SEA GRANT EXTENSION BULLETIN

MISSISSIPPI-ALABAMA SEA GRANT CONSORTIUM—A SEA GRANT COLLEGE

## SHRIMP FISHING GEAR AND PRACTICES IN BAYOU LA BATRE, AL: A SURVEY

**LEAN COPY ONLY**

by Richard K. Wallace<sup>1</sup> and Steve Thomas<sup>2</sup>

During the summer of 1985, Dr. Steve Thomas, an anthropologist at the University of South Alabama, conducted a survey among shrimp fishermen in Bayou La Batre, Alabama. Dr. Thomas and his assistants interviewed 150 captains, asking over 70 questions about their boats, equipment, home life and social attitudes. The results of the survey provide the only known profile of the shrimp fishing fleet in Bayou La Batre. We present here some of the findings on the size of boats, fishing equipment and fishing patterns.

The survey asked each captain whether he considered himself to be an "Inshore", "Offshore" or "Inshore/Offshore" fisherman. Seventy-five captains responded "Inshore", 20 "Inshore/Offshore" and 53 "Offshore". Table 1 provides information about the shrimp boats in these three categories. Under each category, average is the sum of the responses (for example, boat length) divided by the number of captains who answered the question. Range refers to lowest and highest values given and N is the number of captains answering the question.

Table 1. Characterization of equipment used in three types of shrimp fishing.

Equipment	TYPE OF FISHING								
	Inshore			Inshore/Offshore			Offshore		
	Avg	Range	N	Avg	Range	N	Avg	Range	N
Boat Length (Ft.)	48.9	27-84	75	72.0	53-90	20	79.5	57-92	53
Boat Age (Yrs.)	15.3	.2-55	74	9.9	1-47	20	7.2	0-21	52
Horse Power	219.7	65-495	62	379	165-730	18	436	225-700	47
Cylinder	6.7	3-16	73	10.1	6-24	20	10.1	4-16	50
Number of Nets	8.6	1-25	75	10.5	6-23	20	10.3	4-16	53
Boat Value (\$)	81,513	11-350,000	74	271,200	40-575,000	20	329,489	100-555,000	49

<sup>1</sup> Alabama Sea Grant Advisory Service

<sup>2</sup> University of South Alabama

As would be expected, "Inshore" boats are generally smaller, older and of less value than "Inshore/Offshore" or "Offshore" boats. "Inshore/Offshore" boats were similar to offshore boats but tended to slightly smaller, with less horse power and have slightly lower value.

Table 2 continues the comparison of the three different fishing types with regard to fishing patterns. Inshore fishermen make more trips, have a shorter season and lower costs than the other two categories.

Table 2. Characterization of fishing activity in three types of shrimp fishing.

Activity	TYPE OF FISHING								
	Inshore			Inshore/Offshore			Offshore		
	Avg	Range	N	Avg	Range	N	Avg	Range	N
Trips/Year	31.9	6-99	68	19.2	10-32	20	18.0	10-40	53
Trips/Month	4.2	1-20	72	2.2	1-4	19	1.7	1-5	51
Months Shrimp	8.0	1-12	75	10.4	6-12	20	11.1	7-12	53
Down Time (Days)	18.5	0-100	67	13.4	0-49	19	25.9	0-100	48
Cost/Trip (\$)	987	75-7,500	70	4,394	850-15,000	19	6114	2100-10,000	52

One problem constantly facing shrimp boat captains is that of choosing the most efficient size trawl door. Overly large doors may increase fuel consumption with little or no increase in net spread while small doors may underspread a net. The National Marine Fisheries Service has determined that a conventional shrimp trawl should use doors that have about 70-80 square inches of door surface area per foot of trawl headrope, while 60-75 square inches per foot of headrope works well with tongue or bib trawls. (A 9-foot by 40-inch door has 4,320 square inches. When used with a 50-foot net, the square inches per foot of headrope is 4,320 divided by 50 equal 86.4 square inches per foot of headrope.) Table 3 gives some examples of door size and net lengths with the corresponding square inches per foot of headrope for reference.

Table 3. Examples of square inches of trawl door per foot of trawl headrope for common door sizes and headrope lengths.

Door Size (Ft. x In.)	HEADROPE LENGTH (FT.)					
	70	60	50	40	30	25
	Door Size Per Head Line Length (Square inches/feet)					
10 x 44	75.4	88	105.6			
9 x 40	61.7	72	86.4	108.0		
9 x 36	55.5	64.8	77.8	97.2	129.6	
8 x 40	54.8	64.0	76.8	96.0	128.0	
8 x 36	49.4	57.6	69.1	86.4	115.2	138.2
7 x 32	38.4	44.8	53.8	67.2	89.6	107.5
6 x 30	30.8	36.0	43.2	54.0	72.0	86.4
5 x 30			36.0	45.0	60.0	72.0

The survey asked captains about their nets and doors which we converted to square inches of door per foot of headrope. Table 4 shows the percentage of "Inshore" fishermen and "Inshore/Offshore" combined with "Offshore" fishermen using various size ranges of doors. There did not seem to be any consensus door size among the "Inshore" fishermen, but the majority appear to be close to the National Marine Fisheries Service recommendations. All of the fishermen in the "Inshore/Offshore" plus "Offshore" group were using twin rigs (two doors and a sled for two nets) so that comparisons to the National Marine Fisheries Service recommendations and the "Inshore" group (single rig) are not appropriate. It is interesting to note that the twin rig apparently permits the use of much smaller doors than the single rig.

Table 4. Percentage of captains in two types of shrimp fishing using various size trawl doors expressed as square inches of door per foot of headrope (42 and 25 respondents respectively).

Door Size Sq. in./ft. of headrope	TYPE OF FISHING	
	Inshore (Single Rig)	Inshore/Offshore + Offshore (Twin Rigs)
PERCENTAGE		
31 - 50	4	68
51 - 70	38	32
71 - 90	28	
91 - 110	4	
111 - 130	23	

When the "Inshore" fishermen are broken into two groups - one using 40-60 foot nets and one using 20-35 foot nets - it appears that the 20-35 foot net group is using proportionately larger doors (Table 5).

Table 5. Percentage of captains in the inshore shrimp fishery using various size trawl doors (18 respondents in each group).

Door Size Sq. in./ft. of headline	INSHORE (Single Rigs)	
	Headrope 20 - 35 ft.	Headrope 40 - 60 ft.
31 - 50		5
51 - 70		83
71 - 90	44	11
91 - 110	11	
111 - 130	44	

Among the information received from the survey are various findings which we found interesting and are presented for your information.

- 1) Obtaining adequate insurance has been an increasingly important problem in the fishing industry. Forty-eight percent of "Inshore" fishermen indicated they had insurance while 100 percent and 98 percent of the "Inshore/Offshore" and "Offshore" group respectively had insurance.
- 2) Fishermen were asked if they would advise a young man to go into shrimping. One hundred and twelve answered no while 32 said yes. Reasons for not going into shrimping were (a) the uncertain future, (b) a dying industry, (c) cannot make a living and (d) too many fishermen already. The only reason for going into fishing that stood out was "if you really like it".
- 3) When asked what year was the best shrimping year, 29 said 1984 and 11 said 1979. When asked what the worst year was, 30 said 1984 and 10 said 1983.
- 4) Opinions on shrimping regulations were as diverse as those on good years and bad years. Table 6 summarizes regulations that shrimp captains like while Table 7 summarizes regulations they dislike.

Table 6. Percentage of captains indicating they like a particular regulation (150 respondents).

Regulations Liked	
Opening & closing	29%
Net restrictions	13%
Court laws	10%
Nature of enforcement	10%
Other	38%

Table 7. Percentage of captains indicating they dislike a particular regulation (150 respondents).

Regulations Disliked	
Opening & closing	40%
Lack of enforcement	14%
Other	46%

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This work is a result of research sponsored by NOAA Office of Sea Grant, Dept. of Commerce, under Grant No. NA85AA-D-SG006. Issued in furtherance of Cooperative Extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. The Alabama Cooperative Extension Service, Auburn University, Ann E. Thompson, Director, offers educational programs and materials to all people without regard to race, color, national origin, sex, age, or handicap and is an equal opportunity employer.