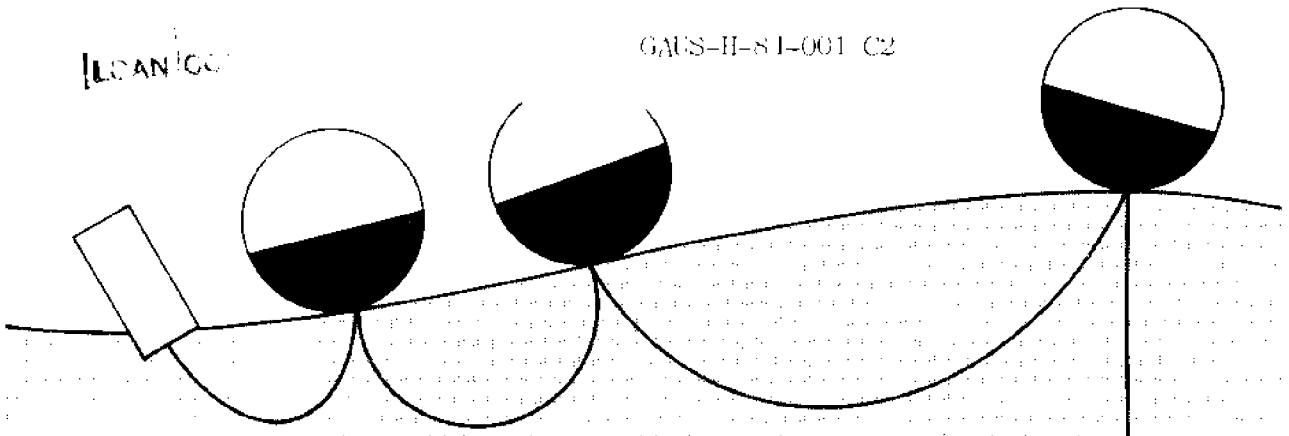

# USING SHRIMP BOATS FOR FINFISHING

## A SUMMARY OF GEORGIA'S COOPERATIVE FINFISH DEVELOPMENT AND FISHING DEMONSTRATION PROJECT FOR 1982

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## A Summary of Georgia's Cooperative Finfish Development and Fishing Demonstration Project for 1982



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## LIST OF FIGURES

Figure 1. Diagram of a Captain Moore Grouper Trap

Figure 2. Diagram of a South Florida Grouper Trap

Figure 3. Diagram of a Chesapeake Bay Crab Trap

Figure 4. Diagram of a Double Chesapeake Bay Crab Trap

Figure 5. Diagram of an S-Trap

Figure 6. Diagram of a typical snapper reel

Figure 7. Diagram of a bottom longline

Figure 8. Diagram of a snood used on bottom longline gear

Figure 9. Primary areas of fishing effort by the captains participating in the Cooperative Venture Project for 1982

## LIST OF TABLES

Table 1. Information on fish trapping by trip for Captains Crosby, Webster, and Blackston, Cooperative Venture Project for 1982

Table 2. Catch and trip information for Captains Crosby, Webster, Blackston, Blackwelder, and Knight, Cooperative Venture Project for 1982

Table 3. Readings of specific areas compiled by all the participants of the Cooperative Venture Project for 1982

Table 4. Monthly ex-vessel prices per pound received for gutted fish during the Cooperative Venture Project for 1982

## TABLE OF CONTENTS


List of Figures ii

List of Tables ii

Introduction 1

Methods 2

Nets 3

Traps 4

Handlining 4

Bottom Longlining 4

Results and Discussion 5

Summary 8

Figures 9

Tables 18

Appendix 26


## INTRODUCTION

Dependence on shrimping alone, even though it is Georgia's major seafood industry, is financially precarious. In recent years weather-caused disasters, escalating fuel costs, and increasing numbers of vessels have squeezed profit margins to the breaking point. Because of the apparent need for off-season fishing to supplement the shrimpers' income, a cooperative venture project was undertaken in 1982 by the shrimping industry, government, and academia.

Earlier exploratory fishing efforts of the National Marine Fisheries Service, the National Sea Grant College Program, and ongoing research by The University of Georgia Sea Grant College Program provided the basis for expansion into alternative offshore fisheries. In the winter of 1982, the Gulf and South Atlantic Fisheries Development Foundation, Inc., the Georgia Sea Grant College Program, and five shrimp boat captains began a cooperative program to determine how shrimp boats could be used for offshore finfishing.

This report summarizes the findings and includes fishing methods, areas discovered and fished, catch results, and comments on gear and equipment modification. These fishery exploratory cruises were made in conjunction with The University of Georgia's research vessel, the GEORGIA BULLDOG.

## METHODS

All boats involved were cabin-forward shrimp boats typical of the Southeastern double-rigged shrimp fishery.

The five cooperating captains, essential boat characteristics, and fishing methods are as follows:

* Captain Leonard Crosby
  Boat Name: *MISS DENISE*
  Size: 57 ft., LOA
  Hull: Fiberglass, tunnel drive
  Engine: Detroit, V8-71, 4.5:1 reduction gear
  Winch: Stroudsburg 515½T
  Fishing Method: Trapping and handlining

* Captain Joe Webster
  Boat Name: *PO BOY*
  Size: 72 ft., LOA
  Hull: Wood, Desco
  Engine: CAT 3408, 6:1 reduction gear
  Winch: Stroudsburg 515½T
  Fishing Method: Trapping, bottom longlining, and handlining

* Captain A.S. Blackston
  Boat Name: *JULIE II*
  Size: 64 ft., LOA
  Hull: Fiberglass, tunnel drive
  Engine: CAT 3408, 4.5:1 reduction gear
  Winch: Stroudsburg 518
  Fishing Method: Trapping, handlining, and fish trawling

* Captain C. Poe Blackwelder
  Boat Name: *SHERRILL ANN*
  Size: 67½ ft.
  Hull: Fiberglass, tunnel drive
  Engine: Detroit V12-71, 4:1 reduction gear
  Winch: Stroudsburg 515½T
  Fishing Method: Bottom trawling and handlining

* Captain Robert E. Knight
  Boat name: *MY GIRLS*
  Size: 72 ft., LOA
  Hull: Wood
  Engine: Detroit V12-71, 6:1 reduction gear
  Winch: Stroudsburg 520
  Fishing Method: Double rigged fish trawling, trapping, and handlining

Four alternative fishing methods were identified as appropriate for shrimp boats on the southeastern Atlantic coast. Bottom trawling (single- and double-rigged), trapping, bottom longlining, and handlining were selected because of conversion ease and relatively low cost. The following four sections describe the gear used by each captain.

## NETS

The basic net type used for bottom trawling by each of the participating captains was a modified crab net. Captain Knight pulled two modified crab trawls simultaneously (double-rigged trawling), as a shrimper would pull his trawls. These nets were 55½′ flat nets modified by the addition of a triangular tongue to the headrope, which increased the length to 75′. Both nets had 3″ stretched mesh cod ends. Texas drop chains with 6″-diameter plywood "flippers" were attached to one net. Cookies, which are 3″-diameter rubber discs cut out of truck tires, were attached to the sweep line of the other net. Both nets were constructed of 4″ stretched mesh No. 24 nylon webbing. Hard plastic 8″-diameter floats were attached to the headrope of each net. Each net was spread with 10′ × 40″ shrimp doors.

Captain Blackston fished one 60′ crab trawl constructed of 4″ stretched No. 24 nylon webbing. The net was modified by adding a tongue and 6″-diameter hard plastic floats to the headline. Plastic mud rollers were added to the sweep line. The net was spread with 6′ steel V-doors and was towed from a block mounted in the center of the outrigger, with an additional staywire added for strength.

Captain Blackwelder fished one 65′ crab trawl without a tongue and with ground gear modified by adding plastic mud rollers. The net was first spread by 8′ × 40″ wooden shrimp doors, but later 8′ × 44″ doors were used because the smaller ones would not spread the net properly. The net was towed from a block mounted in the center of the outrigger, with additional staywire added for strength.

## TRAPS

Five different traps were used—the Captain Moore Grouper Trap (Figure 1), the South Florida Grouper Trap (Figure 2), the Chesapeake Bay Crab Trap (Figure 3), the Double Chesapeake Bay Crab Trap (Figure 4), and the S-Trap (Figure 5). At first, bait was tied into traps in cloth sacks or put into plastic jars in which holes had been drilled. Dissatisfaction with these baiting methods was overcome by adding 1″ × ½″ wire bait wells. Table 1 lists the various traps used by each captain.

## HANDLINING

Snapper reels (Figure 6) were used to supplement the catch while traps were soaking, but their main use was for verification of fish species indicated on echo sounders. Table 1 lists the captains who used snapper reels.

## BOTTOM LONGLINING

Bottom longline gear (Figures 7 and 8) was tested by Captain Webster. The gear consisted of one mile of ¼″ galvanized aircraft cable to which 18″ to 20″ long monofilament snoods were attached with snap-on connectors. Hooks used were Number 4 and Number 5 tuna circle hooks. The mainline was weighted with sash weights (15 pounds) at one end and buoyed at the other end with three 60″-circumference inflatable longline floats on 1200 feet of ⅜″-diameter polypropylene buoyline. All sets were made with the tide. Whole squid and cut scrap fish were used for bait. The line was set and retrieved by the vessel's trynet winch.

## RESULTS AND DISCUSSION

The major goal of this project was to determine the best ways to adapt shrimp boats to other types of fishing. Each captain and crew had to become familiar with the new gear and make modifications to suit their needs. Much fishing time was also spent searching for appropriate fishing areas. The results of this report neither eliminate from further consideration any one diversification technique nor choose one technique to be best suited for shrimp boats. This report gives the results of the five captains' experiences in diversification.

### THE CATCH

Total combined catch of all participating vessels (Table 2) was 10,242 pounds of species predominantly in the snapper-grouper complex. Black sea bass, red porgy, whitebone porgy, and grouper were caught in the highest poundages (Appendix 1). Because more than one method was used at the same time on several boats, catch by each of four fishing methods cannot be identified specifically. Average catch was 569 pounds per two- to five-day trip. Trapping, longlining, and reel fishing were often carried out on the same trip, with the average being 585 pounds per trip. Although the highest poundage caught on one trip was from trawling (1,438 pounds), the average was only 528 pounds per trip. This was below expected catch levels because new trawl modifications were being tested for the first time.

### GEAR: CRAB NETS

Modified crab nets were tested as trawling gear. Unfortunately, these standard, easily available crab nets did not produce the expected catches. The nets were much too light for offshore trawling. The light plastic or plywood mud rollers were not strong enough and the cookies not large enough to prevent net damage, and thus too much time was spent repairing gear. Also, considerable damage occurred to the wooden shrimp doors on the rough bottom, making them ineffective. Captain Knight concludes, "Just gearing up with crab nets and running offshore will not work." Captain Knight also discovered that towing two nets at a time was not an effective technique for bottom trawling. Captains who used the crab nets thought that stronger nets with roller gear and steel doors should be used to fish rough bottoms off the Georgia coast.

### GEAR: FISH TRAPS

Fishermen who used fish traps (Table 1) were enthusiastic about their results during this study. They made consistent catches with only 7 to 18 traps—an extremely small number compared to the number fished by full-time trap fishermen in South Florida. Trapping was concentrated in two areas (Figure 9). In one area, 40 miles offshore at depths of 75 to 115 feet, the catch was mainly black sea bass and red porgy. Red porgy and grouper were the predominant catch in the second area, 60 to 65 miles offshore at depths of 200 to 250 feet, and more of the valuable red snapper were caught there as well.

Fishermen checked the traps every three hours during the daytime and fished one set overnight. Proper trap placement was important. Captain Webster discovered that he had to place the traps right on the fish. To do this, he had to pass over the fish mark, steaming into the current and letting the trap drift back onto the spot.

Captain Crosby noted that overnight sets produced a higher yield per trap than did daytime sets, but nighttime sets of only three hours each were not as effective as those in daylight of three hours' duration. He also noted that trapping on bright, moonlit evenings with a rising barometer gave higher yields than on darker nights.

The Chesapeake Bay Crab Trap outfished all other traps for catching black sea bass. Captains Crosby and Blackston felt that no other trap types would be needed to fish successfully for the black sea bass where they were plentiful, in the live-bottom areas 40 miles offshore.

Trapping was not without its problems, nor the fishermen without solutions. The larger grouper traps did not produce as well as Captain Webster expected on the first trip. He thought that the stiff wire entrance funnels were inhibiting the entrance of larger fish. To solve this, he cut out the stiff muzzles and replaced them with more flexible crab trap muzzles (Figure 1), and then caught more large fish. Other captains who made similar modifications also saw an increase in the size of the fish caught, especially grouper. For example, 300 pounds of grouper and snapper were caught from two modified traps that soaked three hours each.

A problem faced by all captains trying to use shrimp boats for trapping is the slowness of the cathead used to retrieve the traps. Captain Webster, who fished primarily at 200- to 250-foot depths, bypassed the reduction gear in his winch to solve this problem. He mounted his cathead onto the trynet drive shaft—instead of the usual drum shaft—which allowed the cathead to turn much faster. With this modification, trap retrieval time was greatly reduced.

Another problem was the quality of sounding equipment used. Typical shrimp boats are equipped with echo sounders, which work fine for inshore shrimping but do not mark large individual fish at depths of 200 to 250 feet. One captain concluded that a more powerful sounder with a narrow beam angle, such as 10 degrees, was needed.

## GEAR: BOTTOM LONGLINING

Captain Webster was the only captain to try bottom longlining. He concluded that one large piece of cable (5,000') seemed too long to fish for grouper and snapper on patchy hard bottom areas. He suggested using three shorter 1,300' pieces fished side by side where fish concentrations were the greatest.

Captain Webster discovered that if he buoyed off his bottom longline in swift offshore currents, the ⅜" polypropylene buoyline created too much resistance in the water and caused the buoys to submerge. Captain Webster then began using ⅛" steel cable with a 2:1 scope, which solved the problem.

The GEORGIA BULLDOG was having similar buoyline difficulty with its bottom longline operations, and adopted Captain Webster's suggestion. This method was successful, and an additional advantage was gained because the ⅛"-diameter steel cable is much stronger than the ⅜"-diameter polypropylene line.

## BAIT TYPES

Various bait types were tried (Table 1) for both fish trapping and handlining. Captains using fish traps preferred cigar minnows for bait. Captains using handlines preferred squid and cigar minnows.

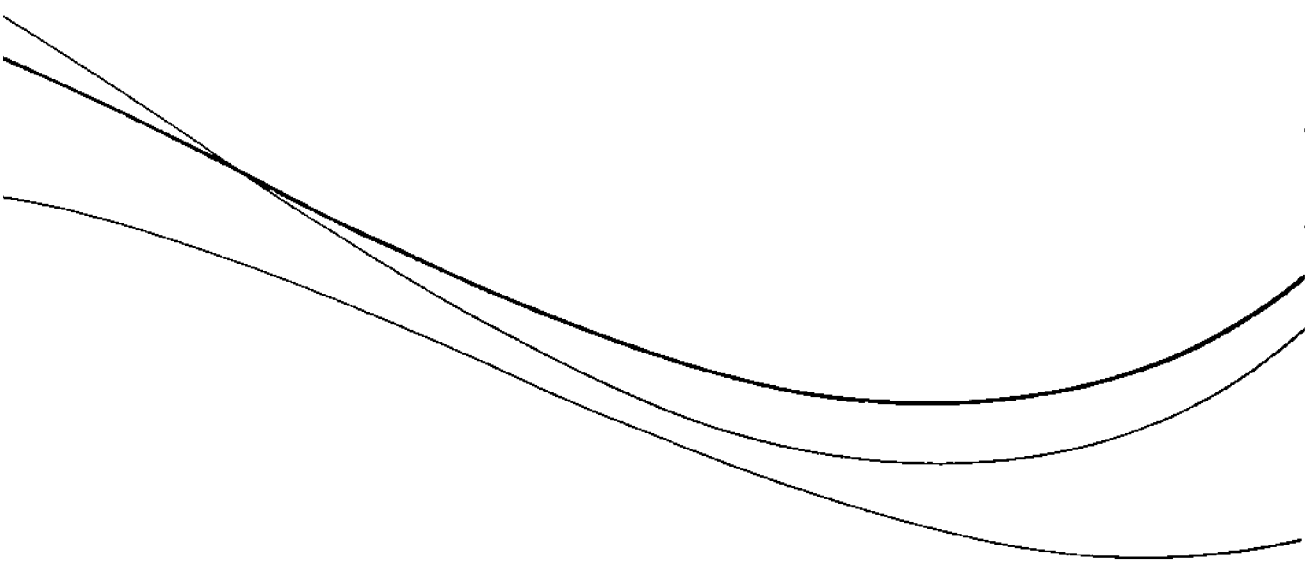
## SUMMARY

The most significant accomplishment of this project was that the captains realized they could successfully diversify their boats and make money. Each trip offshore was a personal success for the captains. Using the fishermen's ideas, several excellent modifications in gear were developed. New fishing areas were discovered and shared among interested captains. A list of Loran C readings with comments after each is given in Table 3.

Fish house operators who sold the catches also recognized the benefits of shrimp boat diversification. Otherwise inactive docks were busy unloading, grading, packing, selling, and shipping fish. The research vessel GEORGIA BULLDOG made seven trips during the 1982 off-season period, shipping 26,316 pounds of drawn fish to market. The dock managers gained experience in marketing, grading, and packing the finfish.

Ex-vessel prices received for the fish caught (Table 4) by the participating captains and The University of Georgia's research vessel show large price variations, corresponding to different fish sizes. Black sea bass, for instance, have a price range of $.40/lb. for small fish (less than ½ lb.), to $1.25/lb. for large fish (greater than 2 lbs.). It is interesting to note that in September 1981, large fish sold as high as $2.40/lb. This is usually the case with other fish species; larger fish command better prices. (An exception is the red snapper, which tends to have an even price range throughout the different size classes, and sometimes small red snapper commands a better price than large red snapper.) Therefore, it is important to check with the fish buyer before unloading to see what size classes he wants, and to sort the catch into size classes before shipping.

Overall, the participating captains felt that there was potential for offseason income from finfishing.



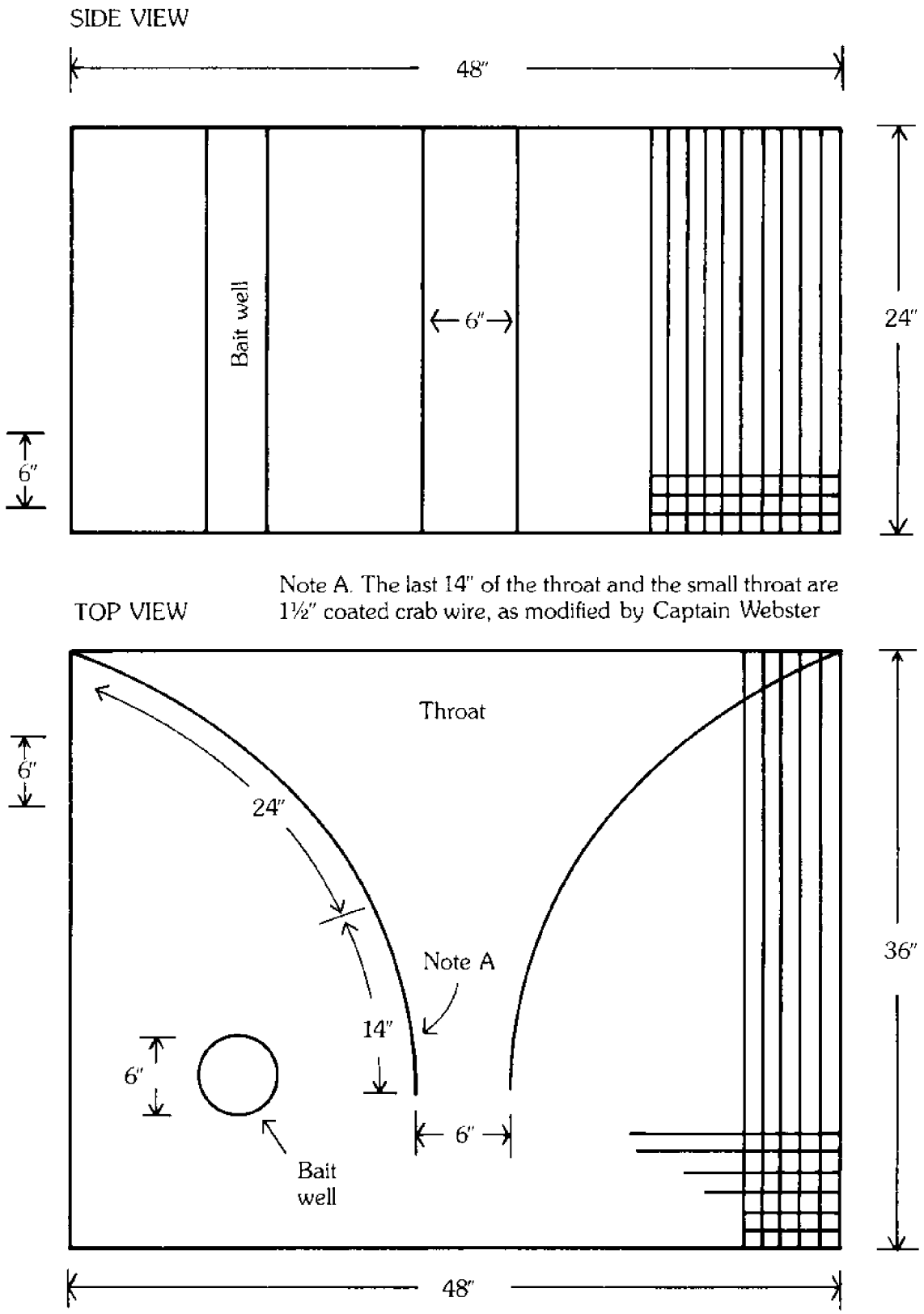
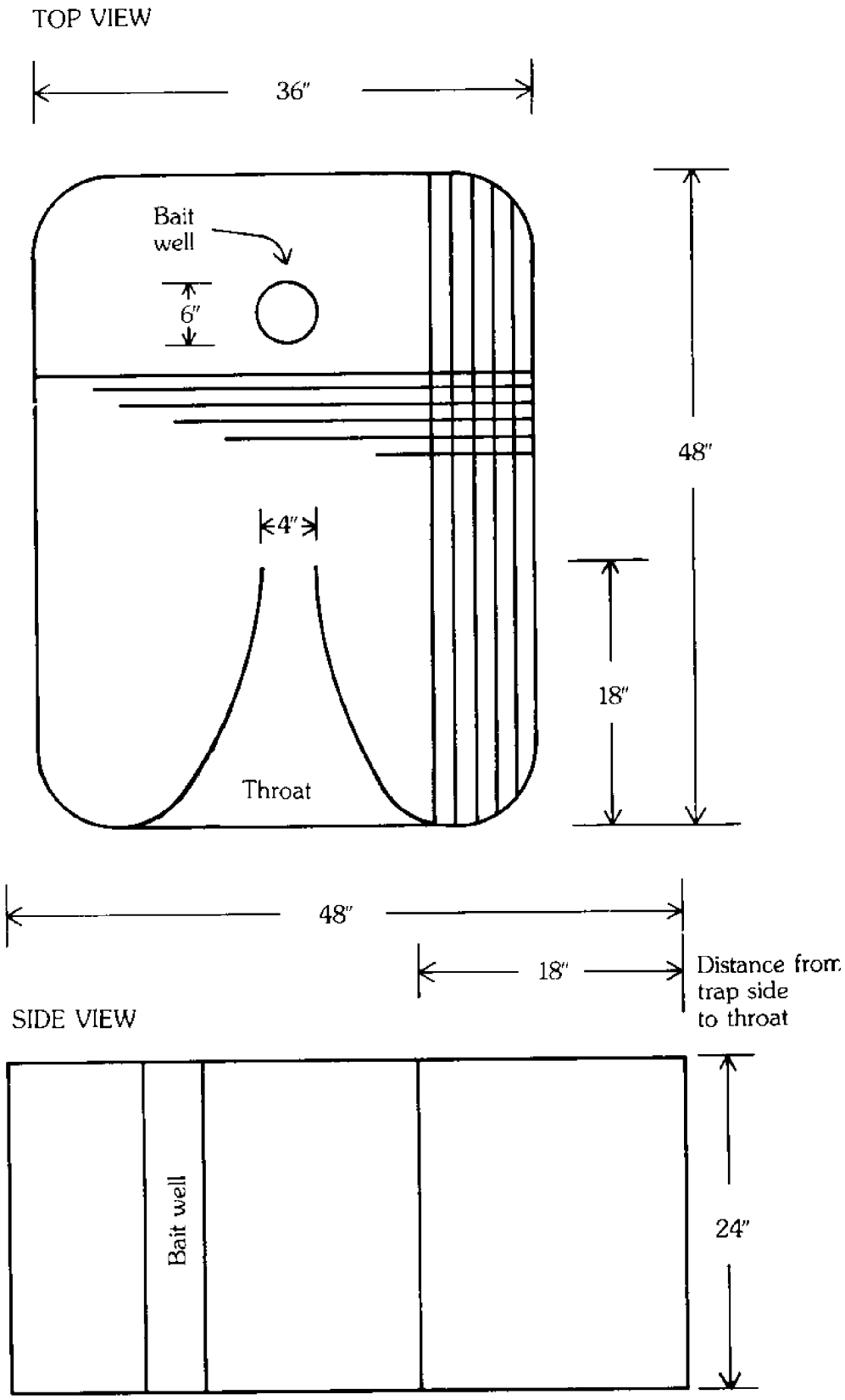



FIGURE 1 Diagram of a Captain Moore Grouper Trap (not to scale)




Constructed of 1½″ × 1½″ 12.5 ga. CEC coated wire
Bait well—1″ × ½″ coated eel wire

FIGURE 2 Diagram of a South Florida Grouper Trap (not to scale)

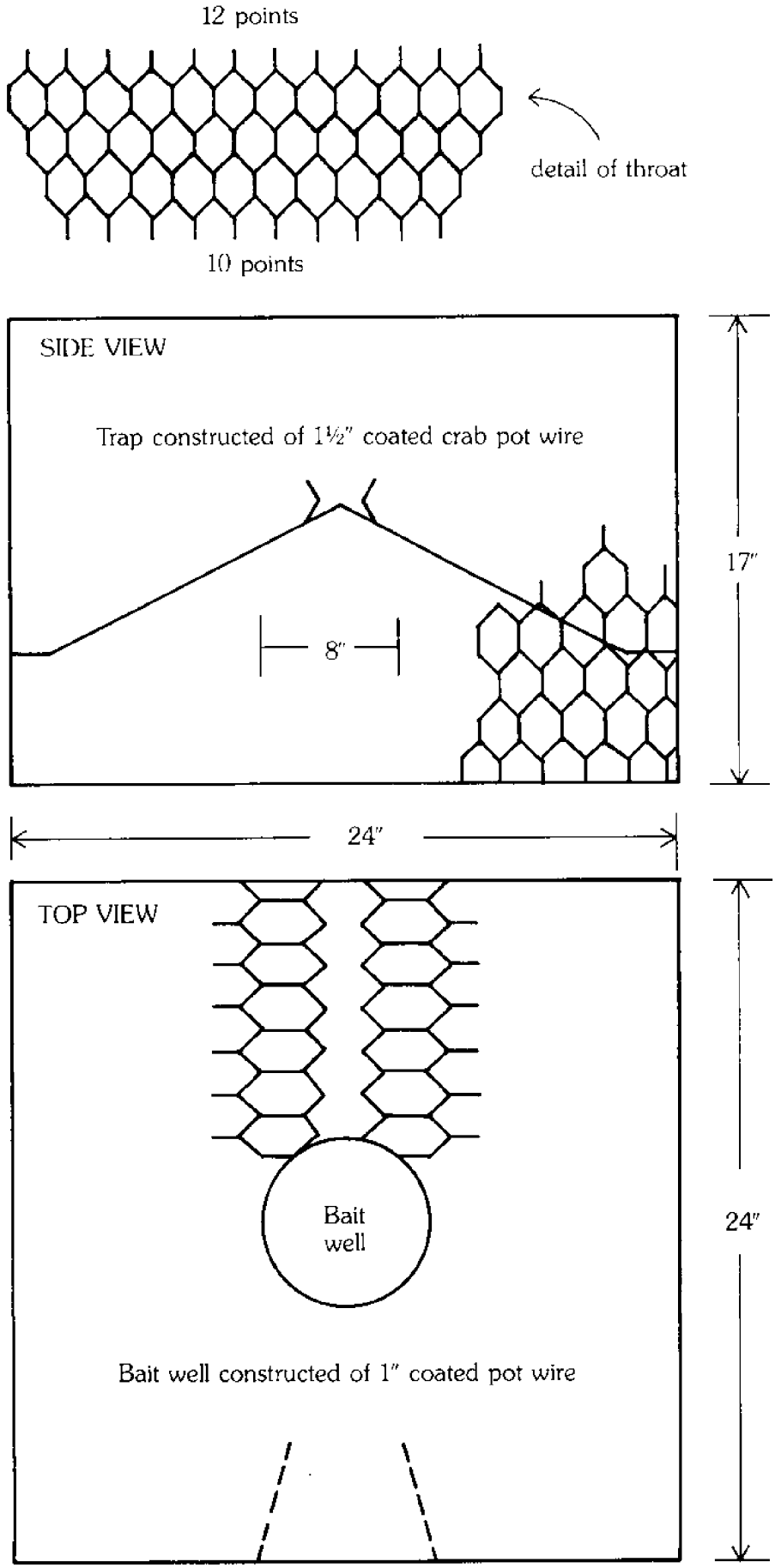



FIGURE 3 Diagram of a Chesapeake Bay Crab Trap (not to scale)

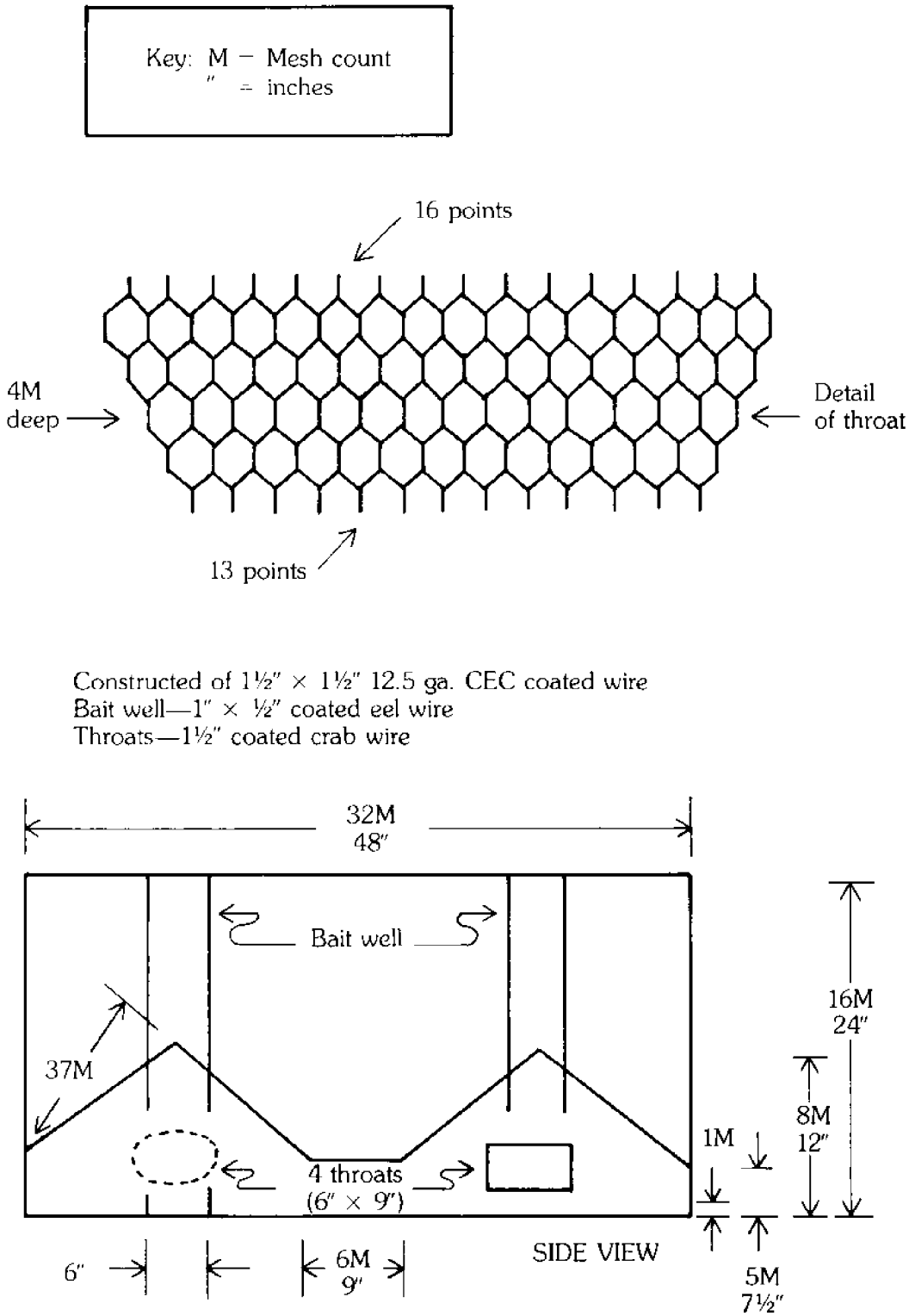



FIGURE 4 Diagram of a Double Chesapeake Bay Crab Trap (not to scale) length 48", width 24", height 24"

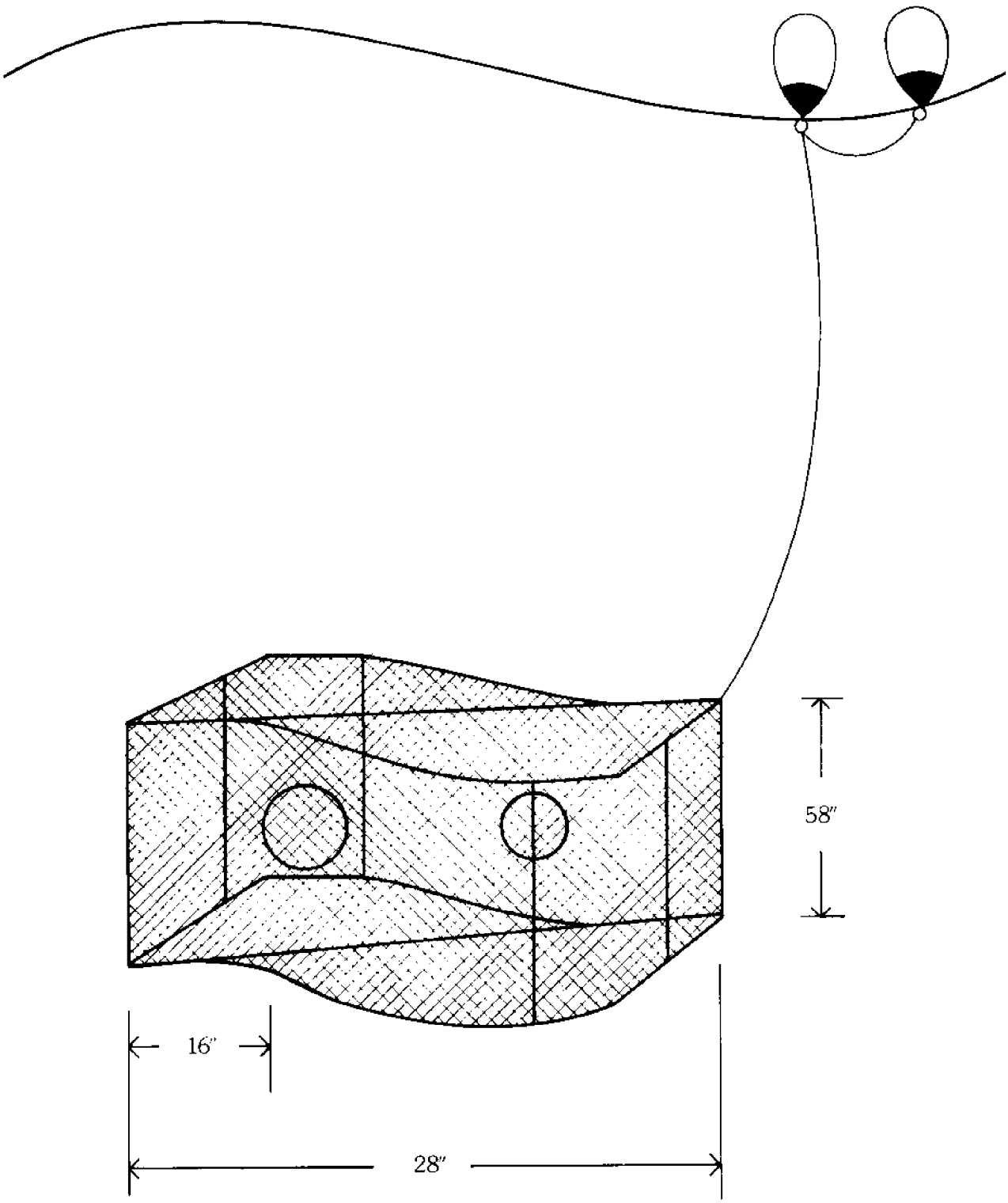



FIGURE 5 Diagram of an S-Trap (not to scale)

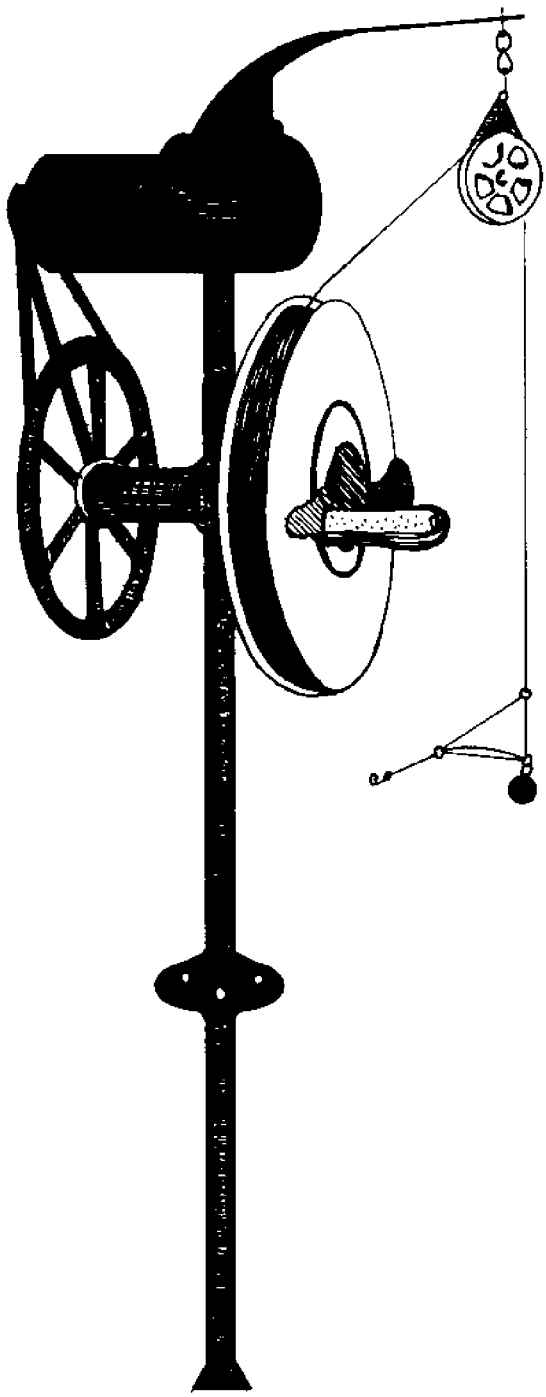


FIGURE 6 Diagram of a typical snapper reel

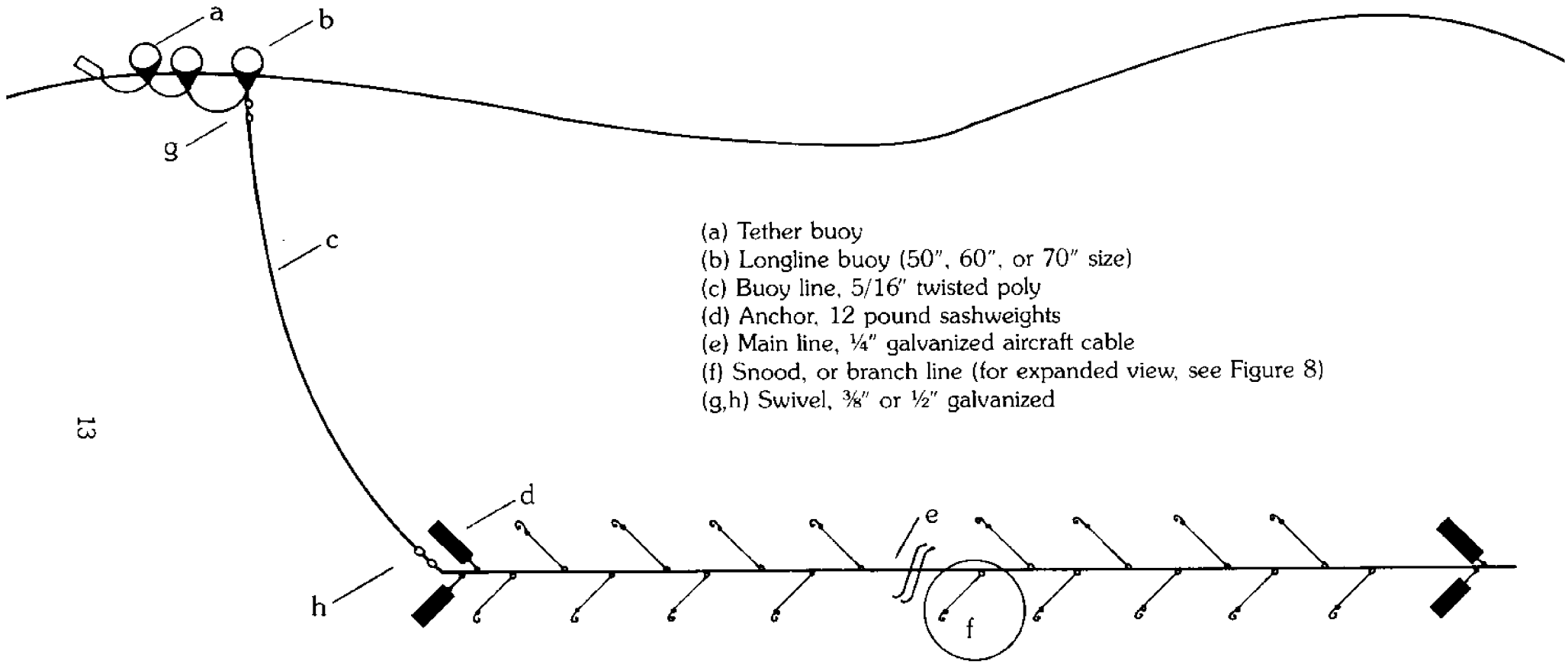





FIGURE 7 Diagram of a bottom longline (not to scale)

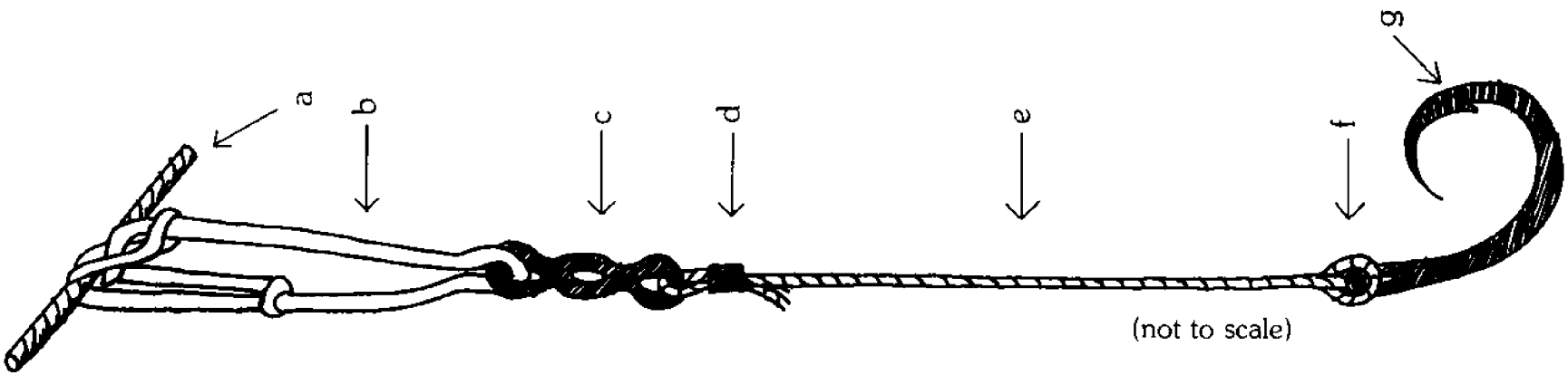



FIGURE 8 Diagram of a snood used on bottom longline gear
(a) Main line, ¼" galvanized aircraft cable
(b) Snap-on connector, 5/16" diameter fit
(c) Swivel, 8/0 McMahan
(d) Leader sleeve, .159" inside diameter, No. C6
(e) Leader, two strands of 200 lb. mono, tightly twisted, 18-20" long
(f) Loop-over hook attachment, allows quick change of hooks
(g) 5/0 tuna circle hook

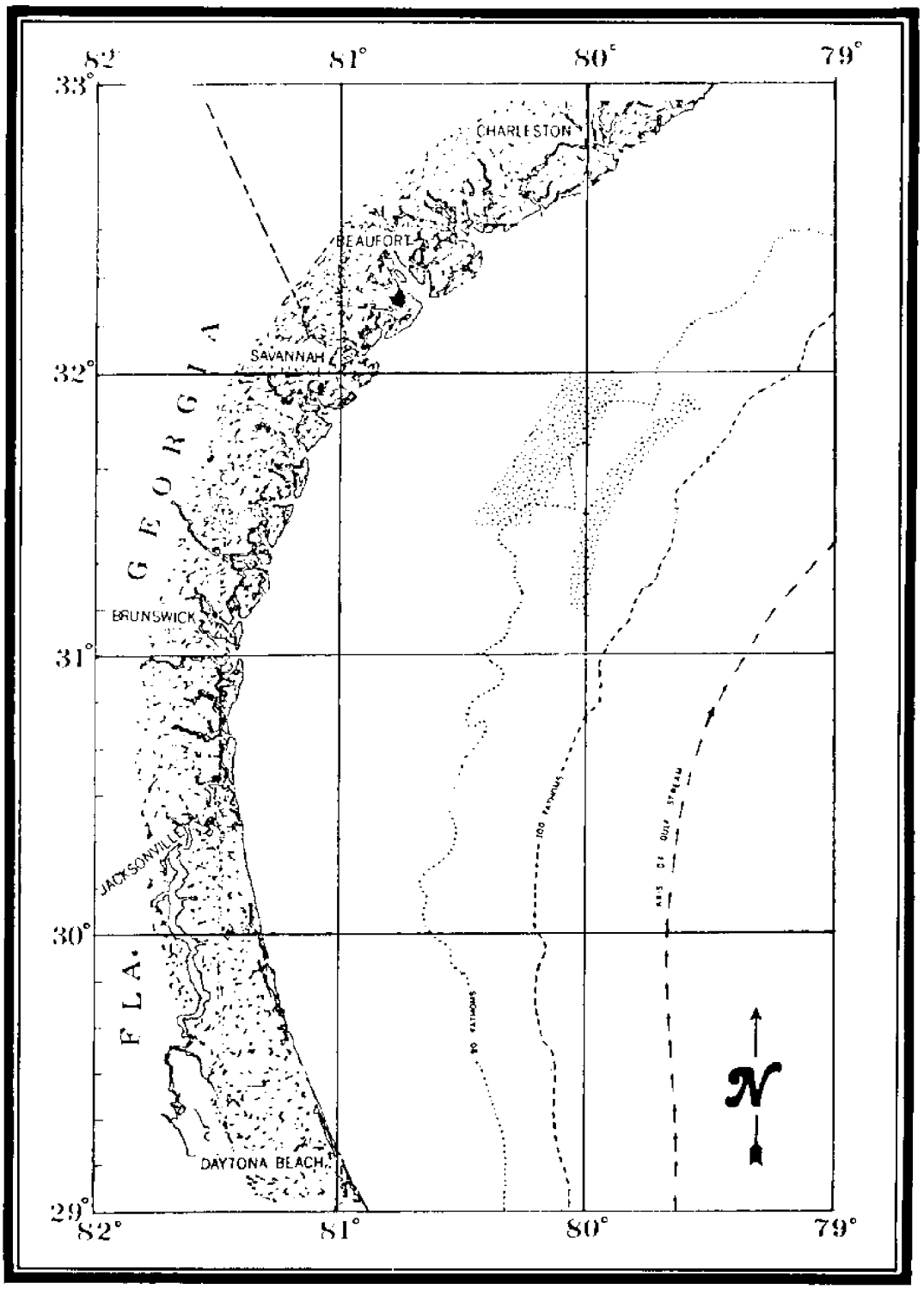



FIGURE 9 Primary areas of fishing effort by captains participating in the Cooperative Venture Project for 1982

**TABLE 1** Information on fish trapping by trip for Captains Crosby, Webster, and Blackston, Cooperative Venture Project for 1982.

| | Trip No. | No. of Capt. Moore grouper traps | No. of So. Fla. grouper traps | No. of Chesapeake Bay traps | Other traps |
|---|---|---|---|---|---|
| MISS DENISE | 1 | 6 | 4 | 4 | --- |
| | 2 | 6 | 4 | 4 | 1 S-Trap<br>1 Double Chesapeake trap |
| | 3 | 6 | 4 | 4 | " |
| | 4 | 6 | 4 | 4 | " |
| JULIE II | 1 | 15 | | 3 | None |
| | 2 | 5 | | 8 | None |
| | 3 | 5 | | 8 | None |
| | 4 | 9 | | 8 | None |
| | 5 | 9 | | 8 | |
| PO BOY | 1 | 7 | 3 | 4 | |
| | 2 | 5 | 2 | 1 | 1 Chesapeake Bay |
| | 3 | 5 | 2 | | 1 S-Trap with 2 bait wells |

| Trap bait used | Hook baits | Problems encountered |
|---|---|---|
| spot, croaker | squid,* cigar minnows, cut black sea bass, & pink porgy | bait containers unsatisfactory |
| spot, croaker cigar minnows,* | " | fast north current, lost two traps |
| spot, croaker cigar minnows,* conger eel | " | current prevented deep hook fishing |
| spot, croaker, cigar minnows* | " | |
| menhaden | squid* | lost grouper trap, hung on edge |
| cigar minnows,* squid | squid* | |
| cigar minnows* | squid* | |
| cigar minnows* | squid* | bad weather, left traps |
| Picked up traps left offshore on last trip | | |
| shrimp heads, spot, croaker, menhaden, cigar minnows,* crushed blue crabs, rock shrimp | cigar minnows,* rock shrimp* | lost 3 grouper traps due to fast current |
| cigar minnows,* amberjack, squid | cigar minnows,* squid, rock shrimp | |
| cigar minnows* | cigar minnows,* squid | |

*denotes preferred bait

**TABLE 2** Catch and trip information for Captains Crosby, Webster, Blackston, Blackwelder, and Knight, Cooperative Venture Project for 1982

| | Trip No. | Dates fished | Gear used | Total catch (lbs) | Predominant species caught |
|---|---|---|---|---|---|
| MISS DENISE | 1 | 1-7 Feb. 1982 | fish traps, snapper reels | 883 | black sea bass |
| | 2 | 13-17 Feb. 1982 | " | 816 | black sea bass red porgy |
| | 3 | 1-5 Mar. 1982 | " | 642 | red porgy, black sea bass |
| | 4 | 10-14 Mar. 1982 | " | 688 | black sea bass |
| | | | TOTAL CATCH | 3,029 | |
| PO BOY | 1 | 1-8 Feb. 1982 | fish traps, bottom longlines, reels | 623 | black sea bass |
| | 2 | 13-18 Feb. 1982 | fish traps, reels | 1,276 | red porgy, grouper |
| | 3 | 1-5 Mar. 1982 | fish traps, reels | 800 | red porgy, grouper |
| | | | TOTAL CATCH | 2,699 | |
| JULIE II | 1 | 2-6 Feb. 1982 | fish traps | 404 | black sea bass |
| | 2 | 8-13 Feb. 1982 | fish traps | 703 | black sea bass |
| | 3 | 16-19 Feb. 1982 | fish traps | 250 | black sea bass |
| | 4 | 19-22 Feb. 1982 | fish traps | -0- | |
| | 5 | 23-24 Feb. 1982 | fish traps | 119 | black sea bass |
| | | | TOTAL CATCH | 1,476 | |

| | Trip No. | Dates fished | Gear used | Total catch (lbs) | Predominant species caught |
|---|---|---|---|---|---|
| **SHERRIL ANN** | 1 | 14-21 Feb. 1982 | 85′ SX-3 fish trawl with tongue, 8′ × 44″ wood doors, reels | 1,438 | red porgy, vermillion snapper |
| | 2 | 1-6 Mar. 1982 | 65′ crab trawl, flat net, 85′ SX-3 fish trawl with tongue, 8′ × 44″ wood doors, reels | 177 | red porgy, grouper |
| | 3 | 9-13 Mar. 1982 | 85′ SX-3 fish trawl with tongue, 10′ × 44″ wood doors, reels | 208 | red porgy, grouper |
| | | | TOTAL CATCH | 1,823 | |
| **MY GIRLS** | 1 | 29-31 Jan. 1982 | 75′ crab trawl with tongue, 9′ × 40″ wood doors | 179 | whitebone porgy |
| | 2 | 12-15 Feb. 1982 | fish traps, reels | 397 | grouper, black sea bass |
| | 3 | 19-22 Feb. 1982 | fish traps, 75′ crab trawls with tongue, 9′ × 40″ wood doors | 639 | black sea bass, grouper, whitebone porgy |
| | | | TOTAL CATCH | 1,215 | |

**Total for all vessels** **10,242 lbs.**
Average catch/trip 569 lbs.

**Total trapping, longlining, and reels** **7,601 lbs.**
Average catch/trip 585 lbs.

**Total from fish dragging** **2,641 lbs.**
Average catch/trip 528 lbs.

**TABLE 3** Readings of specific areas compiled by all the participants of the Cooperative Venture Project for 1982

| No. | Loran C reading | Notes on area | No. | Loran C reading | Notes on area |
|---|---|---|---|---|---|
| 1 | 45118.7<br>60927.8 | red snapper, porgy, grouper | 16 | 45118.3<br>60925.0 | B-liners, red snapper, porgy |
| 2 | 45118.3<br>60925.0 | large ledge, good fish marks | 17 | 45342.7<br>61196.3 | good black sea bass |
| 3 | 45117.5<br>60904.5 | large trap catch of pink porgy | 18 | 45342.7<br>61196.5 | black sea bass, white porgy |
| 4 | 45118.3<br>60925.0 | B-liners, red snapper, pink porgy | 19 | 45342.9<br>61189.0 | black sea bass, white porgy |
| 5 | 45127.6<br>60937.4 | grouper | 20 | 45129.6<br>60938.5 | black sea bass |
| 6 | 45119.3<br>60946.0 | pink porgy | 21 | 45129.1<br>60937.8 | black sea bass |
| 7 | 45155.0<br>60946.0 | B-liners and red snapper | 22 | 45118.2<br>60927.5 | white porgy, B-line snapper |
| 8 | 45117.5<br>60904.5 | grouper | 23 | 45155.9<br>60949.4 | good black sea bass catches |
| 9 | 45119.3<br>60927.2 | ledges | 24 | 45155.1<br>60949.1 | good black sea bass catches |
| 10 | 45128.0<br>60939.0 | pink porgy | 25 | 45193.7<br>60729.7 | good grouper catches |
| 11 | 45129.4<br>60938.6 | good grouper catches | 26 | 45194.1<br>60728.7 | black sea bass |
| 12 | 45117.1<br>60907.4 | lots of conchs | 27 | 45154.1<br>60944.8 | hard bottom |
| 13 | 45116.6<br>60907.3 | lots of conchs | 28 | 45174.4<br>60758.6 | white porgy |
| 14 | 45117.0<br>60906.0 | conger eels | 29 | 45154.0<br>60947.9 | snapper, grouper |
| 15 | 45116.4<br>60905.0 | good grouper catches | 30 | 45118.2<br>60927.5 | hard bottom |

| No. | Loran C reading | Notes on area | No. | Loran C reading | Notes on area |
|---|---|---|---|---|---|
| 31 | 45349.5<br>61200.9 | large ledge with good fish marks | 46 | 45116.6<br>60907.6 | hang |
| 32 | 45306.0<br>61160.0 | hard bottom | 47 | 45019.6<br>61308.5 | hang, hard bottom off Cumberland |
| 33 | 45310.1<br>61159.5 | black sea bass | 48 | 45112.3<br>60914.5 | hang |
| 34 | 44634.4<br>61750.5 | hang off St. Augustine | 49 | 45118.0<br>60927.0 | hard rockpile |
| 35 | 44636.6<br>61742.5 | hang off St. Augustine | 50 | 45133.0<br>60908.2 | hang |
| 36 | 45343.7<br>61190.3 | hang | 51 | 45134.5<br>60918.0 | hang |
| 37 | 45056.0<br>61096.0 | hang, only caught a few fish here | 52 | 45128.0<br>60940.0 | hang |
| 38 | 45300.4<br>61241.1 | slab rock, hang (good fish) | 53 | 45127.7<br>60941.0 | hang |
| 39 | 45291.4<br>61233.4 | hang (good fish) | 54 | 45152.4<br>60947.4 | hang |
| 40 | 45344.1<br>61066.4 | hard bottom area, good fish | 55 | 45154.4<br>60948.4 | hang |
| 41 | 45291.2<br>61233.2 | hard bottom area, (hang) | 56 | 45154.4<br>60889.4 | hang |
| 42 | 45113.3<br>60907.6 | hang | 57 | 45150.0<br>60825.0 | hang |
| 43 | 44946.8<br>61325.4 | a long ledge (hang) | 58 | 45157.6<br>60944.6 | hang |
| 44 | 45143.8<br>60828.5 | hand—hard bottom | 59 | 45158.0<br>60945.4 | hang |
| 45 | 45046.8<br>61115.5 | hang—hard bottom | 60 | 45157.6<br>60946.0 | hang |

| No. | Loran C reading | Notes on area | No. | Loran C reading | Notes on area |
|---|---|---|---|---|---|
| 61 | 45022.1<br>61330.2 | hang | 70 | 44941.9<br>61411.6 | rough ledge |
| 62 | 45133.6<br>60891.0 | good fish marks on top of large ledge | 71 | 45171.8<br>61541.0 | saw snapper boat fishing here |
| 63 | 45145.9<br>60829.4 | good fish marks (area: sow pen) | 72 | 45011.1<br>61329.8 | marked good fish |
| 64 | 45146.6<br>60827.7 | same as above | 73 | 44933.2<br>61326.8 | large snowy grouper catch |
| 65 | 44634.4<br>61750.5 | hang off St. Augustine | 74 | 44930.9<br>61326.7 | same as above |
| 66 | 45131.0<br>60897.0 | deli ledge | 75 | 44940.4<br>61328.8 | same as above |
| 67 | 45175.0<br>60600.0 | 50' ridge | 76 | 44952.6<br>61324.5 | many red snapper caught here |
| 68 | 45202.0<br>60512.0 | large ledge | 77 | 45076.5<br>61063.9 | good black sea bass spot |
| 69 | 45018.9<br>61336.0 | live bottom area | | | |

**TABLE 4** Monthly ex-vessel prices per pound received for gutted fish during the Cooperative Venture Project for 1982

| Species | January | February | March |
|---|---|---|---|
| BLACK SEA BASS* | | | |
| less than ½ lb. | .40 | .40, .55 | |
| ½ to 1½ lb. | .60 | .70, .65 | |
| 1½ to 2 lb. | .90 | 1.25 | |
| PINK PORGY | | | |
| less than 1 lb. | | .60, .85 | .50 |
| 1 to 2 lb. | | 1.20 | .85, .70, 1.30 |
| greater than 2 lb. | | | .85, 1.20 |
| mixed | 1.30 | | |
| WHITEBONE PORGY | | | |
| less than 2 lb. | | .60 | .65, .45 |
| greater than 2 lb. | | .75 | .65, .60 |
| mixed | .90 | .50 | |
| RED SNAPPER | | | |
| 2 to 8 lb. | 2.50 | 3.25 | 3.00, 2.75 |
| greater than 8 lb. | 3.00 | 3.00, 2.50 | 2.75, 2.50 |
| GROUPER | 1.60 | 1.30, 1.35 | 1.25 |
| B-LINER | | | |
| less than ¾ lb. | | | .65, 1.40 |
| ¾ to 1½ lb. | | 2.00 | 1.50, 1.75 |
| greater than 1½ lb. | | | 2.00 |
| GRAY TRIGGERFISH | | | .40 |
| BLUEFISH | | | .60 |
| BONITO | | .40 | |
| DOGFISH | | .40 | |

*These fish sold in the round (i.e., not gutted)

## **APPENDIX I** List of species and scientific names

| | |
|---|---|
| Amberjack | *Seriola dumerili* |
| Black sea bass | *Centropristes striata* |
| Blue crab | *Callinectes sapidus* |
| Bluefish | *Pomatomus saltatrix* |
| Bonito | *Sarda sarda* |
| Cigar minnow | *Decapterus punctatus* |
| Croaker | *Micropogon undulatus* |
| Dogfish shark | *Squalus sp.* |
| Gag grouper | *Mycteroperca microlepis* |
| Grey triggerfish | *Balistes capriscus* |
| Menhaden | *Brevoortia sp.* |
| Red porgy | *Pagrus pagrus* |
| Red snapper | *Lutjanus campechanus* |
| Rock shrimp | *Sicyonia brevirostris* |
| Scamp grouper | *Mycteroperca phenax* |
| Spot | *Leiostomus xanthurus* |
| Squid | *Illex sp.* and/or *Loligo sp.* |
| Vermillion snapper | *Rhomboplites aurorubens* |
| Whitebone porgy | *Calamus leucosteus* |
| Snowy grouper | *Epinephelus niveatus* |