MARFIN

ANNUAL REPORT
FISCAL YEAR 1990

5/17/91

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I. INTRODUCTION

The Marine Fisheries Initiative (MARFIN) Program received its initial impetus from a discussion paper written by Dr. Thomas McIlwain while serving in the office of Rep. Trent Lott (R., MS): Research Needs For Information Leading To Full And Wise Use Of Fishery Resources In The Gulf Of Mexico. This paper, sometimes called the Lott-McIlwain paper, proposed an additional investment in fisheries research and development in the Gulf of Mexico in order to increase the economic contribution of underutilized species, to develop more valuable products from existing fisheries, to develop new export markets, to forecast variations in yields, and to conserve and maintain presently exploited resources.

The next step in the evolution of MARFIN was the generation and publication of the Marine Fisheries Initiative - Gulf Of Mexico Phase, which was published by the Gulf States Marine Fisheries Commission in January 1985. This publication details the research and development efforts necessary to enhance, restore and maintain fisheries in the Gulf Of Mexico.

The Lott-McIlwain paper and the Marine Fisheries Initiative publication were instrumental in convincing Congress to provide funding for the MARFIN Program. On December 4, 1985, the House and Senate allocated $2,850,000 for the MARFIN Program. Following approval by President Reagan on December 13, 1985, funds were reduced to $2,727,000 by the Gramm-Rudman requirement and were transferred to the National Marine Fisheries Service (NMFS) Southeast Region. In Fiscal Years 1987, 1988, 1989, and 1990 the NMFS Southeast Region received $3,500,000; $3,279,500; $3,000,000; and $3,000,000 respectively. These funds were used initially to provide fishery management information on the red drum, shrimp, and king mackerel fisheries. In the last few years research has shifted to bycatch exclusion, reef fish, sharks, and controlled access. Fishery priorities for FY 1990 are given in the Federal Register notice (see Appendix A).

In addition to developing and implementing long-term (three years or more) plans, the MARFIN Program is geared to address fishery management problems that require information in a shorter time frame. The NMFS Southeast Fisheries Center can frequently provide data on a new problem in less than 1 year if contracts rather than Financial Assistance Awards can be utilized to obtain information from states, universities and other non-Federal sources.

The NMFS Regional Director is responsible for administering the program, with reliance primarily upon the MARFIN Program Management Board for guidance on program development and on the selection of appropriate research projects. The Board is comprised of eight members, one representative each from: 1) the Gulf States Marine Fisheries Commission; 2) the Gulf and South Atlantic

States Marine Fisheries Commission; 2) the Gulf and South Atlantic Fisheries Development Foundation Inc.; 3) the Gulf of Mexico Fishery Management Council; 4) the National Marine Fisheries Service; 5) the five Gulf states; 6) four Sea Grant programs; 7) the recreational fishery organizations; and 8) the commercial fishery organizations. The MARFIN Program Coordinator is located in the Southeast Regional Office of NMFS. During FY 1990 the members and staff were:

MARFIN BOARD MEMBERS

NATIONAL MARINE FISHERIES SERVICE

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Chief, Grants Operations Branch
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MARFIN STAFF

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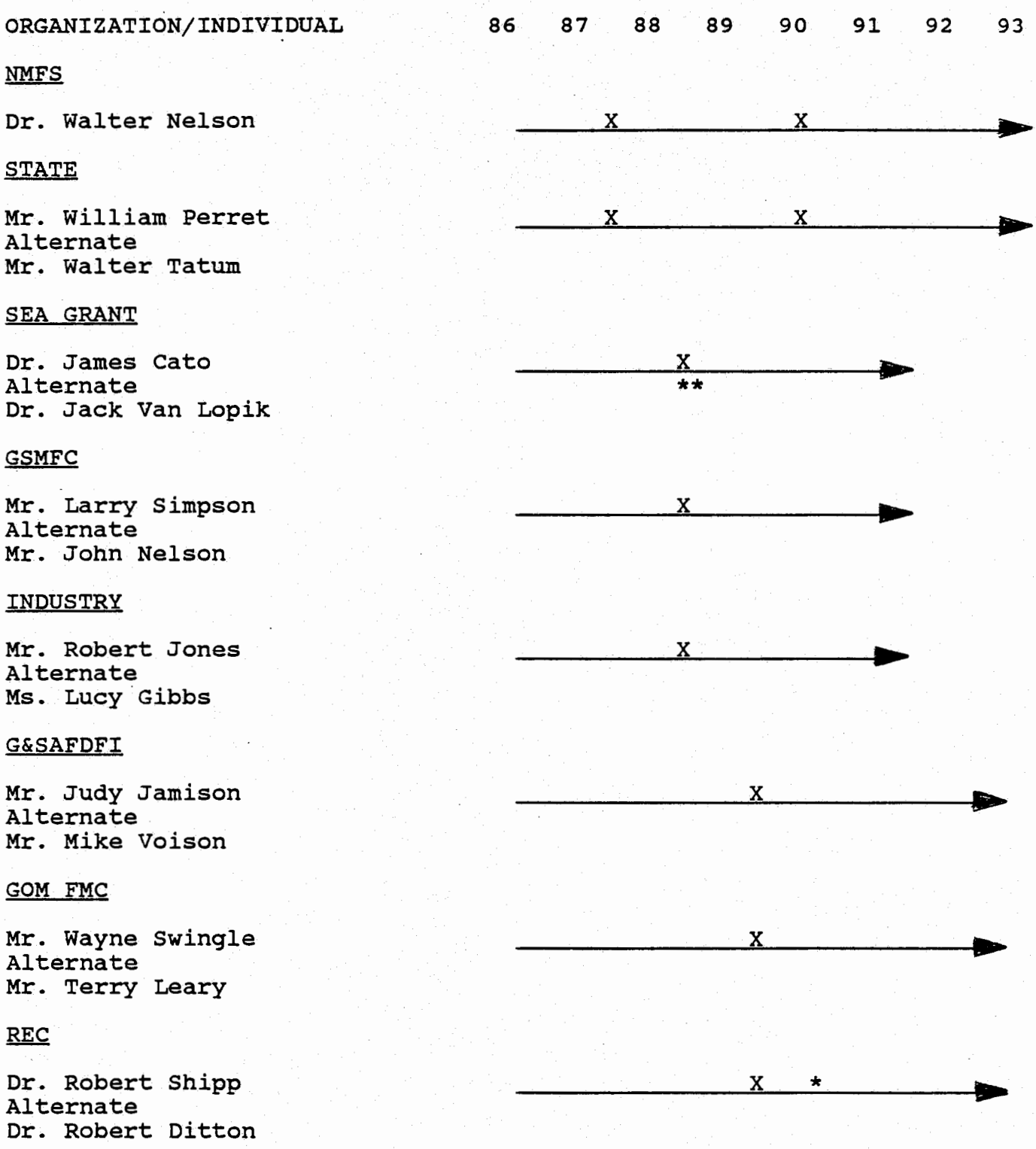
BOARD MEMBER TENURE



X = Reaffirmed
* = Elected Chairman
** = Elected Vice Chairman

II. BOARD MEETINGS

Three board meetings were held in FY 1990, on June 19 -20, September 17 and November 2. The minutes of these meetings may be found in Appendix C.

The majority of the meeting time was spent selecting priority study areas and choosing NMFS and non-NOAA financial assistance proposals for recommendation to the Regional Director for funding.

III. MARFIN CONFERENCE

The third annual MARFIN conference was held in Orlando, Florida on October 31 - November 1, 1990. Abstracts of this conference are contained in the conference report (see also V. ACCOMPLISHMENTS).

IV. FINANCIAL ASSISTANCE ACTIVITIES

All necessary clearances for the Federal Register notice for financial assistance were received in early March. The notice was published in the Federal Register on March 14, 1990 (Appendix A). Fifty-three applications were received by April 30, 1990. All of these applications were formally reviewed by SEFC, SERO, and non-NMFS scientists prior to the Board meeting on June 19-20. This review consisted of a peer critique by three or more scientists from NMFS and non-NOAA institutions. These critiques were then summarized by a group of NMFS scientists, who in turn rated the applications as highly recommended, recommended, or not recommended. MARFIN Board members further reviewed all of the previous summary and critique information. They recommended 18 applications for funding plus 4 alternates. One of the recommended applications was retracted by the applicant since the Board suggested drastic reduction of the fund requested.

The Regional Director accepted 16 of the remaining 17 projects and decided to fund the 17th from FY 91 funds. He also chose one of the four alternates recommended by the Board. These 17 final selections were forwarded to the NOAA Grants Management Division in Washington D.C. for processing. The final 17 financial assistance applications, the 14 multi-year awards (carried over from previous years), and the 10 NMFS studies are listed in Tables I, II, and III. Summaries of these applications and awards, plus the studies conducted by NMFS, are given in Appendix B. Table IV lists the distribution of funds among states, Sea Grant universities, industry and the NMFS.

Universities (including non-profit organizations associated with universities) remain the major recipients of MARFIN funds at 42.4%. The NMFS Southeast Region remains second at 37.5%. The fishing industry and the Gulf States use only 13.8% and 6.3% respectively.

1990 MARFIN COOPERATIVE AGREEMENTS

TABLE I

GRANT#	PROJ#	APPNAME	PROJNAME	CONTACT	YR/TYRS	TMONITOR	STARTDAT	ENDDATE	$
0X1NA90AAHMF745	90MF01.A.02	SE FISHERIES ASSOC INC	CONF ON REDUCTION OF BYCATCH SHRIMP TRAWLG OPERATIONS & ALTER HARVTG	JONES, ROBERT P.	1/2	KLIMA, EDWARD DR. - F/SEC6	11/01/90	11/01/91	$31,650.00
0X1NA90AAHMF748	90MF04.B.01	CARIBBEAN MARINE RES CENTER (CMRC)	SPAWNG BIOLOGY OF SHALLOW-WATER GOM GROUPERS	COLIN, PATRICK DR.	1/2	BOHNSACK, JAMES DR. - F/SEC11	10/01/90	09/30/91	$76,350.00
0X1NA90AAHMF761	90MF09.C.02	MARINE ENIRONMENTAL SCIENCE CONSORTIUM	RECRUITMT & HABITAT UTIL BY BLUE CRAB: IMPORTANCE OF JUV NURSERY HABITAT	HECK, KENNETH DR.	1/2	MINELLO, THOMAS DR. - F/SEC6	10/01/90	09/30/91	$58,287.00
0X1NA90AAHMF762	90MF04.H.02	LSU	MORTALITY RATES & MOVEMENT OF HOOK&LINE CAUGHT & RELEASED RED SNAPPER	RENDER, JEFFREY H.	1/2	GITSCHLAG, GREGG - F/SEC6	10/01/90	09/30/91	$30,568.00

GRANT#	PROJ#	APPNAME	PROJNAME	CONTACT	YR/TYRS	TMONITOR	STARTDAT	ENDDATE	$
NA17FF0172-01*	90MF13.D.01	GSAFDF	JAPANESE & TAIWANESE TRADE BARRIER ANALYSIS FOR GOM BUTTERFISH	JAMISON JUDY	1/1	AYERS, JAMES - F/SEC32	04/01/91	03/31/92	$50,000.00
NA90AAHMF744	90MF01.A.01	GULF SHRIMP RES & DEV FOUND	FINFISH EXDLUDG GEAR IN SHRIMP TRAWLS IN W. GOM	GIBBS, LUCY	1/1	SEIDEL, WILBER - F/SEC22	10/01/90	09/30/91	$47,135.00
NA90AAHMF746	90MF01.A.03	GSAFDF	MANAGEMT OF BYCATCH IN DIRECTED COMMERCIAL FISHERIES IN GOM	JAMISON, JUDY	1/1	SEIDEL, WILBER - F/SEC22	10/01/90	09/30/91	$100,000.00
NA90AAHMF747	90MF03.A.03	MOTE MARINE LAB	COBIA, AMBERJACK,DOLPHIN MIGRATION & LIFE HISTORY STUDY OFF SW FL	MAHADEVAN, KUMAR DR.	1/1	NAKAMURA, EUGENE - F/SEC5	11/01/90	12/31/91	$75,000.00
NA90AAHMF749	90MF05.B.01	FL DNR	INVESTIGATIONS OF INSHORE & OFFSHORE POP DYNAMICS OF SPANISH SARDINES IN W.FL	TORRES, LINDA	1/1	NICHOLS, SCOTT DR. - F/SEC23	02/01/91	01/31/92	$50,906.00
NA90AAHMF750	90MF12.C.05	FL DNR	SPAWNG STOCK AND EXPLOIT/ESCAPE OF BLACK MULLET	TORRES, LINDA	1/1	MERRINER, JOHN DR. - F/SEC9	10/01/90	09/30/91	$57,731.00
NA90AAHMF752	90MF03.A.02	MOTE MARINE LAB	K & SPANISH MACKEREL MIGRATION & STOCK ASSESMT STUDY IN SGOM	MAHADEVAN, KUMAR DR.	1/1	NAKAMURA, EUGENE - F/SEC5	11/01/90	12/31/91	$75,000.00
NA90AAHMF754	90MF04.A.01	TX PARKS & WILD DEPT	SOCIOECONOMIC IMPACTS OF REC REEF FISH FISHERMEN IN TX	MATLOCK, GARY DR.	1/1	PLATT, JONATHAN - F/SER	10/01/90	09/30/91	$11,535.00
NA90AAHMF755	90MF04.H.03	TX A&M RES FOUND	GENETIC STUDIES TO DET STOCK STRUCTURE OF REEF FISHES IN GOM: PHASE 1	MESLER, FRED B.	1/1	NAKAMURA, EUGENE - F/SEC5	10/01/90	09/30/91	$54,623.00
NA90AAHMF756	90MF07.B.01	TX A&M RES FOUND	SOCIAL & ECONOMIC CHARACTERIZATION OF GOM REC & COM SHARK FISHERIES	MESLER, FRED B.	1/1	PLATT, JONATHAN - F/SER	10/01/90	09/30/91	$50,000.00
NA90AAHMF757	90MF12.B.02	UNIV OF TX AT AUSTIN	DYNAMICS OF ESTUARINE & OFFSHORE RED DRUM STOCKS	FUIMAN, LEE DR.	1/1	NICHOLS, SCOTT DR. - F/SEC23	10/01/90	09/30/91	$26,393.00
NA90AAHMF759	90MF04.H.01	UNIV OF S AL	SPECIES IDENT AND MANAGEMENT OF AMBERJACKS	SZEDLMAYER, STEVE DR.	1/1	NAKAMURA, EUGENE - F/SEC5	10/01/90	09/30/91	$18,893.00
NA90AAHMF763	90MF12.B.01	LSU	AGE STRUCTURE & REPROD. POTENTIAL OF WGOM OFFSHORE POP OF RED DRUM	WILSON, CHARLES DR.	1/1	GOODYEAR, PHILLIP DR.- F/SEC11	10/01/90	09/30/91	$38,785.00
NA90AAHMF764	90MF12.C.02	LSU	LARVAL FOOD, GROWTH & MICROHABITAT SELECT: AFFECTING CRUIT OF DEPEND. FISH	BALTZ, DONALD DR.	1/1	MINELLO, THOMAS DR. - F/SEC6	02/01/91	01/31/92	$72,530.00

*To be funded from FY91 funds

TABLE II 1988 and 1989 MULTI-YEAR MARFIN COOPERATIVE AGREEMENTS

GRANT#	PROJ#	APPNAME	PROJNAME	CONTACT	YR/TYRS	TMONITOR	STARTDAT	ENDDATE	$
8I3NA90AAHMF729	88MAR03.2.02 (095)	MS DEPT OF WILDLIFE FISHERIES & PARKS	MS/NMFS K & S MACKEREL SAMPLG PROB.	BUCHANAN, MICHAEL	3/3	KUMPF, HERMAN DR. - F/SEC5	02/01/91	01/31/92	$28,945.00
9I2NA90AAHMF722	89MAR03.A.02	LSU	AGE,GROWTH,&REPRO BIOLOGY OF AMBERJACK & COBIA FROM COASTAL LA WATERS	THOMPSON, BRUCE DR.	2/2	NAKAMURA, EUGENE - F/SEC5	02/01/91	01/31/92	$66,800.00
9I2NA90AAHMF723	89MAR06.0.01	LSU	AGE, GROWTH, DIET & SPAWNING DATE OF YELLOWFIN TUNA IN MS RIVER PLUME	SHAW, RICHARD DR.	2/2	GRIMES, CHURCHILL DR. - F/SEC5	02/01/91	01/31/92	$23,940.00
9I2NA90AAHMF724	89MAR11.A.02	LSU	VAR OF YR-CLASS STRENGTH & ANNUAL REPROD OUTPUT OF RED&BLACK DRUM NGOM	WILSON, CHARLES DR.	2/3	NICHOLS, SCOTT DR. - F/SEC23	10/01/90	09/30/91	$84,200.00
9I2NA90AAHMF725	89MAR06.B.01	LA DEPT OF W&F	BIOL & CATCH/EFFORT SAMPLG FROM TUNA & SHARK FISHERIES IN NGOM	SHEPARD, JOSEPH A.	2/3	TURNER, STEPHEN DR. - F/SEC12	10/01/90	09/30/91	$87,700.00
9I2NA90AAHMF726	89MAR01.1.03	LA DEPT OF W&F	ENHANCG BENEFITS FROM SHRIMP IN GOM BY OPTMZG SHRIMP MANAGEMENT IN LA	CLARK, JERRY DR.	2/2	JUSTEN, MICHAEL - F/SER21	02/01/91	01/31/92	$126,000.00
9I2NA90AAHMF727	89MAR11.D.02	LSU	UTILIZATION OF FISHERIES-INDEPDENT DATA: FUTURE MANGMT IMPLICATIONS	SHAW, RICHARD DR.	2/3	NICHOLS, SCOTT DR. - F/SEC23	02/01/91	01/31/92	$79,600.00
9I2NA90AAHMF728	89MAR04.0.07	LSU	MACKEREL & REEF FISH BIOPROFILE & CATCH/EFFORT DATA COL FROM NGOM	RUSSELL, SANDRA	2/3	KUMPF, HERMAN DR. - F/SEC5	10/01/90	09/30/91	$38,730.00
9I2NA90AAHMF730	89MAR04.Y.02	GCRL	EARLY LIFE HIST OF SNAPPERS IN COASTAL & SHELF WATERS OF NCGOM	LYCZKOWSKI-SHULTZ, J. DR.	2/2	MANOOCH, CHARLES DR. - F/SEC9	10/01/90	09/30/91	$8,920.00
9I2NA90AAHMF731	89MAR07.D.01	MARINE ENVIRONMENTAL SCIENCE CONSORTIUM	EVAL QUAHOG ABUNDANCE & GROWTH IN INSHORE AL & NW FL:ASSMT CLAM CULT	HECK, KENNETH DR.	2/2	ZIMMERMAN, ROGER DR. - F/SEC6	02/01/91	01/31/92	$61,101.00
9I2NA90AAHMF732	89MAR11.D.03	MARINE ENVIRONMENTAL SCIENCE CONSORTIUM	VALUE OF VEG&UNVEG HABITATS TO JUVENILE SPOTTED SEATROUT & RED DRUM	HECK, KENNETH DR.	2/2	THAYER, GORDON DR. - F/SEC9	02/01/91	01/31/92	$51,900.00
9I2NA90AAHMF733	89MAR04.H.01	UNIV OF S AL	INVEST OF LIFE HIST PARAMENTERS OF SPECIES OF SECOND REEF FISH & DOLPH	SHIPP, ROBERT L. DR.	2/2	GOODYEAR, PHILLIP DR.- F/SEC11	02/01/91	01/31/92	$42,190.00
9I2NA90AAHMF734	11.A.04	FL DNR	AGE VALIDATION OF ADULT BLACK DRUM IN FL	TORRES, LINDA M.	2/3	GOODYEAR, PHILLIP DR.- F/SEC11	02/01/91	01/31/92	$4,000.00
9I2NA90AAHMF735	89MAR03.B.02	UNIV OF MIAMI	IMPLEMT OF LOG BOOK SYS FOR SPOTTER PILOTS & FLEET CAPT RCD MACKEREL	EHRHARDT, NELSON DR.	2/2	NAKAMURA, EUGENE - F/SEC5	02/01/91	01/31/92	$25,000.00

TABLE III

1990 NMFS PROJECTS

PROJ#	APPNAME	PROJNAME	PI	STARTDAT	ENDDATE	$AWARD
90NMFS01	SERO, EKBERG	MARFIN PROGRAM MANAGEMENT	EKBERG, DONALD	10/01/89	09/30/90	$75,000.00
90NMFS02	SERO, SCHMIED	EDUC. TOOLS FOR MAR. REC. FISHERMEN TO PROMOTE WISE USE & CONSERVATION OF GULF FISHERY RES.	SCHMIED, RON	10/01/89	09/30/90	$16,000.00
90NMFS03	SERO, PLATT/WATERS	ECONOMIC DATA COLLETION FOR THE GULF OF MEXICO REEF FISH FISHERY	PLATT/WATERS	01/01/90	12/31/90	$100,000.00
90NMFS06	SEFC, KEMMERER	LATENT RESOURCES RESEARCH IN GOM	KEMMERER, ANDREW	10/01/89	09/30/90	$460,000.00
90NMFS07	SEFC, KEMMERER	SHRIMP TRAWL BYCATCH REDUCTION	SEIDEL, WILBER	10/01/89	09/30/90	$200,000.00
90NMFS08	SEFC, KLIMA	EVAL. OF THE IMPACTS OF TED ON SHRIMP CATCH RATES IN GOM	KLIMA ,ED	10/01/89	01/31/91	$107,000.00
90NMFS09	SEFC, NELSON	EASTERN GULF REEF FISH CATCH AND EFFORT DATA	BOHNSACK, JAMES	03/01/90	03/01/91	$55,000.00
90NMFS10	SEFC,KEMMERER	TED TECHNOLOGY TRANSFER	SEIDEL, WILBER	10/01/89	09/30/90	$45,000.00
90NMFS11	SEFC, KLIMA	CONT. OF IMPROVED SEA TURTLE STRANDING AND SALVAGE NETWORK (STSSN) IN SHRIMP STATISTICAL SUBAREAS 17-21, SW LA AND TX	CAILLOUET, CHARLES	10/01/89	09/30/91	$40,000.00
90NMFS12	SEFC, NAKAMURA	COASTAL RESOURCES RESEARCH IN THE SE	NAKAMURA, GENE	10/01/89	09/30/90	$205,000.00

5/17/91

TABLE IV
MARFIN FUNDING FOR FY 1990
IN K$

	STATES						SEA GRANT/UNIVERSITIES/NONPROFIT RES.					FISHING INDUSTRY	NMFS	
ORGANIZATION / USE	FL	AL	MS	LA	TX	GSMFC	FL	AL-MS	LA	TX				TOTALS
RECEIVE	112.6	0.0	28.9	213.7	11.5	56.8	25.0	70.0	435.1	131.0	397.7	178.7	1,303	2,964.0
USE DIRECTLY	90.4	0.0	27.3	0.0	11.5	56.8	25.0	70.0	422.1	131.0	372.8	178.7	1,111.5	2,497.1
SUBCON-OUT	22.2	0.0	1.6	213.7	0.0	0.0	0.0	0.0	13.0	0.0	24.9	0.0	191.5	466.9
SUBCON-IN	0.0	0.0	0.0	0.0	0.0	0.0	22.9	0.0	213.7	0.0	0.0	230.3	0.0	466.9
TOTAL	90.4	0.0	27.3	0.0	11.5	56.8	47.9	70.0	635.8	131.5	372.8	409.0	1,111.5	2,964.0
GRAND TOTAL			186.0							1,257.5		409.0	1,111.5	2,964.0
PERCENT			6.3							42.4		13.8	37.5	100

V. ACCOMPLISHMENTS

The third annual MARFIN conference was held in Orlando, Florida on October 31 - November 1, 1990. The proceedings of the conference are available from the NMFS Regional Office. A summary of this symposium is given below:

Shrimp Fisheries

A major problem in the shrimp trawling industry has been the interaction of turtles with trawls and the development of methods to keep turtles out of trawls. Several turtle excluder devices (TED's) have been devised to remove turtles from trawls during trawling. These include the NMFS TED, the Georgia TED, the Matagordo TED, the Cameron TED, the Morrison TED, the Parish TED, and the Andrews TED. All of these devices exclude turtles. The Morrison TED is constructed of webbing. The others are metal or a combination of metal, plastic, and webbing. In some configurations an acceleration funnel may be added. The Anthony Weedless and the Supershooter are modifications of the Georgia TED. Although all of these TEDs exclude turtles, some catch fewer shrimp than others. During 1989 - 1990, the Georgia TED and its modification, the Supershooter, were tested for shrimp and finfish catch in Texas, Louisiana, and off the Carolinas. Ninety-one % of the Georgia TED testing was done off Louisiana and 65% of the Supershooter studies were performed in the Atlantic. Figure 1 shows the shrimp catch and Figure 2 shows the finfish catch. It should not be inferred that the Supershooter catches more shrimp or more finfish, since the locations and seasons were different. It is important to note, however, that in comparison with standard nets neither TED catches significantly fewer shrimp or finfish.

Another problem caused by trawlers is that the bycatch of finfish is at least an order of magnitude larger than the shrimp catch. In order to stop the decline of many demersal fisheries, attempts are underway to modify trawls to release finfish during trawling. The goal is a 50% reduction in finfish mortality by 1993. Twelve different approaches have now been consolidated into four full prototypes which show promise. Extensive testing of these prototypes is planned for 1991.

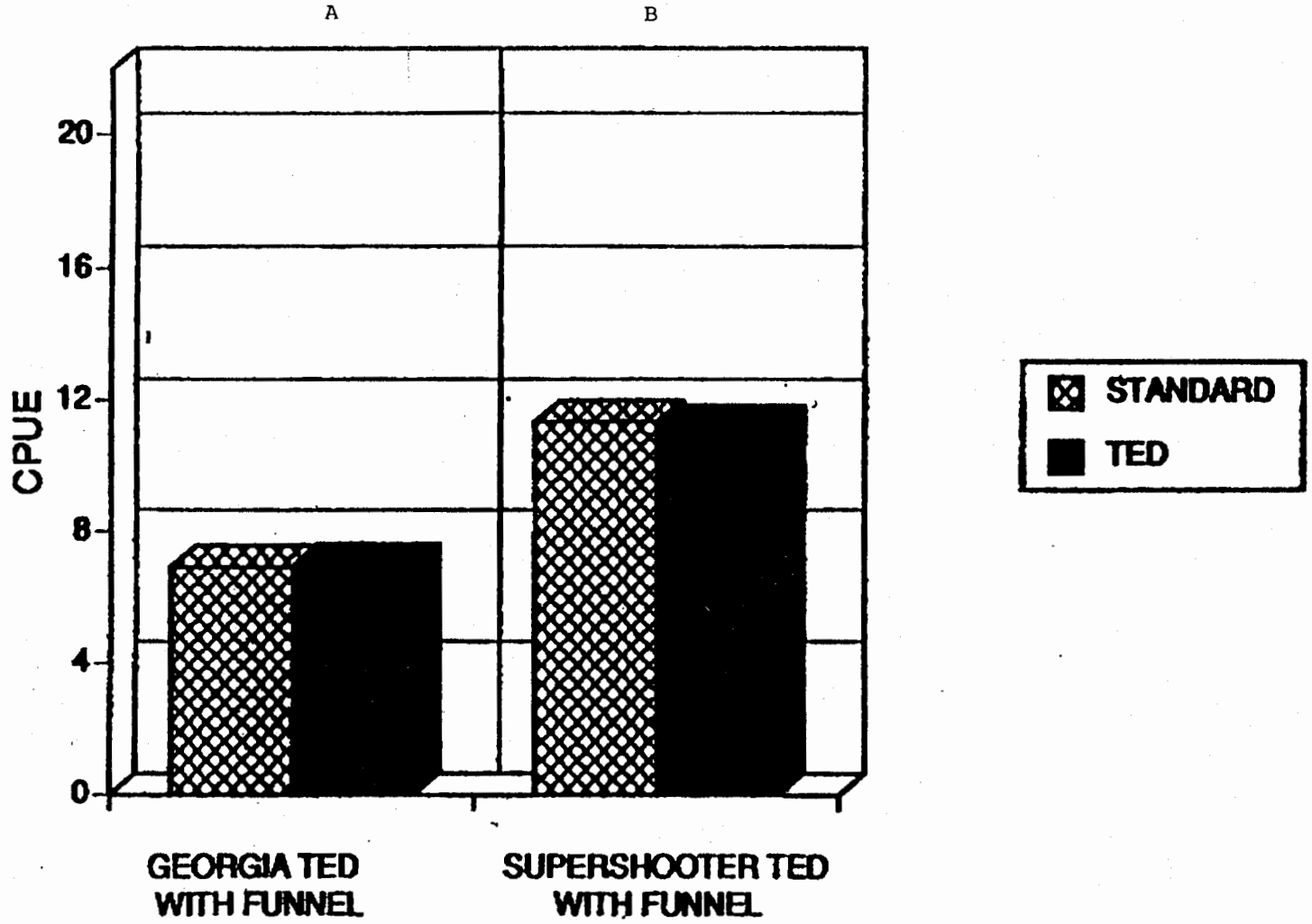


FIGURE 1

CPUE (lbs/hr) of shrimp in standard and TED-equipped nets. All areas and seasons combined. Standard and TED-equipped nets were not significantly different ($P<0.05$). Data paired by tows without try nets included (n= 425). 1989-1990.

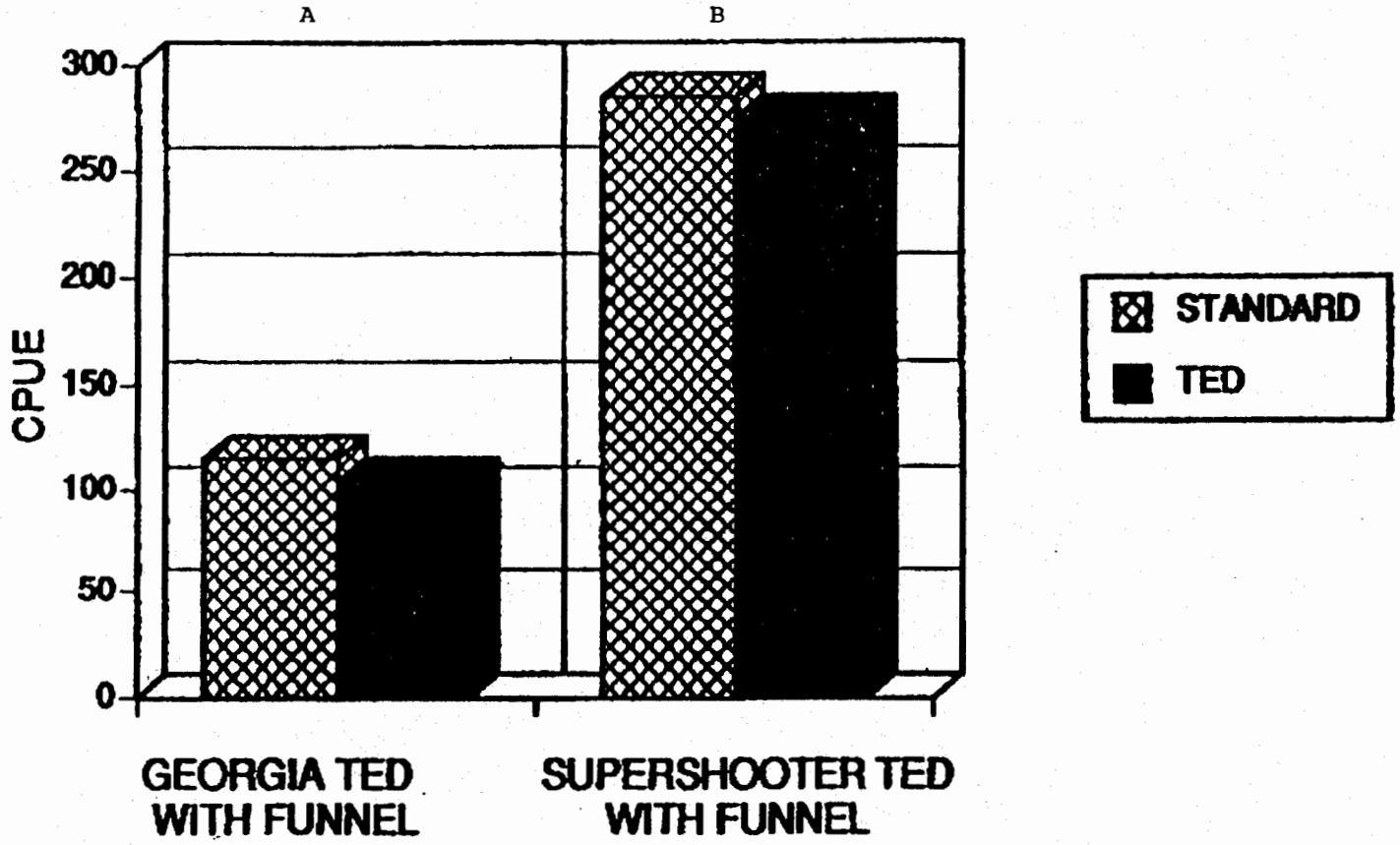


FIGURE 2

CPUE (lbs/hr) of finfish in standard and TED-equipped nets. All areas and seasons combined. Standard and TED-equipped nets were not significantly different (P<0.05). Data paired by tows without try nets included (n=425). 1989-1990.

Estuarine Fish

In past years red drum received most of the MARFIN attention. Recently the shift has been to other estuarine species such as black drum and mullet. Habitat factors also have been studied. The sex ratio of striped mullet caught in Louisiana appears to depend on the gear used and location within the estuary. Small-mesh gear catches predominately males, while larger meshes catch mainly females. In the Tampa Bay region of Florida, hydroacoustic, mark-recapture, and catch-and-effort surveys were used to determine the striped mullet spawning stock biomass.

Microhabitat used by postlarval spotted seatrout is predominated by proximity to Spartina alterniflora. These fish occur most frequently 1-3 m from the marsh edge. Salinity and turbidity are also significantly related to seatrout density. Several microhabitat variables appeared important to the occurrence of postlarval red drum. Water temperature varied between 20.8 and 34.5 °C, depths ranged from 3-42 cm, and most fish were found less than 2.5 m from the marsh edge.

Fishery-independent estimates of red drum spawner biomass are much lower than fishery dependent mark-recapture studies by approximately one order of magnitude. Methods refinement will be required before managers can rely on fishery-independent information.

Crabs and Oysters

Juvenile blue crabs (2-18 mm carapace width) are found close to the marsh edge (0-1 m) in the fall in Barataria Bay. In the spring and winter they predominate at 2-4 m from the marsh edge. In the summer they are fairly evenly distributed from 0-4 m. The preferred salinities range from 10-25 ppt. For dissolved oxygen the range was from 4-12 mg/l.

Most of Louisiana's oyster production (80%) comes from private grounds. These grounds have increased greatly in the past 40 years. In 1951 - 1952 there were less than 40 thousand acres leased. In 1988 this figure had risen to approximately 310 thousand acres.

Coastal Pelagics

Initial age, growth, and reproductive biology studies of cobia showed that females are slightly larger than males. The sex ratio was strongly skewed towards males for the 1987 - 1990 test period. The maximum age was 10 with year class composition dominated by 2 to 4 years old. Spawning off Louisiana takes place mainly during May to July. Amberjacks, like cobia, tend to have larger females and also spawn during the same spring - summer season.

Estimates of the spawning stock biomass for Gulf king and Spanish mackerel are given in Figures 3 and 4. The Spanish are stable and the kings appear to be recovering. Table V compares the allowable catches (ABCs) for both mackerels in the Gulf and in the Atlantic. Table VI lists king and Spanish mackerel as the species most frequently caught by trolling in the Gulf of Mexico.

Small Pelagics

Spring and fall surveys in the northcentral Gulf of Mexico with large high-opening bottom trawls were successful in locating sizeable concentrations of several species of small pelagics; in providing additional information on distribution and abundance of these latent resources; and in providing additional information concerning distribution by size and abundance in relation to temperature, depth, and area in the northern Gulf of Mexico. The cruises were also instrumental in standardizing the 123-ft Shuman trawl for assessing stocks of small pelagics. A fish-shooter device was added to the trawl, increasing its effectiveness and providing a successful modification for the use of smaller trawls in the commercial harvest of these fast-swimming, elusive species.

Hydroacoustic surveys were also conducted in the early spring and late fall to determine the ability of a new hydroacoustic system to differentiate individual targets and to estimate school sizes of the small pelagics. More acoustic targets were noted at night than during the day. At night, two to three target layers formed (Figure 5). In the survey area between the mouth of the Mississippi River and Mobile Bay, and between the 20 and 150-fathom isobaths, Gulf butterfish and Atlantic cutlassfish comprised 70 to 100% by weight of the total catches made with the semipelagic trawl through a target layer located at a depth of 20 to 70 m (upper layer). Target layers were also located near midwater and 2 to 50 m above the bottom. The catches from the deeper layers were more mixed though dominated by butterfish and Atlantic cutlassfish. Other species captured in the midwater and near-bottom layers were small squid, small lizardfish, and searobins.

In the Desoto Canyon area located south of the Florida panhandle, the upper target layer was dominated by round herring, with some butterfish, rough scad and chub mackerel. The movement of target species off the bottom was also confirmed with acoustic and trawl data. Round herring were observed with acoustics to rise off the bottom 1-3 hours before sunset and move to a layer that was 20

FIGURE 3

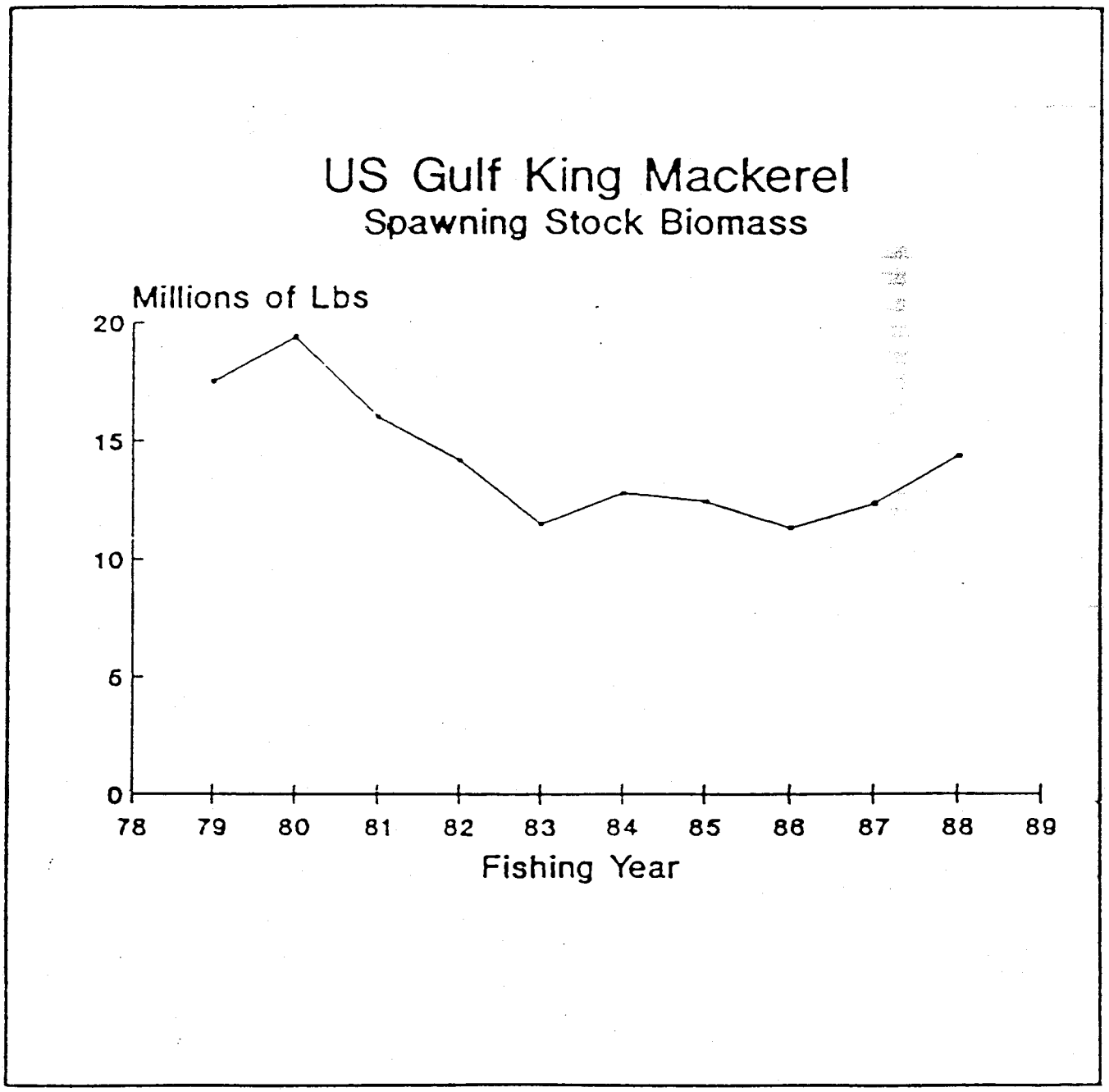

US Gulf King Mackerel
Spawning Stock Biomass
Millions of Lbs
20
15
10
5
0
78
79
80
81
82
83
84
85
86
87
88
89
Fishing Year

FIGURE 4

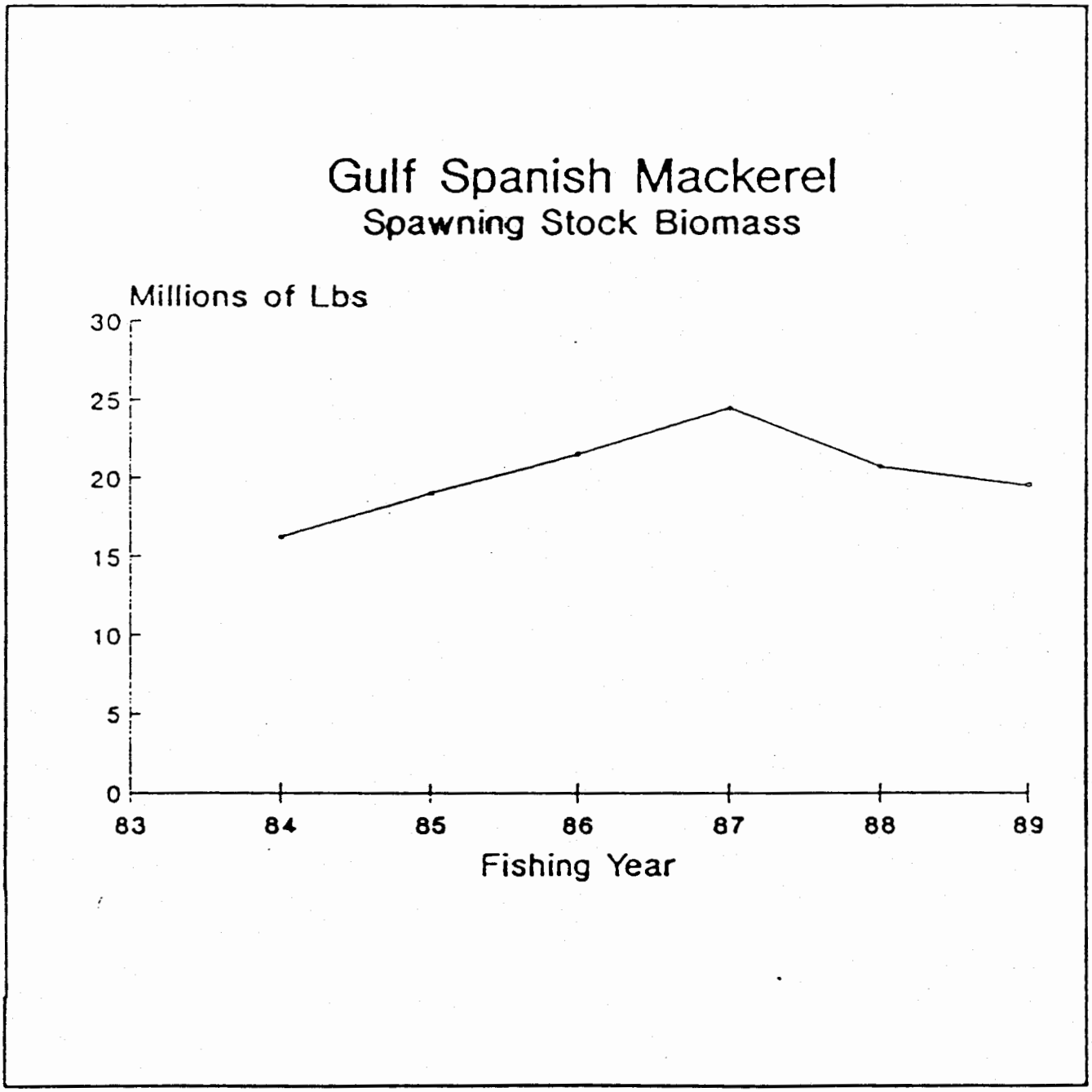

Gulf Spanish Mackerel
Spawning Stock Biomass
Millions of Lbs
30
25
20
15
10
5
0
83
84
85
86
87
88
89
Fishing Year

TABLE V

KING AND SPANISH MACKEREL ALLOWABLE CATCH RANGES AND CATCH LIMIT ESTABLISHED BY FISHERY MANAGEMENT COUNCIL

Stock	Fishing year	Million pounds ABC	TAC
Gulf			
King mackerel	Jul. 1, 90-Jun. 30, 91	3.2-5.4	4.25
Span. mackerel	Apr. 1, 90-Mar. 31, 91	3.9-7.4	5.25
Atlantic			
King mackerel	Apr. 1, 90-Mar. 31, 91	6.5-15.7	8.30
Span. mackerel	Apr. 1, 90-Mar. 31, 91	4.2-6.6	5.00

TABLE VI

MOST FREQUENTLY CAUGHT SPECIES

	Gulf of Mexico		Atlantic	
	Trolling	Non-trolling	Trolling	Non-trolling
1.	Spanish mackerel	Gray triggerfish	Spanish mackerel	Black Sea bass
2.	King mackerel	Red snapper	Dolphin	Unident. grunts
3.	Dolphin	Vermilion snapper	King mackerel	Unident. porgies
4.	Little tunny	Unident. porgies	Bluefish	Vermilion snapper
5.	Atlantic bonito	Unident. grunts	Atlantic bonito	Yellowtail snapper

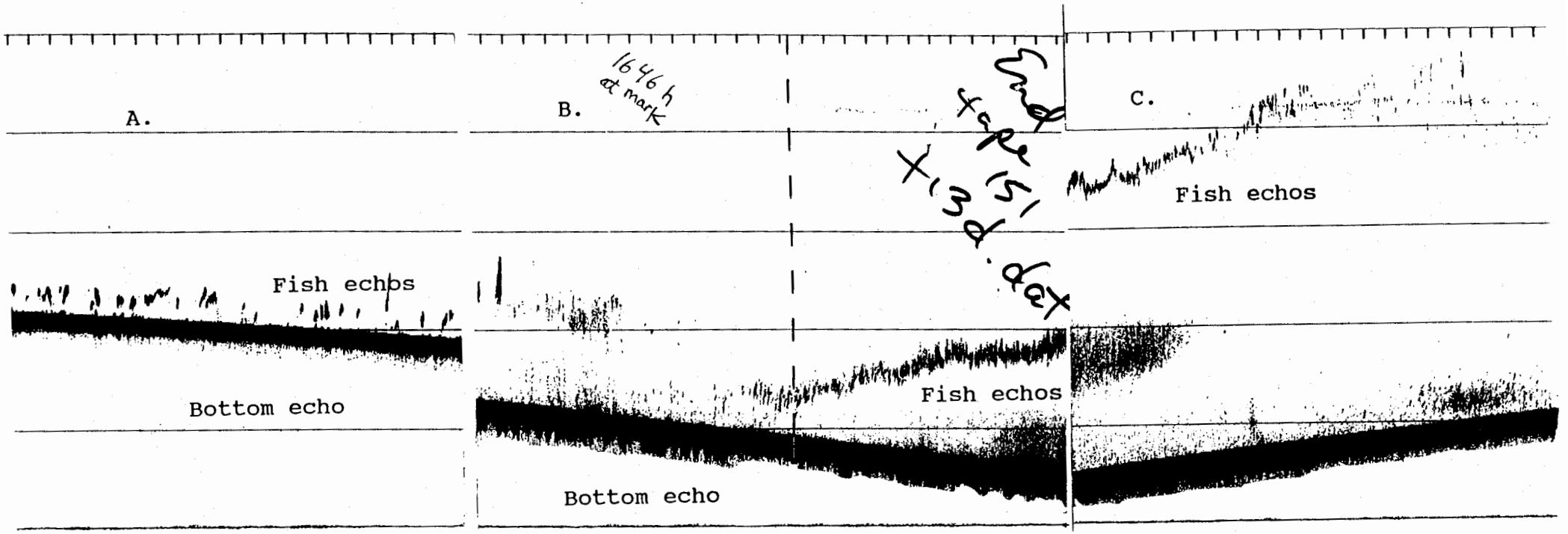


Figure 5. Echograms of round herring made at 120 kHz along the acoustic transect at longitude 86°30' W during CHAPMAN cruise 90-08. Horizontal grid lines at 50-m intervals. Vertical tick marks every 60 seconds.

A. Time 1400 h, bottom depth 140-155 m.
B. Time 1646 h, sunset at 1801 h, bottom depth 180 - 220 m.
C. Time 1830 h, bottom depth 220-200 m.

to 70 m below the surface. The identity of these targets was determined by capture with the bottom and semi-pelagic trawls. The catch composition of bottom trawls during daylight was more varied than noted for the semipelagic trawl. Catches were dominated by round herring, butterfish, rough scad and longspine porgy. Other non-target species included Atlantic cutlassfish, Atlantic croaker, spot, longfin squid, pinfish, broad flounder, vermilion snapper, and nurse sharks.

Ocean Pelagics

Longlining for tuna (20 trips) using 68 sets, 39,600 hooks, and 1,429.6 miles of line resulted in a catch of 855 yellowfin tuna, 47 miscellaneous tuna, 89 swordfish, 137 common dolphin (fish), 70 wahoo, 15 sharks, 30 escolar, and 14 miscellaneous fish. Discarded fish included 103 blue marlin, 111 white marlin, 108 sailfish, 109 little tunny, 193 yellowfin tuna, 271 sharks, 70 blackfin tuna, 27 longbill spearfish, 27 swordfish, 21 escolar, 43 skipjack tuna, 12 dolphin (fish), and 138 miscellaneous fish. The yellowfin tuna catch rate of 2.79 fish per 100 hooks was significantly greater than the 1988-89 catch rate of 1.85 fish per 100 hooks.

Attempts to correlate catch with environmental variables showed that temperature was not important for explaining model variation in catch rates within species with the exception of bluefin. Effort, however, in the Gulf region was restricted in general from January through May, thus annual temperature effects on catch rates by species could not be fully evaluated. Temporal variables were important for explaining model variation in catch rate of yellowfin tuna, white marlin, and bigeye tuna. Canonical correlation analyses showed variation in catch rate of bluefin, yellowfin tuna and white marlin related to longitudinal position (eastern versus western Gulf) and quadratic month. Other associations were shown between bluefin, bigeye, yellowfin, and white marlin and longitudinal position, linear date, number of floats, and number of hooks.

Recreational Fishing

In view of the increased fishing pressure on Gulf of Mexico species, it is imperative that conservation be stressed. In commercial fisheries the pressing need is to reduce or eliminate bycatch of non-target fish. MARFIN has attempted to promote "Ethical angling" by a catch and release program. Figures 6 and Figures 7 are examples of information available to all anglers.

Reef Fish

Reef fish population data are in short supply at a time when the various fishes appear to be overfished. Early life history data have been collected for several species with emphasis on red and gray (mangrove) snappers. Prior to this MARFIN study no information was available on larvae smaller than 4 mm. Some of the larvae (7) were red snapper and, only one was a gray, while 166 were vermilion snapper. Identification of species at these small sizes is very difficult due to lack of dorsal and pelvic spine formation.

Large (up to 8 tons and 16 ft. high) artificial reefs used to enhance reef fish population off Big Pine Key in Florida attracted large numbers of yellowtail snapper on the high profile of midwater and deep units.

FIGURE 6

NATIONAL MARINE FISHERIES SERVICE CATCH AND RELEASE QUICK REFERENCE CARD

WHY RELEASE FISH

1. A fish is too valuable a resource to be caught only once.
2. A personal commitment to conservation adds fun to fishing.
3. Size, season, and bag regulations make release mandatory.
4. Stressed fish populations need your help to recover.
5. The future of sportfishing is in your hands. Pass it on!

HOW TO BEGIN

1. Decide to release a fish as soon as it is hooked.
2. Land your quarry quickly; don't play it to exhaustion.
3. Set the hook immediately. Try to prevent a fish from swallowing the bait.
4. Work a fish out of deep water slowly, so it can adjust to the pressure change.
5. Use hooks that are barbless and made from metals that rust quickly.
6. Always keep release tools handy.

HANDLING YOUR CATCH

1. Leave the fish in the water (if possible) and don't handle it. Use a tool to remove the hook or cut the leader.
2. Keep the fish from thrashing.
3. Net your catch only if you cannot control it any other way.
4. When you must handle a fish:
   - Use a wet glove or rag to hold it.
   - Turn a fish on its back or cover its eyes with a wet towel to calm it.
   - Don't put your fingers in the eyes or gills of your catch.
   - Larger fish can be kept in the water by holding the leader with a glove or by slipping a release gaff through the lower jaw.
   - Avoid removing mucous or scales.
   - Get the fish back in the water as quickly as possible.
5. Protect against personal injury by handling each species carefully and correctly.

REMOVING THE HOOK

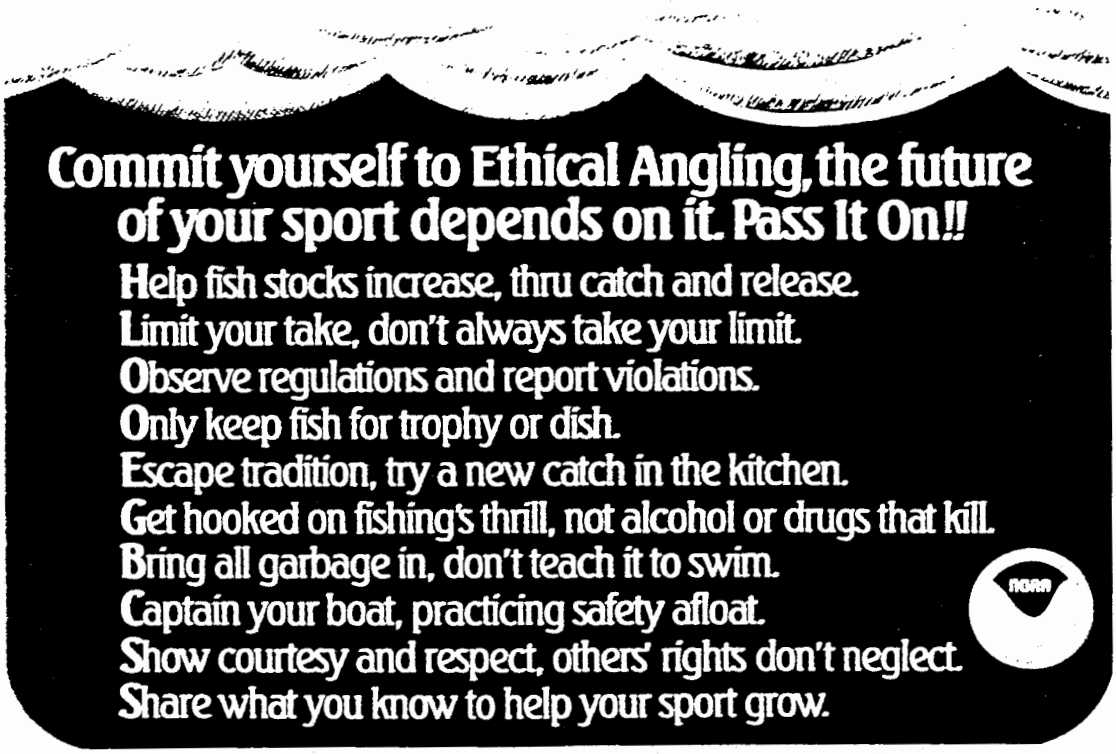
1. Cut the leader close to the mouth if a fish has been hooked deeply or if the hook can't be removed quickly.
2. Back the hook out the opposite way it went in.
3. Use needle-nose pliers, hemostats, or a hookout to work the hook and protect your hands.
4. For a larger fish in the water, slip a gaff around the leader and slide it down to the hook. Lift the gaff upward as the angler pulls downward on the leader.
5. Do not jerk or pop a leader to break it. This damages vital organs and kills the fish.

THE FINAL MOMENTS

1. Place the fish in the water gently, supporting its mid-section and tail until it swims away.
2. Resuscitate an exhausted fish by moving it back and forth or tow it alongside the boat to force water through its gills.
3. Use an ice pick, needle, or hook point to puncture the expanded air bladder on a fish taken from deep water.
4. Watch your quarry to make sure it swims away. If it doesn't, recover the fish and try again.
5. **REMEMBER, A RELEASED FISH HAS AN EXCELLENT CHANCE OF SURVIVAL WHEN HANDLED CAREFULLY AND CORRECTLY.**

Prepared and distributed by:
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
9450 Koger Boulevard
St. Petersburg, Florida 33702
(813) 893-3141 ☆ U.S.G.P.O.: 1990- 754-005/1083

FIGURE 7


Commit yourself to Ethical Angling, the future of your sport depends on it. Pass It On!!
Help fish stocks increase, thru catch and release.
Limit your take, don't always take your limit.
Observe regulations and report violations.
Only keep fish for trophy or dish.
Escape tradition, try a new catch in the kitchen.
Get hooked on fishing's thrill, not alcohol or drugs that kill.
Bring all garbage in, don't teach it to swim.
Captain your boat, practicing safety afloat.
Show courtesy and respect, others' rights don't neglect.
Share what you know to help your sport grow.

APPENDIX A

FEDERAL REGISTER NOTICE

[Docket No. 9123-0339]

Financial Assistance for Research and Development Projects To Provide Information for the Full and Wise Use and Enhancement of Fishery Resources in the Gulf of Mexico

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Notice of availability of financial assistance.

SUMMARY: For fiscal year (FY) 1991, Marine Fisheries Initiative (MARFIN) funds are available to assist persons in carrying out research and development projects that optimize the use of U.S. Gulf of Mexico fisheries involving the U.S. fishing industry (recreational and commercial), including, but not limited to, harvesting methods, economic analyses, processing, fish stock assessment, and fish stock enhancement. NMFS issues this notice describing the conditions under which applications will be accepted and how NMFS will determine which applications will be funded.

DATES: Applications for funding under this program will be accepted between January 28, 1991 and 6 p.m. e.s.t. on March 14, 1991. Applications received after that time will not be considered for funding.

Applications may be inspected at the NMFS Southeaste Regional Office (see **ADDRESSES**) from March 14, 1991 to March 21, 1991.

Selection of successful applications generally will be provided by March 29, 1991.

ADDRESSES: Send applications to: Regional Director, Attn: D. Ekberg, Southeast Regional Office, National Marine Fisheries Service, 9450 Koger Boulevard, St. Petersburg, FL 33702.

Questions of an administrative nature should be referred to: Grants Management Division, Attn: Jean West, Chief, Grants Operations Branch, NOAA, SSMC2, OA321, 1325 East-West Highway, Silver Spring, MD 20910, telephone 301-427-2922.

Send comments on the collection of information to the office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT: Dr. Donald R. Ekberg, 813-893-3720.

SUPPLEMENTARY INFORMATION:

I. Introduction

The Fish and Wildlife Act of 1956, at 16 U.S.C. 753a, and section 304(e) of the Magnuson Fishery Conservation and Management Act (16 U.S.C. 1854(e)) auhtoirze the Secretary of Commerce (Secretary) to conduct research to enhance U.S. fisheries. The Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriation Act of 1991 makes funds available to the Secretary for FY 1991. This solicitation makes available approximately $2.6 million (including $585 thousand for continuing projects) for financial assistance under the MARFIN program to manage and enhance the use of fishery resources in the Gulf of Mexico. There is no guarantee that sufficient funds will be available to make awards for all approved projects. U.S. fisheries[1] include any fishery that is or may be engaged in by U.S. citizens. The phrase "fishing industry" includes both the commercial and recreational sectors of U.S. fisheries. The "MARFIN Board" consists of individuals from (1) NMFS, (2) Gulf of Mexico Fishery Management Council, (3) Gulf and South Atlantic Fisheries Development Foundation, (4) Southeast Sea Grant Universities, (5) Gulf States Marine Fisheries Commission, (6) recreational fisheries, (7) commercial fisheries, and (8) the Gulf States. This program is described in the Catalog of Federal Domestic Assistance under program number 11.433 Marine Fisheries Initiative.

II. Funding Priorities

A. Proposals for FY 1991 should exhibit familiarity with related work that is completed or ongoing. Where appropriate, proposals should be multidisciplinary. Coordinated efforts involving multiple institutions or persons are encouraged. While the areas for priority consideration are listed below, proposals in other areas will be considered on a funds available basis.

[1] For purposes of this notice, a fishery is defined as one or more stocks of fish, including tuna, and shellfish which are identified as a unit based on geographic, scientific, technical, recreational and economic characteristics, and any and all phases of fishing for such stocks. Examples of a fishery are Gulf of Mexico shrimp, groundfish, menhaden, etc.

1. Shrimp

a. Shrimp Trawler Bycatch (Very high priority)

(1) These studies should include collection and analyses of new data using a multi-species approach with emphasis on species under Federal or state management.

(2) Quantification and further analysis of existing biological data obtained from observers, fishery independent surveys and other sources.

(3) Data collection and analyses related to the economic and social consequences of bycatch and various bycatch alternatives in the shrimp fisheries, including impact of management options. Capital/labor mobility and effort changes related to costs, management and/or increased fish abundance should be considered. Sociological studies should describe the demograhpic, social, and cultural characteristics of the fishermen as they may affect vocational and geographic mobility in response to changing fishery regulations. Direct and indirect economic and social consequences should be considered.

(4) Development and evaluation of gear and fishing tactics to reduce inshore and offshore bycatch. Biological, economic, and social implications should be considered.

b. Controlled-Access Management (Very high priority)

Proposals should concentrate on the development and assessment of models that predict economic changes in total fishing value, distributional effects and costs of fishery management, including enforcement and data costs. Sociological studies should describe the demographic, social, and cultural characteristics of the fishermen as they may affect vocational and geographic mobility in response to changing fishery regulations.

2. Oceanic Pelagics

a. Longline Fishery, Including Bycatch

(1) Quantification and analysis of existing data with special emphasis on existing logbook data.

(2) Collection and analyses of new data using a multi-species approach.

(3) Development and evaluation of gear and fishing tactics to reduce bycatch. Biological economic, and social factors should be considered.

b. Sharks (Very high priority)

(1) Characterization of the directed commercial, commercial bycatch, bycatch from other fisheries, and recreational fisheries, by species and

gear type, through analysis of new and existing data.

(2) Determination of baseline cost and returns for longline fisheries that target or retain sharks, and estimation of demand curves for shark products and recreational shark fisheries.

(3) Development of stock assessment and species profiles for target species.

3. Reef Fish (High priority)

a. Determination of recruitment processes for shallow and deep-water reef fish.

b. Identification of reef fish stock structure.

c. Complication of existing data on location and areal extent of reef fish habitats.

d. Collection and analysis of life history and catch and effort data for stock assessment, with special emphasis on shallow and deep-water grouper, amberjack, and grey triggerfish, including longline fishery data.

3. Description of the demographic, social and cultural characteristics of fishermen. Economics proposals should concentrate on the development of models that are capable of determining the economic effects of reef fish management, including bag limits, size limts, quotas, seasonal/area closures, gear restrictions and limited entry. Proposals should incorporate biological considerations either endogenously or exogenously. Emphasis should be placed on the development of model structures. These models may be tested using hypothetical data if sufficient empirical data are unavailable.

f. Studies contributing to the early life history of red snapper, specially related to larval survival.

4. Coastal Herrings & Butterfish

a. Collection of fishery independent data using resource surveys.

b. Description of predator-prey relationships.

c. Development of species profiles of coastal herrings and associated species.

5. Coastal Pelagics

a. Determination of recruitment indices for king and Spanish mackerel, cobia, and dolphin.

b. Collection and analysis of king and Spanish mackerel data from the entire Gulf of Mexico.

6 General

a. Determination of hook/release mortality for king and Spanish mackerel, reef fish, amberjack, and dolphin as a function of capture depth, handling, tackle, water temperature and other related factors.

b. Development of educational materials that can be used at sea by recreational and commercial fishermen to identify fish. Special emphasis should be given to sharks and reef fish.

c. Assessment of the changes in recreational and commercial values that have resulted from the implementation of bag limits, size limits, quotas or other management rules for red drum, mackerels, spotted sea trout, and reef fish.

d. Determination of sources and extent of unreported recreational and commercial catches of major Gulf of Mexico fisheries.

e. Studies that contribute to the economic and biological improvement of the estuarine fish, marine mollusks, and crab fisheries.

B. MARFIN financial assistance for projects started in FY 1986. For fiscal years 1986, 1987, 1988, 1989, and 1990, awards totaled $9.082 million. Funding, by fishery, was as follows:

	$ thousand	Percent of total
1. Shrimp (includes TED technology transfer)	1,525.8	16.8
2. Menhaden	70.9	0.8
3. Coastal pelagics	1,228.2	13.5
4. Reef fish	608.9	6.7
5. Coastal herrings	577.6	6.4
6. Ocean pelagics	455.3	5.0
7. Marine mollusks	387.2	4.3
8. Crabs and lobsters	564.4	6.2
9. Bottomfish	89.1	1.0
10. Marine Mammals and endangered species	288.2	3.2
11. Estuarine fish	3,200.5	35.2
12. General	85.9	0.9

C. Priority in program emphasis will be placed upon funding projects that have the greatest probability of recovering, maintaining, improving, or developing fisheries, improving our understanding of factors affecting recruitment success, generating increased values from fisheries, and generating increased recreational opportunity and harvest potential. Projects will be evaluated as to the likelihood of achieving these benefits through both short-term and long-term research projects with consideration of the magnitude of the eventual economic benefit that may be realized. Both short-term projects that may yield more immediate benefits and long-term projects yielding greater benefits will receive equal emphasis.

D. Further information on current programs that address the above listed priorities may be obtained from the NMFS Southeast Regional Office (see **ADDRESSES**).

III. How to Apply

A. Eligible Applicants

1. Applications for grants or cooperative agreements for MARFIN projects may be made, in accordance with the procedures set forth in this notice, by:

a. Any individual who is a citizen or national of the United States;

b. Any corporation, partnership, or other entity, non-profit or otherwise, if such entity is a citizen of the United States within the meaning of section 2 of the Shipping Act, 1916, as amended (46 U.S.C. 802).[3]

2. NOAA reserves the right to withhold the awarding of a grant or cooperative agreement to any individual or organization who is delinquent on a debt to the Federal Government until payment is made or satisfactory arrangement are made with the agency to whom the debt is owed. Any first time applicant for Federal grant funds is subject to a preaward accounting survey prior to execution of the award. Women and minority individuals and groups are encouraged to submit applications. NOAA employees, including full-time, part-time, and intermittent personnel (or their immediate families), and NOAA offices or centers are not eligible to submit an application under this solicitation, or aid in the preparation of

[3] To qualify as a citizen of the United States within the meaning of this statute, citizens or nationals of the United States or citizens of the Northern Mariana Islands (NMI) must own not less than 75 percent of the interest in the entity or, in the case of a non-profit entity, exercise control of the entity that is determined by the Secretary to be equivalent to such ownership; and in the case of a corporation, the president or other chief executive officer and the chairman of the board of directors must be citizens of the United States. No more of its board of directors than a minority of the number necessary to constitute a quorum may be non-citizens; and the corporation itself must be organized under the laws of the United States, or of a State, including the District of Columbia, Commonwealth of Puerto Rico, American Samoa, the Virgin Islands of the United States, Guam, the NMI or any other Commonwealth, territory, or possession of the United States. Seventy-five percent of the interest in a corporation shall not be deemed to be owned by citizens of the NMI, if: (1) The title to 75 percent of its stock is not vested in such citizens of nationals of the United States or citizens of the NMI free from any trust or fiduciary obligation in favor of any person not a citizen or national of the United States or citizens of the NMI; (2) 75 percent of the voting power in such corporation is not vested in citizens or nationals of the United States or citizens of the NMI; (3) through any contract or understanding it is arranged that more than 25 percent of the voting power in such corporation may be exercised, directly or indirectly in behalf of any person who is not a citizen or national of the United States or a citizen of the NMI, or (4) by any means whatsoever, control of any interest in the corporation is conferred upon or permitted to be exercised by any person who is not a citizen or national of the United States.

an application, except to provide information about the MARFIN program and the priorities and procedures included in this solicitation. However, NOAA employees are permitted to provide information about ongoing and planned NOAA programs and activities that may have implication for an application. Potential applicants are encouraged to contact NOAA organizations engaged in fisheries research in the Gulf of Mexico, or Dr. Donald R. Ekberg at the NMFS Southeast Regional Office (see **ADDRESSES**) for information on NOAA programs.

B. Amount and Duration of Funds

Under this solicitation for FY 1991, an estimated $2.0 million will be available to fund fishery research and development projects ($1.41 million for new projects and $585 thousand for continuing projects). Grants or cooperative agreements may be awarded for a period of up to 3 years. Once awarded, multi-year projects will not compete for funding in subsequent years. Funding for multi-year projects beyond the first year is contingent upon the availability of program funds in subsequent fiscal years, and the extent to which project objectives and reporting requirements are met during the prior year. Publication of this announcement does not obligate NMFS to award any specific grant or to obligate all of any part of the available funds. Awards generally will be made no later than 90 days after the funding selection is determined and negotiations are completed. Under no circumstances should a successful applicant proceed with the proposed project until such time that he/she has received a signed notice of award from the Grants Officer.

C. Cost-Sharing Requirements

Applications must reflect the total budget necessary to accomplish the project, including contributions and/or donations. Cost-sharing is not required for the MARFIN program. However, cost-sharing is encouraged, and in case of a tie in considering proposals for funding, cost-sharing may affect the final decision. The appropriateness of all cost-sharing will be determined on the basis of guidance provided in OMB circulars. Appropriate documentation must exist to support in-kind services or property used to fulfill cost-sharing requirements.

D. Format

1. Applications for project funding must be complete. They must identify the principal participants and include copies of any agreements describing the specific tasks to be performed by participants. Project applications should give a clear presentation of the proposed work, the methods for carrying out the project, its relevance to managing and enhancing the use of Gulf of Mexico fishery resources, and cost estimates as they relate to specific aspects of the project. Budgets will include a detailed breakdown by category of expenditure with appropriate justification for both the Federal and non-Federal share. Applicants may submit up to three related projects under one proposal, but must identify project costs, including administrative costs, separately for each individual project. Applicants should not assume prior knowledge on the part of NMFS as to the relative merits of the project described in the application.

2. Applications must be submitted in the following format:

a. *Cover Sheet:* An applicant must use OMB Standard Form 424 (revised 4/88) as the cover sheet for each project or group of consolidated projects. Applicants may obtain copies of the form from the NMFS Southeast Regional Office, or Department of Commerce's Grants Management Division (see **ADDRESSES**).

b. *Project Summary:* Each project must contain a summary of not more than one page that provides the following information:

(1) Project title.

(2) Project status (new or continuing). If continuing, show previous financial assistance award number and beginning/ending date.

(3) Project duration (beginning and ending dates).

(4) Name, address, and telephone number of applicant.

(5) Principal Investigator(s).

(6) Project objectives.

(7) Summary of work to be performed. For continuing projects, the applicant must briefly describe progress to date, in addition to any changes to the statement of work previously submitted.

(8) Total Federal funds requested (for multi-year projects, identify each year's requested funding).

(9) Cost-sharing to be provided from non-Federal sources (for multi-year projects, identify each year's cost-sharing). Specify whether contributions are project related cash or in-kind.

(10) Total project cost.

c. *Project Description:* Each project must be completely and accurately described. Each project description may be up to 15 pages in length. NMFS will make all portions of the project descriptions available to the public and members of the fishing industry for review and comment; therefore, NMFS cannot guarantee the confidentiality of any information submitted as part of any project, nor will NMFS accept for consideration any project requesting confidentiality of any part of the project.

Each project must be described as follows:

(1) *Identification of Problem(s):* Describe how existing conditions prevent the full use of Gulf of Mexico fishery resources. In this description, identify:

(a) The fisheries involved;

(b) The specific problem(s) that the fishing industry has encountered;

(c) The sectors of the fishing industry that are affected; and

(d) How the problem(s) prevent the fishing industry from using the fishery resources.

(2) *Project Goals and Objectives:* State what the proposed project will accomplish and describe how this will eliminate or reduce the problem(s) described above. For multi-year projects, describe the ultimate objective of the project and how the individual tasks contribute to reaching the objective. Describe the timeframe in which tasks would be conducted.

(3) *Need for Government Financing Assistance:* Explain why other fund sources cannot fund all the proposed work. List all other sources of funding that are, or have been, sought for the project.

(4) *Participation by Persons or Groups Other Than the Applicant:* Describe the level of participation required in the project(s) by NOAA or other government and non-government entities. Specific NOAA employees should not be named in the proposal, even though the applicant may wish to acknowledge government expertise in an allied areas.

(5) *Federal, State, and Local Government Activities:* List any programs (Federal, State, or local government or activities, including State Coastal Zone Management Programs, Sea Grant, Southeast Area Monitoring and Assessment Program, Pub.L. 99-659 and Cooperative Statistics) this project would affect and describe the relationship between the project and those plans or activities.

(6) *Project Outline:* Describe the work to be performed during the project, starting with the first month's work and continuing to the last month. Identify specific milestones that can be used to track project progress. For multi-year projects, major project tasks and milestones for future years must also be identified. If the work described in this section does not contain sufficient detail to allow for proper technical evaluation,

NMFS will not consider the application for funding and will return it to the applicant.

(7) *Project Management:* Describe how the project will be organized and managed. Include resumes of principal investigators. List all persons directly employed by the applicant who will be involved in the project, their qualifications, and their level of involvement in the project.

(8) *Monitoring of Project Performance:* Identify who will participate in monitoring the project.

(9) *Project Impacts:* Describe the impact of the project in terms of anticipated increased landings, production, sales, exports, product quality, safety, or any other measurable factors. Describe the specific products or services that will be produced by this project. Describe how these products or services will be made available to the fishing industry.

(10) *Evaluation of Project:* The applicant is required to provide an evaluation of project accomplishments in the final report. The application must describe the methodology or procedures to be followed to determine technical or economic feasibility, to evaluate consumer acceptability, or to quantify the results of the project in promoting increased landings, production, sales, exports, product quality, safety, or other measurable factors.

(11) *Total Project Costs:* Total project costs is the amount of funds required to accomplish the proposed statement of work (SOW), and includes contributions and donations. All costs must be shown in a detailed budget. Cost-sharing shall not come from another Federal source. Costs must be allocated to the Federal share and non-Federal share provided by the applicant or other sources. Non-Federal costs are to be divided into cash and in-kind contributions. A standard budget form (ED-357 NG; Rev. 3-80) is available from the offices listed (see **ADDRESSES**). A separate budget must be submitted for each project. An applicant submitting a multi-year project must submit two budgets—one covering total project costs (including individual costs per year) and one covering the initial funding request for the project. The initial funding request must cover funds required during the first 12-month period. NMFS will not consider fees or profits as allowable costs for grantees. To support its budget, the applicant must describe briefly the basis for estimating the value of the non-Federal funds derived from in-kind contributions. Costs for the following categories must be detailed in the budget as follows:

(i) *Personnel.*

(a) *Salaries:* Identify salaries by position and percentage of time and annual/hourly salary of each individual dedicated to the project.

(b) *Fringe Benefits:* Indicate benefits associated with personnel working on the project. This entry should be the proportionate cost of fringe benefits paid for the amount of time spent in the project. For example, if an employee spends 20 percent of his/her time on the project, 20 percent of his/her fringe benefits should be charged to the project.

(ii) *Consultants and Contract Services:* Identify all consultant and/or contractual service costs by specific task in relation to the project. If a commitment has been made prior to application to contract with a particular organization, explain how the organization was selected. Describe the type of contract, budget, deliverables expected, and timeframe. A detailed budget must be submitted (with supporting documentation) for the total amount of funding requested for a subcontractor/consultant. All contracts must meet the standards established in OMB circulars.

(iii) *Travel and Transportation:* Identify number of trips to be taken, purpose, and number of people to travel. Itemize estimated costs to include approximate cost of transportation, *per diem*, and miscellaneous expenses.

(iv) *Equipment, Space or Rental Costs:* Identify equipment purchases or rental costs with the intended use. Equipment purchases greater than $500 are discouraged, since experienced investigators are expected to have sufficient capital equipment on hand. Use of lease to purchase (LTOP) or similar leases are prohibited. Identify space or rental costs with specific uses.

(v) *Other Costs.*

(a) *Supplies:* Identify specific supplies necessary for the accomplishment of the project. Consumable office supplies must be included under Indirect Costs unless purchased in a large quantity to be used specifically for the project.

(b) *Postage and Shipping:* Include postage for correspondence and other project related material, as well as air freight, truck or rail shipping of bulk materials.

(c) *Printing Costs:* Include costs associated with producing materials in conjunction with the project.

(d) *Long Distance Telephone and Telegraph:* Identify estimated monthly bills.

(e) *Utilities:* These costs should be included under Indirect Costs unless purchased in a large quantity to be specifically identified to the project. Identify costs of utilities and percentage of use in conjunction with performance of project.

(f) *Indirect Costs:* This entry should be based on the applicant's established indirect cost agreement rate with the Federal Government. A copy of the current approved negotiated Indirect Cost Agreement must be included. It is the policy of the Department of Commerce that indirect cost shall not exceed direct costs.

(g) *Additional Costs:* Indicate any additional costs associated with the project that are allowable under OMB Circulars A-21, A-87, and A-122.

(d.) *Supporting Documentation:* This section should include any required documents and any additional information necessary or useful to the description of the project. The amount of information given in the section will depend on the type of project proposed. The applicant should present any information that would emphasize the value of the project in terms of the significance of the problems addressed. Without such information, the merits of the project may not be fully understood, or the value of the project to fisheries use may be underestimated. The absence of adequate supporting documentation may cause reviewers to question assertions made in describing the project and may result in a lower ranking of the project. Information presented in this section should be clearly referenced in the project description.

E. Application Submission and Deadline.

1. *Deadline:* (see dates)

2. *Submission of Applications to NMFS:* Applications are not to be found in any manner and should be one-sided. All incomplete applications will be returned to the applicant. Applicants must submit one signed original and two (2) copies of the complete application to the NMFS Southeast Regional Office (see **ADDRESSES**). Questions of an administrative nature should be referred to the Grants Management Division, OA321 (see **ADDRESSES**).

IV. Review Process and Criteria

A. Evaluation and Ranking of Proposed Projects

1. For applications meeting the requirements of this solicitation, NMFS will conduct a technical evaluation of each project prior to any other review. This review normally will involve experts from non-NOAA organizations. If an application contains two or more projects, NMFS will evaluate the projects separately. All comments

submitted to NMFS will be taken into consideration in the technical evaluation of projects. NMFS will provide point scores on proposals based on the following evaluation criteria:

a. Adequacy of research/development/demonstration for managing or enhancing Gulf of Mexico marine fishery resources, addressing especially the possibilities of securing productive results (30 points).

b. Soundness of design/technical approach for enhancing or managing the use of Gulf of Mexico marine fishery resources (25 points).

c. Organization and management of the project, including qualifications and previous related experience of the applicant's management team and other project personnel involved (20 points).

d. Effectiveness of proposed methods for monitoring and evaluating the project (15 points).

e. Justification and allocation of the budget in terms of the work to be performed (10 points).

2. Applications will be ranked by NMFS into three groups: (a) Highly recommended, (b) recommended, and (c) not recommended; for presentation to MARFIN Board members. The Board members individually will consider the significance of the problem addressed in the project, along with the technical evaluation and need for funding. The Board members' individual evaluations will aid NMFS in determining the appropriate level of recommended funding for each project.

B. Consultation with Others

NMFS will make project descriptions available for review as follows:

1. *Public Review and Comment:* Applications may be inspected at the NMFS Southeast Regional Office (see **ADDRESSES** and **DATES**).

2. *Consultation with Members of the Fishing Industry:* NMFS shall, at its discretion, request comments from members of the fishing and associated industries who have knowledge in the subject matter of a project or who would be affected by a project.

3. *Consultation with Government Agencies:* Applications will be reviewed in consultation with the NMFS Southeast Science and Research Director and appropriate laboratory personnel, NOAA Grants Officer and, as appropriate, Department of Commerce bureaus and other Federal agencies, for elimination of duplicate funding. The Regional Fishery Management Councils (Councils) may be asked to review projects and advise of any real or potential conflicts with Council activities.

C. Funding Decision

After projects have been evaluated, MARFIN Board members individually will submit funding recommendations to the Director of the NMFS Southeast Regional Office (Regional Director). The Regional Director, in consultation with the NOAA Assistant Administrator for Fisheries, will ascertain that the projects do not substantially duplicate other projects that are currently funded by NOAA/NMFS or are approved for funding by other Federal offices, determine the projects to be funded, and determine the amount of funds available for the program. The exact amount of funds awarded to each project will be determined in preaward negotiations between the applicant, the Grants Office, and the NMFS program staff. The Department of Commerce wil review all projects recommended for funding before an award is executed by the Grants Officer. The funding instrument will be determined by the Grants Officer. Projects shall not be initiated by a recipient until a notice of award is received from the Grants Officer. For multiyear projects, funds will be provided when specified tasks are satisfactorily completed and after NMFS has received MARFIN funds for subsequent fiscal years.

V. Administrative Requirements

A. Obligations of the Applicant

An applicant must:

1. Meet all application requirements and provide all information necessary for the evaluation of the project.

2. Be available, upon request, in person or by designated representative, to respond to questions during the review and evaluation of the project(s).

3. If a project is awarded, manage the day-to-day operations of the project, be responsible for the performance of all activities for which funds are awarded, and be responsible for the satisfactory completion of all administrative and managerial conditions required by the award. This includes adherence to procurement standards set forth in the award and referenced OMB Circulars and Department of Commerce regulations.

4. If a project is awarded, keep records sufficient to document any costs incurred under the award, and allow access to records for audit and examination by the Secretary, the Comptroller of the United States, or their authorized representatives.

5. Fishery data collected during the course of a project that could be pertinent to fishery management needs must be available to NMFS on request, subject to pertinent confidentiality requirements.

6. If a project is awarded, quarterly project status reports on the use of funds, and progress of the project must be submitted to NMFS within 30 days after the end of each calendar quarter. The content of these reports will include, at a minimum:

a. A summary of work conducted, which includes a description of specific accomplishments and milestones achieved;

b. The degree to which goals or objectives were achieved as originally projected;

c. Where necessary, the reasons why goals or objectives are not being met; and

d. Any proposed changes in plans or redirection of resources or activities and the reason therefore.

7. If a project is funded, submit an original and two copies of a final report to NMFS within 90 days after completion of each project. The report must describe the accomplishments of the project and include an evaluation of the work performed and the results and benefits of the work in sufficient detail to enable NMFS to assess the success of the completed project. Results must be described in relation to the project objectives of resolving specific impediments to managing or enhancing fisheries, and be quantified to the extent possible. Potential uses of project results by private industry or fishery management agencies should be specified. Any conditions or requirements necessary to make productive use of project results should be identified.

8. Present completed project results at the annual MARFIN conference and submit an abstract 15 days prior to the conference (September 1991). Travel funds for the Principal Investigator to attend this meeting will be provided by NMFS.

9. Each recipient of MARFIN funding must comply with applicable OMB circulars, Department of Commerce policies and regulations, and NOAA policies and guidelines. The Drug-Free Workplace Act of 1988 requires that all grantees receiving Federal financial assistance must maintain a drug-free workplace. Each award contains DOC standard terms and conditions and NOAA special award conditions that must be met by the recipient.

10. For each project funded, three copies of all publications or reports printed with grant funds must be submitted to the Program Officer. Any publication printed with grant funds must identify the NOAA MARFIN

program as the funding source along with the grant award number. Grant recipients are also requested to submit to the Program Officer three copies of all publications resulting wholly or in part from MARFIN funded projects, to indicate in such publications the role of the MARFIN program in accomplishing the research and, where another Federally funded program provides data sources used in the research, to so indicate.

B. Obligations of the National Marine Fisheries Service

The NMFS Southeast Region will:

1. Provide programmatic information necessary for the proper submission of applications.

2. Provide advice to inform applicants of NMFS fishery management and development policies and goals.

3. Monitor all projects after award to ascertain their effectiveness in achieving project objectives and in producing measurable results. Actual accomplishments of a project will be compared with stated objectives.

4. Refer questions regarding grant management policy and administration from applicants/recipients to the Grants Officer.

C. NOAA Grants Management Officer Responsibility

The NOAA Grants Management Officer is responsible for the execution of NOAA Federal Assistance Awards. The Grants Officer is responsible for the business management aspects of the awards, and serves as the counterpart to the Business Officer of the recipient. The Grants Officer works closely with the Program Officer, who is responsible for the scientific, technical, and programmatic aspects of the project. The official grant file will be maintained by the Grants Officer.

D. Legal Requirements

The applicant will be required to satisfy the requirements of applicable local, state, and Federal laws.

Recipients are subject to the provisions of 31 U.S.C. 1352 entitled "Limitations on use of appropriated funds on certain Federal contracting and financial transaction," more commonly known as the "lobbying disclosure" rule.

Section 319 of Public Law 101-121 generally prohibits recipients of Federal contracts, grants, and loans from using appropriated funds for lobbying the Executive or Legislative branches of the Federal Government in connection with a specific contract, grant, or loan. A "Certification for Contracts, Grants, Loans, and Cooperative Agreements" and the SF-LLL form, "Disclosure of Lobbying Activities" (if applicable), are required to be submitted with the application.

Potential recipients may be required to submit an "Identification-Application for Funding Assistance" form (Form CD-346), which is used to ascertain background information on key individuals associated with the potential recipient. The CD-346 form requests information to reveal if any key individuals in the organization have been convicted of, or are presently facing, criminal charges such as fraud, theft, perjury, or other matters pertinent to management honesty or financial integrity. Potential recipients may also be subject to reviews of Dun and Bradstreet data or other similar credit checks.

A false statement on the application may be grounds for denial or termination of funds and grounds for possible punishment by a fine or imprisonment.

Grants awarded pursuant to the Magnuson Fishery Conservation and Management Act, 16 U.S.C. 1854(e), shall be in accordance with the Fisheries Research Plan (comprehensive program of fisheries research) in effect on the date of the award.

Classification

NMFS reviewed this solicitation in accordance with Executive Order (E.O.) 12291 and the Department of Commerce guidelines implementing that Order. This solicitation is not "major" because it is not likely to result in (1) an annual effect on the economy of $100 million or more; (2) a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or (3) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets. This notice does not contain policies with sufficient federalism implications to warrant preparation of a federalism assessment under E.O. 12612. Prior notice and an opportunity for public comments are not required by the Administrative Procedure Act or any other law for this notice concerning grants, benefits, and contracts. Therefore, a regulatory flexibility analysis is not required for purposes of the Regulatory Flexibility Act.

Information collection requirements contained in this notice have been approved by the Office of Management and Budget (OMB Clearance No. 0648-0178) under the provisions of the Paperwork Reduction Act. Public reporting burden for Agency-specific collection of information elements, exclusive of requirements specified under applicable OMB circulars, is estimated to average 4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Regional Director and to OMB (see ADDRESSES).

This program is subject to the provisions of E.O. 12372.

Authority: 16 U.S.C. 753a and 16 U.S.C. 1854(e)

Dated: January 18, 1991.

William W. Fox, Jr.,

Assistant Administrator for Fisheries, National Marine Fisheries Service.

[FR Doc. 91-1834 Filed 1-25-91; 8:45 am]

BILLING CODE 3510-22-M

APPENDIX B

APPROVED APPLICATION SUMMARIES

TOMFC1.F.01

MARFIN PROJECT SUMMARY

Project Title: Feasibility Study: Finfish Excluding Gear in Shrimp Trawls in the Western Gulf of Mexico

Project Status/: Duration — New X Con't ____ Start Date 10/1/90 End Date 9/30/92

Name, Address, Telephone Number of Applicant:
Gulf Shrimp Research and Development Foundation, Inc.
403 Vaughn Building, 807 Brazos, Austin, TX, 78701
512/476-8446

Principal Investigator(s) and "Brief" Statement of Qualifications:
Lucy L. Gibbs - Executive Director, Gulf Shrimp Research & Development Foundation and Texas Shrimp Association. Ms. Gibbs has managed four projects for the Foundation and is familiar with project evaluation, management and reporting procedures.

Project Objective: Assess the feasibility of gear that will exclude a significant number of finfish from shrimp trawls in the Western Gulf of Mexico while retaining an acceptable level of shrimp.

Summary of Work:
1) assemble and evaluate information on existing designs for finfish excluding gear
2) perform field trials on existing designs and evaluate results
3) design and fabricate gear or modifications to existing gear with potential for exclusion of finfish in shrimp trawls
4) perform field trials on new and/or modified gear and evaluate results
5) compile data and present conclusions on feasibility of a finfish excluding gear in shrimp trawls
6) disseminate information to interested parties

Project Funding	1st Year Funds Requested	2nd Year Funds Requested	Total Funds Requested
Federal	$ 47,135	$ 51,635	$ 98,770
Matching	$ 72,780	$ 72,780	$145,560
Total	$119,915	$124,415	$244,330

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MARFIN PROJECT SUMMARY

Project Title: An international conference on the reduction of bycatch in shrimp trawling operations and alternative harvesting methods for the shrimp fishery.

Project Status/: New XX Con't _____ **Start** 11/1/90 **End** 11/1/92

Project Duration: 24 months

Name, Address, and Telephone Number of Applicant:

Mr. Robert P. Jones
312 E. Georgia St.
Tallahassee, FL 32301 Tel. #: (904) 224-0612

Principal Investigator(s) and "Brief" Statement of Qualification:

Mr. Robert P. Jones, Executive Director
Southeastern Fisheries Association
Tallahassee, FL

Project Objectives:

1. To summarize pertinent information on alternate methods of shrimp harvesting and methods to reduce bycatch.
2. Identify future research necessary to reduce bycatch in U.S. shrimp fisheries.
3. Edit and publish invited papers, conference proceedings and management recommendations.

Summary of Work: **(For continuing projects, include, briefly, progress to date)**

Organize and sponsor an international conference of fishery scientists, managers and fishermen to address the problem of bycatch in shrimp trawls and examine alternate harvesting strategies. Additional goals of the conference are to provide recommendations for future research needs and management policies. The conference is scheduled for October 1991 in Tampa, Florida. Proceedings of the conference will be edited and published for dissemination of pertinent information.

Project Funding	1st Yr Funds Requested	2nd Yr Funds Requested	3rd Yr Funds Requested	Total Funds Requested
Federal	$ 31,650	$ 99,650	$	$ 131,300
Matching	$ 8,750	$ 17,300	$	$ 26,050
Total	$ 40,400	$ 116,950	$	$ 157,350

MARFIN PROJECT SUMMARY

Project Title: Strategic Planning for the Management of By-Catch in the Directed Commercial Fisheries of the Gulf of Mexico

Project Status: New Start Date 10/01/90 End Date 09/30/91

Name, Address, and Telephone Number of Applicant:

Gulf & South Atlantic Fisheries Development Foundation, Inc.
5401 W. Kennedy Boulevard, Suite 669
Tampa, FL 33609
(813) 286-8390

Principal Investigator(s) and "Brief" Statement of Qualifications:

Ms. Judy L. Jamison, Acting Executive Director, Gulf & South Atlantic Fisheries Development Foundation, Inc. Ms. Jamison has been on the Foundation staff as an Administrative Assistant for more than ten years, until March 1990 when she became Acting Executive Director. Because of her familiarity with OMB guidelines, as well as her many years of working cooperatively with industry, NOAA Grants, and NMFS, the Board of Trustees feels she is capable of fulfilling the Acting Executive Director's position until such time as a permanent replacement is found. She will utilize the services of private consultants on technical issues, as appropriate.

Priority Response Statement:

This proposal responds to the MARFIN solicitation published on pages 9480-9485, Volume 55, Number 50, of the Federal Register, Wednesday, March 14, 1990, 1(a), 1(c), 1(d), and 1(e) for bottomfish.

Project Objective:

To plan for data collection and future NMFS/industry cooperation in improving the efficiency and selectivity of fishing gear (or strategy) through reductions in the harvest and/or mortality of non-targeted species (by-catch) in the Gulf trawl and longline fisheries (particularly shrimp).

Summary of Work:

The Gulf of Mexico has and is experiencing extensive losses of fishery resources, including endangered species, due in part to the inadvertent or presently unavoidable capture of non-target species during fishing operations. This is especially evident in the shrimp trawl fishery and in pelagic longlining. This project will organize and conduct a cooperative program involving the fishing industry, NOAA scientists, Sea Grant scientists, Gulf of Mexico Fishery Management Council staff, and Gulf Coastal State Marine Fisheries agencies, to develop a plan that will include a by-catch management strategy, data needs, and a data collection system(s). An initial meeting of these participants will result in the appointment of a task force and the assignment of agreed upon planning responsibilities. The task force will consolidate and reconcile the strategies and supporting data needs of the state and federal fishery management agencies and develop a plan for data collection. A second meeting of the principals will seek consensus on a data collection plan based primarily upon voluntary industry cooperation. Federal, state, and industry commitments will be specifically identified.

Project Funding:

Source	Initial Funds Requested	Total Funds Requested	Percentage of Total
Federal	$146,858	$146,858	(100% of Total)
Matching	$ 0	$ 0	(0% of Total)
Total	$146,858	$146,858	(100% of Total)

PROJECT SUMMARY

a. Project Title: King and Spanish Mackerel Migration and Stock Assessment Study in the Southern Gulf of Mexico.

b. Project Status: New.

c. Project Duration: Fourteen months (November 1990-December 1991).

d. Applicant: Mote Marine Laboratory (MML), 1600 Thompson Parkway, Sarasota, Florida 34236. (813) 388-4441.

e. Principal Investigator: Karen M. Burns.

f. Project Objective: Obtain Spanish mackerel migration information off Mexico through tagging efforts at strategic sites along mackerel migration routes (Yucatan Peninsula - winter; Veracruz - spring). Aid in stock assessment investigations by providing king and Spanish mackerel specimens of various sizes and ages and king mackerel juveniles from Yucatan and Veracruz for electrophoresis. Concurrently otoliths/sex/fish size data will be provided from the same area. Monitor mackerel catches and obtain cero and serra specimens, for occurrence and mixing information. Obtain historical landings from Mexican Gulf Coast states. Provide length/frequency and CPUE data.

g. Project Summary: This project can be divided into six integral parts:

I. Movement and Migration of Mackerel

A. Tagging: Spanish mackerel would be tagged at strategic locations of greatest occurrence during months of peak abundance (Figure 1).

LOCATION	DATES	TAGGING GOALS
Yucatan/Campeche	Jan - Mar 1991	up to 500
Veracruz/Alvarado	March - May 1991	up to 1000
Quintana Roo	Nov 1991	up to 200

B. Tag Recovery System: MML will use a rapid reward system. All tags will be worth $10.00. Payment will be immediate and letters of recognition from PESCA, MML and NMFS will be issued.

C. Reward Poster Distribution: Continue the ongoing publicity campaign MML and PESCA began in 1986 with radio and newspaper articles. Continue the $10.00 tag return policy. Distribute reward posters in high visibility areas and involve the public and as many fishing cooperatives as possible.

II. Length/Frequency Distribution of Mackerel: Obtain length measurements and CPUE data for king and Spanish mackerel during months of prime harvesting.

III. Otolith/Sex/Fish Size Data Collection: Collect up to 200 pairs of mackerel otoliths along with sex and fish size data from Yucatan and Veracruz. The collection will consist of 10 fish of each sex over the available size range in groups of 20 fish at 10 cm intervals.

IV. Historical Landings: Provide recorded landings for king and Spanish mackerel by weight, value and area of harvest for all Mexican states bordering the Gulf.

V. Stock Identification: Deliver whole frozen king and Spanish mackerel or adult mackerel tissue samples (100 from Yucatan in winter, 100 from Veracruz in spring) and king mackerel juveniles when available to NOAA/NMFS Panama City for electrophoresis.

VI. Spanish Mackerel Stock Assessment. Determine the temporal and spacial extent of mixing of the three Spanish mackerel species (*Scomberomorus maculatus*, *S. regalis*, and *S. brasiliensis*) off Mexico.

h. Total Federal Funds Requested. $ 99,675
i. Funds from Nonfederal Sources. $ 93,056
j. Total Project Costs. $192,731

PROJECT SUMMARY

i. Project Title: Cobia (*Rachycentron canadum*), Amberjack (*Seriola dumerili*) and Dolpnin Migration and Life History Study off the Southwest Coast of Florica

ii. Project Status: New

iii. Project Duration: Fourteen months (Nov. 1990 - Dec. 1991)

iv. Applicant: Mote Marine Laboratory (MML) 1600 Thompson Parkway, Sarasota, FL 34236 (813) 388-4441 [FAX (813) 388-4312].

v. Principal Investigators: Karen M. Burns and Carole L. Neidig.

vi. Project Objective: Obtain cobia, amberjack and dolphin movement and migration information off the southwest coast of Florida through tagging efforts. Provide length/frequency data. Obtain hard parts along with fish sex, size and capture location for age and growth determination. Conduct angler survey to provide information on number, size and location of cobia, amberjack and dolphin caught off the southwest coast of Florida.

vii. Project Summary: This project can be divided into four integral parts:

I. Movement and Migration of Cobia, Amberjack and Dolphin
A. Tag/Release: Tag cobia, amberjack and dolphin off the southwest coast of Florida.
B. Tag Recovery System: Establish a rapid notification system for tag returns. Letters of recognition from MML will be issued. A year-end lottery will be established.
C. Poster Distribution: Distribute tag publicity posters in high visibility areas and inform the public and fishing organizations of project objectives by direct-contact and through multi-media presentations.

II. Length/Frequency Distribution of Cobia, Amberjack and Dolphin: Obtain up to 250 length measurements of cobia, amberjack and dolphin from along the southwest coast of Florida.

III. Life History Investigation:
A. Age and Growth: Collect cobia, amberjack and dolphin hard parts along with sex and size data and capture location and analyze for age and growth determination.
B. Maturation and Fecundity: Obtain up to 200 cobia, amberjack and dolphin gonads and determine their maturation stages, gonadosomatic index (GSI) and the developmental stages of ova. Make fecundity estimates by the examination of mature ovaries.

VI. Angler Survey: Survey commercial and recreational fishermen from the southwest coast of Florida to obtain information on the number, size and location of the three species caught.

viii.	Total Federal Funds Requested:	$167,989
ix.	Funds from Non-Federal Sources:	$ 71,139
x.	Total Project Costs:	$ 96,850

SOMF C4.A.21

PROJECT SUMMARY

i. PROJECT TITLE: Sociological and economic impacts of recreational reef fish fishermen in Texas coastal waters.

ii. PROJECT STATUS: new

iii. PROJECT DURATION: 1 October 1990 - 30 September 1991

iv. APPLICANT: Texas Parks and Wildlife Department
Coastal Fisheries Branch
4200 Smith School Road
Austin, Texas 78744
(512) 389-4857

v. PRINCIPAL INVESTIGATORS: Gary C. Matlock, Tom Wagner

vi. PROJECT OBJECTIVES:

Summarize and analyze sociological and economic data obtained from recreational reef fish fishermen in Texas coastal waters, to assist fishery managers in formulating an accurate definition of optimum yield (OY) for this fishery.

vii. SUMMARY OF WORK TO BE PERFORMED:

Sociological and economic data collected from Texas recreational reef fish fishermen will be accessed from computer files of the Texas Parks and Wildlife Department (TPWD), Coastal Fisheries Branch, Sport Harvest Monitoring Program. Individual trip data concerning angler motivations, satisfaction, expenditures, and contingent valuation from May 1987 through May 1990, and annual data from four statewide mail surveys concerning angler attitudes, opinions, and durable goods expenditures will be summarized and analyzed. Project progress will be reported quarterly to the funding agency and results will be disseminated through a final project report.

viii. TOTAL FEDERAL FUNDS REQUESTED: $11,534.93

ix. COST SHARING (25% STATE): $3,844.97

x. TOTAL PROJECT COST: $15,379.90

90MFC4.3.01

Summary Page

PROJECT TITLE: Spawning biology of shallow-water Gulf of Mexico groupers

PROJECT STATUS: New Project

PROJECT DURATION: 1 September 1990 to 31 August 1992, 2 years

APPLICANT: Dr. Patrick L. Colin, Caribbean Marine Research Center, c/o Florida State University Marine Laboratory, Rt. 1, Box 456, Sopchoppy, FL 32358, 904-697-2340.

PRINCIPAL INVESTIGATORS: Drs. Patrick L. Colin and Christopher C. Koenig

PROJECT OBJECTIVES: To define accurately the timing of (seasonal, lunar and daily), locations of and behavior during spawning by gag and red grouper.

SUMMARY OF WORK: Gonads will be collected and analyzed from the catch of gag and red grouper taken by commerical and recreational fishermen during a two year period. Additional collections will be made by researchers. SCUBA diving, ROV (remote operating vehicle) and autonomous video systems will be used to document and quantify spawning activity of groupers. Results will permit consideration of alternative managment options for Gulf of Mexico groupers.

Total Federal Funds Requested:	$159,889 (both years)	$76,350 (year 1) $83,539 (year 2)
Cost-sharing from non-Federal sources:		$15,900 (year 1) $16,800 (year 2)
Total Project costs:	$192,589 (both years)	

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MARFIN PROJECT SUMMARY

Project Title: "SPECIES IDENTIFICATION OF AMBERJACKS: IMPACT ON REEF FISH MANAGEMENT PLAN IMPLEMENTATION AND MANAGEMENT OF STOCKS IN THE GULF OF MEXICO."

Project Status: New Start: October 1, 1990 End: September 31, 1991

Project Duration: 1 Year

Name and Address of Applicant: Bridget Elizabeth McAfee
University of South Alabama
Coastal Research and Development Institute
Life Sciences Building Room 25
Mobile, AL 36688 (205) 460-7136

Principal Investigators: Bridget Elizabeth McAfee: MS degree in ichthyology from Moss Landing Marine Laboratories; currently a Fisheries Researcher at Coastal Research and Development Institute, University of South Alabama; 10 years experience working on many aspects of fish biology.

Project Objective: We propose to reevaluate the species status, relative abundance and distribution of greater amberjack (*Seriola dumerili*) and lesser amberjack (*Seriola fasciata*) in the Gulf of Mexico. We will define morphological characters which will supplant existing esoteric ones in an effort to facilitate easy discrimination of the two species in the field. Field identification by fishermen and enforcement personnel is vital to the effective management of these economically valuable species.

Summary of Work to be Performed: We propose to examine the specimens of greater amberjack (*Seriola dumerili*) and lesser amberjack (*Seriola fasciata*) that are currently archived in museums in New York, Washington DC and Philadelphia, to validate or modify their currently accepted systematic status using traditional morphometric and pigmentation characters. We will elaborate morphological characters to allow easy identification of these species. Also, we will determine the relative abundance of each species in recreational catches landed throughout the Gulf coast by examining the external morphology of fresh amberjacks. We will corroborate morphological differences by sampling appropriate size classes for subsequent electrophoretic analysis in the laboratory.

Total Project Cost:

Project Funding	Initial Funds Requested Year 1	Total Funds Requested	Percentage of Total
Federal	18,893.00	18,893.00	100%
Matching			
Total	18,893.00	18,893.00	100%

MARFIN PROJECT SUMMARY

A. Project Title: Mortality Rates and Movement of Hook-and-Line Caught and Released Red Snapper

B. Project Status: New X Con't ___

C. Start: Oct. 1, 1990 End: Sept. 30, 1992

D. Name, Address, and Telephone Number of Applicant:

Louisiana State University
Coastal Fisheries Institute
Center for Wetland Resources
Baton Rouge, Louisiana 70803-7503
(504) 388-6283

E. Principal Investigators(s):

Jeffrey H. Render
Charles A. Wilson

F. Project Objectives:

The goal of this project is to estimate mortality of hook-and-line caught and released red snapper. Specific objectives are to determine the effects of air bladder/abdomen deflation, tagging, depth, and sesonal environmental parameters on mortality.

G. Summary of Work:

During year 1, red snapper will be brought up from known depth with hook-and-line gear and released into in-sea near surface holding pens where mortality will be directly observed over a 3 day period for each treatment. Sampling will be conducted on one of several oil and gas structures owned by companies (Mobil, W & T Offshore) who have agreed to cooperate in this research project. A series of 4 treatments will be tested where the effects of air bladder/abdomen deflation and tagging will be evaluated relative to controls. Treatments will include; control (fish placed immediately in pen), vented air bladder/abdomen, vented air bladder/abdomen with tagging, and tagging only. Treatments will be replicated over 4 seasonal periods to determine the effect of environmental parameters (i.e. oxygen, temperature) on mortality.

In year 2, mortality of red snapper will be estimated at 3 capture depth intervals (15, 30, 45 m) with data telemetered with ultrasonic transmitters. Released fish will be observed with a remotely operated vehicle to directly observe behavior of released fish.

Project Funding	1st yr Funds requested	2nd yr Funds requested	3rd yr funds requested	Total Funds requested
Federal	$30,568	$47,655		$78,223
Matching	$ 3,633	$ 3,633		$ 7,266
Total	$34,201	$51,288		$85,489

90MFC4 ...

MARFIN PROJECT SUMMARY

Project Title: Genetic Studies to Determine Stock Structure of Reef Fishes in the Gulf of Mexico: Phase One

Project Status/: Duration New X Con't __ Start 10/1/90 (Date) End 9/30/91 (Date)

Name, Address, and Telephone Number of Applicant:

Texas A&M Research Foundation
P. O. Box 3578
College Station, Texas 77843
(409) 845- 8629

Principal Investigator(s) and "Brief" Statement of Qualifications:

PI: Dr. John R. Gold, Professor of Genetics
Dept. of Wildlife & Fisheries Sciences
Texas A&M University
College Station, Texas 77843
(409) 845-5702

PI Qualifications: Seventeen years experience in fish genetics research, including work on chromosomes, protein electrophoresis, and nuclear and mitochondrial DNAs. Three years experience working on the population genetics of red drum.

Project Objectives:

(1) To generate mitochondrial (mt)DNA probes for three target reef fish groups (viz., snappers, groupers, and jacks) using recombinant DNA technologies;
(2) To survey restriction enzyme site polymorphism among geographic samples of three target species (viz., the red snapper, the red grouper, and the greater amberjack);
(3) To provide the group specific mtDNA probes and background information on each target species to research groups (including the Principal Investigator's laboratory) in order to permit simultaneous initiation of studies on the genetic stock structure among species in each target group.

Summary of Work: (For continuing projects, include briefly, progress to date)

(1) Appropriate tissues (heart, spleen, and muscle) will be removed (and flash frozen) from 45 adult individuals each of the red snapper, red grouper, and greater amberjack. Specimens will be obtained from several localities in the Gulf of Mexico and Atlantic Ocean, with primary emphasis on waters off the Florida coast.
(2) The mitochondrial DNA molecules from each of the three target species will be cloned using recombinant DNA technologies and used as probes to survey restriction enzyme site variation among the individuals sampled from each target species. Approximately 30-35 restriction enzymes will initially be screened in order to obtain an informative set of 12-15 enzymes.
(3) The resultant probes and information will be used to stimulate multiple researches on the genetic stock structure of key species in each target group.

Project Funding	Initial Funds Requested	Total Funds Requested	Percentage of Total
Federal	$ 54,623	$ 54,623	(91 % of Total)
Matching	$ 5,637	$ 5,637	(9 % of Total)
Total	$ 60,260	$ 60,260	(100 % of Total)

9/1 = 05.B.01

MARFIN PROJECT SUMMARY

Project Title: Investigations of inshore and offshore population dynamics of Spanish sardines along the central west coast of Florida.

Project Status/Duration: Continuation x Start Date: 1 February 1991
End Date: 31 January 1992

Name, Address, and Telephone Number of Applicant:

Florida Department of Natural Resources
Florida Marine Research Institute
100 Eighth Avenue SE
St. Petersburg, FL 33701-5095 813-896-8626

Principal Investigator(s) and Brief Statement of Qualifications:

Frederick C. Sutter--M.S. University of Massachusetts. Ten years of fisheries research experience in the Gulf of Mexico, specializing in near-shore population dynamics of coastal pelagics.

Behzad Mahmoudi -- Ph.D. University of Miami. Specialist in stock assessment and population dynamics modeling of the South Atlantic and Gulf of Mexico finfishes.

Project Objective:

To provide estimates of population dynamic parameters to compare inshore and offshore Spanish sardine stock structures off the central west coast of Florida. This study will provide information for the assessment of this increasingly utilized resource.

Summary of Work:

As part of a multi-disciplinary study of baitfish resources in the eastern Gulf of Mexico, collection of Spanish sardines was initiated in the Tampa Bay area during February of 1990 as part of a two year investigation of stock structure using size/age distributions, growth rates, and reproductive parameters from inshore (approximately 5 fathoms) and offshore (greater than 10 fathoms) populations. Offshore collections will be made seasonally, near the time of a new moon, using night lighting to attract fish. Sampling devices will include multi-panel gill nets, cast nets, and a hoop net outfitted with an underwater light. Inshore collections will be made on a monthly basis from the commercial purse seine fishery and from fishery independent sampling. Lengths, length-weight measurements and otoliths will be taken during each collection to provide an analysis of growth patterns. Reproductive studies of sex ratios, maturity stages, development, and seasonality will be made in concert with age and growth investigations to better define the stock structure of this important commercial latent resource.

Project Funding	1st Yr Funds Requested	2nd Yr Funds Requested	3rd Yr Funds Requested	Total Funds Requested
Federal	$ 50,906	$ 0	$ 0	$ 50,906
Matching	$ 0	$ 0	$ 0	$ 0
Total	$ 50,906	$ 0	$ 0	$ 50,906

10 MF07 B C1

PROJECT SUMMARY

a. Project title: A Social and Economic Characterization of Gulf of Mexico Recreational and Commercial Shark Fisheries
b. Project status: new
c. Project duration: October 1, 1990 - September 30, 1991
d. Name, address and telephone number of applicant:
Texas A & M Research Foundation
Box 3578
College Station, Texas 77843
(409) 845-8629
e. Principal investigator:
Dr. Robert B. Ditton
Department of Wildlife and Fisheries Sciences
Texas A&M University
College Station, Texas 77843

f. Project objectives

1. To provide a social and economic profile of tournament shark anglers in the Gulf of Mexico study region.
2. To provide a social and economic profile of party boat anglers in Port Aransas, Texas.
3. To determine the network of major players, key activity centers and the business and social structure of commercial shark harvesting and processing in the Gulf of Mexico.
4. To determine possible impacts of the proposed federal management plan and identify future research directions.

g. Summary of work to be performed

1. Recreational fishery: Representative samples of shark tournament anglers and party boat anglers will be sent a mail questionnaire or interviewed on board, respectively. The purpose of these survey research efforts will be to ascertain participation in the shark fishery, social and economic characteristics, trip expenditures, the economic value which they attribute to shark fishing, and attitudes regarding catch and other harvest regulations being considered. Established survey procedures will be followed to yield reliable information for timely managerial use.

2. Commercial fishery: A network of key informants from the harvesting and processing sectors of the fishery will be identified and interviewed on-site. Social and economic data on participants will be collected and their interactions with management authorities will be observed. These methods will permit a better understanding of the commercial fishery and its connection to the regulatory process.

h. Total federal funds requested: $87,938
i. Non-federal cost share: $12,400
j. Total project costs: $100,338

90MF 09.C 02

B. MARFIN PROJECT SUMMARY

Project Title: RECRUITMENT AND HABITAT UTILIZATION BY THE BLUE CRAB, *CALLINECTES SAPIDUS*: THE IMPORTANCE OF JUVENILE NURSERY HABITATS TO THE FISHERY

Project Status: New Start: October 1990 End: September 1992

Project Duration: 2 yrs.

Name and Address of Applicant: Marine Environmental Sciences Consortium, Dauphin Island Sea Lab, P.O. Box 369-370, Dauphin Island, AL 36528

Principal Investigators: Steven G. Morgan, Kenneth L. Heck, Loren Coen and Richard K. Zimmer-Faust

Project Objective: We propose to evaluate and rank the relative importance of nursery habitats for blue crab populations in the north central Gulf of Mexico. This information will enable better forecasts of the size of adult blue crab populations and will permit more prudent exploitation and management of blue crab stocks.

Summary of Work to be Performed: Our proposed study will compare settlement rates of blue crab postlarvae and the subsequent mortality and growth rates of juvenile blue crabs in marsh and seagrass nursery habitats in coastal waters of Alabama during peak recruitment for two years. We thereby will be able to rank the importance of three widespread types of nursery habitats to the blue crab fishery: (1) a high salinity habitat where widgeon grass, shoal grass, black needlerush and smooth cordgrass dominate, (2) an intermediate salinity habitat where needlerush and widgeon grass prevail, and (3) a low salinity habitat where tape grass and bullrush are abundant. This research has been recommended by government agencies at the regional and state levels from New York to Texas and was developed as part of an inter-regional, cooperative research program to understand the population dynamics of blue crabs. This project was designed to address funding priority 5 of the southeast region [Federal Register 55(50):9481].

Total Project Cost:

Project Funding	Initial Funds Requested Year 1	Total Funds Requested Years 1 & 2	Percentage of Total
Federal	$58,287	$118,148	66%
Matching	$29,342	$60,923	34%
Total	$87,629	$179,071	100%

90MF12.B.0

MARFIN PROJECT SUMMARY

A: Project Title: Age Structure and Reproductive Potential of the Northern Gulf of Mexico Offshore Population of Red Drum, Sciaenops ocellatus, not Vulnerable to Purse Seine Capture: The Missing Fish?

B: Project Status: New X Cont. ___

C: Start: Oct. 1, 1990 End: Sep. 30, 1992

D: Name, Address, and Telephone Number of Applicant:
Louisiana State University
Coastal Fisheries Institute, Center for Wetland Resources
Baton Rouge, Louisiana 70803-7503
(504) 388-6283

E. Principal Investigators: Charles A. Wilson and Daniel W. Beckman

F. Project Objective: To provide age, year-class strength, and reproductive information for red drum that apparently occur separately from the large spawning schools vulnerable to purse seine sampling, including: 1) Determination of age-frequency distribution of the red drum population sampled from relatively deep offshore waters by hook-and-line, and comparison with red drum sampled from large surface schools by purse seine., 2) Estimation of spawning frequency and batch fecundity and comparison of these values with those for purse seined red drum. Identification of relationships between reproductive output and age, size, year class strength, and growth.

G. Summary of Work: Red drum will be randomly sampled from hook-and-line catches incidental to commercial snapper catches in northern Gulf of Mexico federal waters. Samples will be collected as available throughout the year. Lengths, weights, and sex will be recorded and otoliths and gonads removed from fish sampled. Otoliths will be sectioned and annuli counted for age determination. Female gonads will be sectioned and stained for histological examination, and oocytes will be staged. Spawning frequency and batch fecundities will be estimated. The population age-class structure and reproductive biology will be compared to that determined for the purse seined population.

Project Funding	Initial Funds Requested	Total Funds Requested	Percentage of Total
Federal	$ 38,785	$ 77,570	(91% of Total)
Matching	$ 3,633	$ 7,266	(9% of Total)
Total	$ 42,418	$ 84,836	(100% of Total)

90 MF 12.B.02

MARFIN PROJECT SUMMARY

Project Title: Dynamics of Estuarine and Offshore Red Drum *(Sciaenops ocellatus)* Stocks, as Determined by Otolith Elemental Analysis

Project Status/: New ✓ Con't _____ Start 09/01/90 End 02/28/91
Duration 18 Months

Name, Address, and Telephone Number of Applicant:

Lee A. Fuiman
The University of Texas at Austin
Marine Science Institute
P.O. Box 1267, Port Aransas, TX 78373 (512-749-6775)

Principal Investigator(s) and "Brief" Statement of Qualifications:

Lee A. Fuiman, Ph.D.
Research Scientist and Assistant Professor
Fishery Biology/Ichthyology

Project Objective:

Examine the life history of red drum in coastal Texas. Research designed to determine: 1) age structure of both estuarine and offshore stocks of red drum; 2) escapement of juveniles to offshore stocks; and 3) dynamics of offshore stocks. Includes age when individuals join offshore stocks, whether they remain offshore, and how often they return to bay and nearshore waters.

Summary of Work:

The research will use analyses of the elemental composition of otoliths to reconstruct an individual fish's life history. These analyses will be made with a wavelength dispersion electron probe microanalyzer (electron microprobe). A series of laboratory experiments will determine the relationship between water temperature and the concentration of certain elements (*e.g.* strontium and calcium) in otoliths. The resulting calibration curve will be used to determine water temperatures experienced by individual fish during their lifetime. Comparisons of these calculated temperatures with bay and Gulf water temperatures, together with age determinations, will identify movements of fish between the two stocks.

Project Funding	1st Yr Funds Requested	2nd Yr Funds Requested	3rd Yr Funds Requested	Total Funds Requested
Federal	$ 26,393	$ 21,013	$	$ 47,406
Matching	$ 10,632	$ 11,165	$	$ 21,797
Total	$ 37,025	$ 32,178	$	$ 69,203

GOMF 12.C.92

MARFIN PROJECT SUMMARY

Project Title: Larval Food, Growth, and Microhabitat Selection: Factors Affecting Recruitment of Estuarine-dependent fishes in the northern Gulf of Mexico

Project Status: New **Start:** Feb 1, 1991 **End:** Jan 31, 1992

Name, Address, and Telephone Number of Applicant:
Louisiana State University
Coastal Fisheries Institute
Center for Wetland Resources & Zoology and Physiology
Baton Rouge, Louisiana 70803-7503
(504) 388-6512 (504) 388-1738

Principal Investigator(s):
D. M. Baltz, Assistant Professor, Coastal Fisheries Institute & Department of Marine Sciences
J. W. Fleeger, Professor, Zoology and Physiology

Project Objectives: To better understand the factors affecting the recruitment of black drum, red drum, and spotted seatrout, we propose to identify and characterize the critical nursery microhabitats of these three important recreational and commercial species that range throughout the northern Gulf of Mexico and Southeast Atlantic. Our objectives are:

1) to identify and characterize nursery microhabitats by systematically sampling larval fishes along environmental gradients in coastal estuaries,
2) to identify important food items in their diets,
3) to characterize recent growth by examining daily increments on otoliths, and
4) to relate microhabitat selection, food, and daily growth data to identify important factors affecting recruitment.

Summary of Work: Larval distribution in marsh microhabitats will be studied using a drop sampler to identify the primary nursery area. The nursery area will then be characterized using microhabitat variables (e.g., depth, salinity, temperature, dissolved oxygen, turbidity, substrate type, etc.). Analysis of larval samples will yield information on the daily growth rates and diet of young-of-year fishes, which together with microhabitat data will be used in a general regression model to evaluate the recruitment potential of various microhabitats in an estuarine nursery area.

Project Funding	Initial Funds Requested	Total Funds Requested	Percentage of Total
Federal	$83,530	$83,530	(92.5% of Total)
Matching	$ 7,188	$ 7,188	(7.5% of Total)
Total	$90,718	$90,718	(100% of Total)

PROJECT TITLE

Estimation of Spawning Stock Biomass and Exploitation/Escapement Rates for Population Assessment of Black Mullet (Mugil cephalus)

PROJECT STATUS: NEW XX CON'T -- START: 1 OCTOBER 1990
END: 30 SEPTEMBER 1991

NAME, ADDRESS, AND TELEPHONE NUMBER OF APPLICANT:

FLORIDA DEPARTMENT OF NATURAL RESOURCES, Division of Marine Resources
Florida Marine Research Institute (813-896-8626)
3900 Commonwealth Blvd., Tallahassee, Florida 32399

PRINCIPAL INVESTIGATOR(S) AND BRIEF STATEMENT OF QUALIFICATIONS:

BEHZAD MAHMOUDI, PH.D. UNIVERSITY OF MIAMI,
SPECIALIST IN FISH POPULATION DYNAMICS, MODELING, AND STOCK ASSESSMENT.
FIVE YEARS OF EXPERIENCE IN THE STUDY OF FLORIDA'S BLACK MULLET FISHERY

PROJECT OBJECTIVE:

Determine spawning stock biomass and the commercial gill net exploitation/escapement rates for black mullet during the roe mullet season.

SUMMARY OF WORK:

This research proposal is a continuation of a mark/recapture study supported by MARFIN during the 1989-1990 mullet spawning season. The goal of this project is to provide estimates of black mullet population parameters during the roe mullet fishery. As steps are taken to develop a management plan for the black mullet fishery, there is a critical need for fishery-independent estimates of important parameters such as spawning stock biomass, the rates of the exploitation and escapement of the spawning populations from the commercial fishery.

The spawning stock biomass of black mullet schools will be measured through mark/recapture experiments made during each spawning run in three selected systems in the Tampa Bay region. Spawning runs occur approximately 4 to 6 times during the season when aggregated schools of mullet emigrate in response to cold front events from inshore waters to offshore spawning grounds. The Petersen-type estimates of spawning stock size, exploitation rate, and escapement rate will be calculated during each spawning run.

Prior to each spawning run, approximately 500 mullet will be marked from aggregated schools in each of the three systems. Two of the sampling areas selected are heavily utilized and one is lightly utilized by the commercial fishery. Immediately after the passage of a cold front and subsequent emigration of mullet schools from the tag-release areas, data on the returns and associated catches will be collected from the commercial fishery to develop a data base for parameter estimations.

Project Funding	1st Yr Funds Requested	2nd Yr Funds Requested	3rd Yr Funds Requested	Total Funds Requested
Federal	$57,731	-0-	-0-	$57,731
Matching	$18,675	-0-	-0-	$18,675
Total	$76,406	-0-	-0-	$76,406

MARFIN SUMMARY SHEETS FOR 1990 MULTI-YEAR PROJECTS

MARFIN PROJECT SUMMARY

Project Title: MACKEREL AND REEF FISH BIOPROFILE AND CATCH/EFFORT DATA COLLECTION FROM THE NORTHERN GULF OF MEXICO

Project Status: Continuation (2nd year)

Project Duration: October 1, 1990-September 30, 1991 (1 year)

Applicant: Center for Wetland Resources
Louisiana State University
Baton Rouge, Louisiana 70803-7503
(504) 388-6507

Principal Investigator: Sandra J. Russell, Research Assoc. IV
Coastal Fisheries Institute, LSU

Project Objectives:

The goal of this study is to record catch/effort and bioprofile data from the mackerel and reef fish fisheries in the northern Gulf of Mexico.

Project Summary:

The second year of this three-year project will build upon the computerized database of mackerel and reef fish effort and biological information established by LSU's MARFIN-funded sampling program in 1986. Specifically, we will continue to obtain interviews (goal of 170) from both recreational and commercial mackerel and reef fish fishermen. Their catches will be randomly sampled so that at least some fish from every trip are measured (goal of 2,000 fork lengths, each, of king mackerel and red snapper). Spanish mackerel, greater amberjack, common dolphin, tilefish, and other snapper and grouper species will also be measured when available (goal of at least 1,000 fork lengths).

Otoliths and muscle tissue/other organ samples will continue to be collected and shipped to the NMFS-Panama City Lab as per their requirements.

From October 1, 1989 through April 30, 1990, the LSU port sampler obtained 37 interviews from commercial fishermen targeting king mackerel and reef fish, and measured 371 king mackerel, 432 red snapper, and 107 miscellaneous snappers and groupers. The vessels have been scattered towards Texas unusually late this past spring and have been landing in remote locations at night, making interception difficult. The interview rate should increase this summer as the king mackerel fishery re-opens, the fishing tournament season gets underway, and the reef fish vessels move eastward towards Grand Isle. Data have been sent via tape to NMFS-Miami.

Project Funds:	2nd Year Funds Requested
Federal	$38,730.00
Matching	3,199.00
Total	$41,929.00

MARFIN PROJECT SUMMARY

Project Title: EARLY LIFE HISTORY OF SNAPPERS IN COASTAL AND SHELF WATERS OF THE NORTHCENTRAL GULF OF MEXICO, LATE SUMMER/FALL MONTHS, 1983-1989.

Project Status/: New__ Con't_X_ Start Date 10/01/90 End Date 09/30/91
Duration

Name, Address, and Telephone Number of Applicant:
Gulf Coast Research Laboratory
P.O. Box 7000
Ocean Springs, MS
(601) 872-4211

Principal Investigators and Qualifications:
J. Lyczkowski-Shultz, Ph.D., Associate Biologist
B.H. Comyns, M.S., Research Associate

Project Objectives: Document and describe the distribution, relative abundance, and ecology of snapper larvae, especially red and vermilion snapper. Provide new data on snapper spawning locations in relation to hardbottom and artifical reef sites. Describe developmental morphology of small (<4 mm), preflexion red snapper. Assess the feasiblility of aging red snapper larvae using daily otolith growth increments. Begin to develop a database from which larval snapper growth and mortality rates can be estimated and recruitment processes described.

Summary of Work: Progress towards year 1 objectives pertaining to analyses of field collections is on schedule. Snapper larvae were identified from archived ichthyoplankton collections (including discrete-depth, finescale, and broadscale samples) taken from Aug. through Nov. 1983-85, and Sep. 1986-89. Analyses of horizontal and vertical, distribution and abundance patterns relative to locations of hardbottom and artifical reef habitats are underway. However, due to lack of funding for their snapper mariculture project, the Alabama Marine Resources Division (AMRD), Gulf Shores, Alabama, was unable to supple us with reared red snapper larvae for taxonomic description and otolith observations. Description of preflexion red snapper larvae and daily otolith growth increment verification will be made in project year 2 pending funding of the AMRD rearing program in 1990-91. Determination of age structure and field growth and mortality rates will be undertaken depending on the success of the AMRD rearing program, and the extent of the field collected, larval snapper database.

Project Funding	Funds Requested In Second Year	% of Total
Federal	$8,920	41%
Matching	$12,785	59%
Total	$21,705	100%

MARFIN PROJECT SUMMARY

Project Title:Evaluation of Quahog (Mercenaria mercenaria) Abundance and Growth in Inshore Alabama and Northwestern Florida Waters: An Assessment of Habitat Favorability for Clam Culture

Project Status:	New	Con't X	Start Date	February 1, 1991	End Date	January 31, 1992
Duration						

Name, Address, Telephone No. of Applicant: Dr. Kenneth L. Heck, Jr. and Dr. Loren D. Coen, Marine Environmental Sciences Consortium, Dauphin Island Sea Lab & University of South Alabama's Coastal Research and Development Institute, Dauphin Island, Alabama, 36528, (205) 861-2141

Principal Investigator(s) and "Brief" Statement of Qualifications:
Kenneth L. Heck, Ph.D.. 1976. (Florida State University). Senior Marine Scientist. Efforts are focused on ecological studies og seagrass-associated macrofauna, expecially shrimps, crabs, and fishes. Current studies include assessment of the nursery value and rates of secondary production in seagrass habitats along the Atlantic and Gulf coasts of seagrass meadows.

Loren D. Coen, Ph.D.. 1987. (University of Maryland). Research Scientist. Research focuses on experimental ecology, emphasizing aquatic plant-animal interactions. Current work includes the functional morphology and ecology of tropical decapod crustaceans, seagrass ecology and herbivore susceptibility and life history evolution of seaweeds.

Project Objective: To collect information on survival and growth rates of Quahogs (Mercenaria mercenaria) in Alabama and northwest Florida and to evaluate the favorability of nearshore vegetated habitats for hard clam populations.

Summary of Work: (For continuing projects, include, briefly, progress to date).

Field surveys of the quahog (Mercenaria mercenaria) in Alabama and northwest Florida have been initiated to document population sizes and habitat specific growth and rates of survival. We are currently testing the hypothesis that seagrasses increase the probability of clam survival by evaluating experimentally in the field whether and how different types of seagrasses can protect clams from: (1) lethal predation by crabs and other predators; and (2) sublethal partial predation by animals such as flatfish that "nip" clam siphons and in so doing reduce clam growth rates. The first seasonal growth/survival experiment, using a Halodule bed in Perdido Pass, Alabama, began in early May, 1990. Clams (240 nipped & 240 unnipped, one-half caged) were placed within either the seagrass bed or the sand. Additional plots/cages are being monitored to measure siphon regeneration in the field and instantaneous siphon nipping rates. Later experiments will assess the importance of seasonality and seagrass type (e.g., Thalassia).

This information will be used to provide a more general and complete understanding of the environmental factors that influence survival and growth rates of hard clams in the northern gulf of Mexico. Of special importance will be an assessment of the relative importance of seagrasses, which we believe to be serving as "critical" habitats for hard clams just as they are for young shrimp, crabs and fishes in the Gulf.

Project Funding:	2nd Yr Funds Requested
Federal	$ 61,101
Matching	$ 19,947
Total	$ 81,048

MARFIN PROJECT SUMMARY

Project Title: The Relative Value of Vegetated and Unvegetated Habitats to Juvenile Spotted Seatrout and Red Drum: Comparisons of Nursery Habitats and Field Growth Rate Measurement Techniques

Project Status/: New Con't X Start Date February 1, 1991 End Date January 31, 1992
Duration

Name, Address, and Telephone Number of Applicant: Kenneth L. Heck, David A. Nadeau; Marine Environmental Sciences Consortium, Dauphin Island Sea Lab & University of South Alabama's Coastal Research and Development Institute, Dauphin Island, Alabama, 36528, (205) 861-2141

Principal Investigator(s) and "Brief" Statement of Qualifications:
Kenneth L. Heck, Ph.D. 1976. (Florida State University).
David A. Nadeau, M.S. (University of South Alabama)(Expected 1990).

Project Objective: (1) To better understand the habitat requirements of early juvenile spotted seatrout and red drum by determining the relative importance of food availability and refuge from predation in explaining the association of both species with seagrass habitats; and (2) to develop a simple, cost-effective method of comparing in situ individual growth rates of juvenile fishes among potential "nursery" habitats.

Summary of Work: (For continuing projects, include, briefly, progress to date).

We will use field growth comparison experiments to assess the relative habitat value of seagrass (Halodule wrightii) and nearby unvegetated habitats for early juvenile spotted seatrout and red drum. We will also evaluate different methods of measuring growth of fishes under field experimental conditions with the goal of developing a cost-effective technique for comparing habitat favorability for early juvenile fishes. This work is of both theoretical and practical importance, for it seeks to determine how habitat quality ultimately influences the size of adult fish populations. In particular, this work will allow us to rank quantitatively the various types of estuarine nursery habitats according to the growth rates exhibited by fishes in vegetated and unvegetated habitats.

Despite the fact that funding was not received until February 1, 1990, twenty-one fish enclosures on hand have been cleaned and repaired, and twenty additional enclosures have been constructed. These enclosures were deployed in dense Halodule and unvegetated sand habitats at Point aux Pins, AL for seasonal field growth experiment #1. Red drum fingerlings obtained from the Florida Marine Research Institute, St. Petersburg, FL were marked with calcein, graded to similar size, and stocked into field enclosures for 62 d. Red drum recovered from enclosures were measured for standard length and total length in the field and returned to the Dauphin Island Sea Lab for removal of sagittal otoliths. Growth of the fish in length will be calculated and compared to otolith growth, seagrass biomass, and sediment characteristics.

Project Funding	1st Yr Funds Requested	2nd Yr Funds Requested	3rd Yr Funds Requested	Total Funds Requested
Federal	$ 51,900	$ 51,900	$ 0	$ 103,800
Matching	$ 9,280	$ 10,069	$ 0	$ 19,349
Total	$ 61,180	$ 61,969	$ 0	$ 123,149

MARFIN PROJECT SUMMARY

A. **Project Title:** Investigation of Life History Parameters of Species of Secondarily Targeted Reef Fish in the Northern Gulf of Mexico

B. **Project Status:** New (Renewal of one year project.)

C. **Project Duration:** February 1 1991 to January 31, 1992, or other appropriate one year interval.

D. **Applicant:**
Dr. Robert L. Shipp, Director
Coastal Research and Development Institute
University of South Alabama
Mobile, Alabama 36688

E. **Principal Investigators: (Other Than Applicant)**
Dr. Richard K. Wallace
Marine Fisheries Specialist
Alabama Sea Grant Extension Service
3940 Government Boulevard
Mobile, Alabama 36693

F. **Project Objective:** Provide data on age/length relationships and basic life history of secondary reef target species, (snappers, porgies, groupers, amberjacks) and dolphins from the northern Gulf of Mexico. These data will establish a base for optimal management of these species during anticipated changes in fishing pressure with implementation the of Reef Fish Management Plan. Supplementary data on red snapper will also be gathered.

G. **Summary of Work to be Performed:**

Otoliths will be gathered from numerous sources (archived lab material, commercial outlets, on board, dockside) from secondary target reef species and dolphins. Concurrently additional life history data (length, sex, gonadal condition, etc.) will be gathered. Data will be entered and analyzed according to accepted fishery procedures to provide information on basic life history parameters of these secondary target species.

H. **Total MARFIN Funds Requested:**

FY 1991 $42,190
FY 1992 $42,190

I. **Project Costs Provided from Non-MARFIN Sources:**

FY 1991 $11,700 FY 1992 $11,700

J. **Total Project Costs:** FY 1991 $53,890 FY 1992 $53,890

MARFIN PROJECT SUMMARY

Project Title: Age Validation of adult black drum in Florida

Project Status/Duration: Cont_ XX_ New__ Start Date 02/1/91

Name, Address, and Telephone Number of Applicant:

Florida Department of Natural Resources
Florida Marine Research Institute
100 Eighth Ave. S.E., St. Petersburg, FL 33701-5095
Phone: 813/896-8626

Principal Investigator (s) & "Brief" Statement of Qualifications:

Michael D. Murphy: M.S. Wildlife and Fisheries Sciences, Texas A&M University, 1981: eight years active research on life history, population dynamics, and stock assessment of scieanids off Florida.

Ronald G. Taylor: B.S. Marine Biology, Auburn University, 1970; fourteen years of experience determining aspects of fisheries species composition and fish reproduction.

Project Objective: To determine and validate the age of adult black drum using tetracycline-marked fish.

Summary of Work:

Approximately 300 black drum, each larger than 15 lbs., will be captured from the Mosquito/Indian River Lagoonal system, tagged with a numbered internal anchor tag, injected with 30 mg/kg body wt. oxytetracycline, and released back into the wild. Subsequent recaptures from this group will have their otoliths sectioned and examined for the number of opaque bands deposited after the fluorescing band of tetracycline. This reference mark will be used to test the hypothesis that one opaque band forms each year and thus are accurate indicators of age.

Project Funding	1st Yr Funds Requested (90)	2nd Yr Funds Requested (91)	3rd Yr Funds Requested (92)	Total Funds Requested
Federal	$ 4,000	$ 4,000	$ 4,000	$ 12,000
Matching	0	0	0	0
Total	$ 4,000	$ 4,000	$ 4,000	$ 12,000

2. PROJECT SUMMARY

a. Project Title: Implementation of a log book system for spotter pilots and fleet captains to record observations on mackerel schools in south Florida.

b. Project Status: New

c. Project Duration: Start Date:2/1/1990 **End Date:**1/31/1992

d. Applicant: Rosenstiel School of Marine and Atmospheric Science
University of Miami. 4600 Rickenbacker Causeway
Miami, Florida 33149
Telephone: (305) 361-4604

e. Principal Investigator(s):
Dr. Nelson M. Ehrhardt. Associate Professor
Division of Marine Biology and Fisheries
(305) 361-4741

f. Project Objectives: The goal of this project is to study the temporal-spatial distribution of schooling mackerels and the character of the directed fishing acting upon them. Objectives include: 1) To obtain data on the winter distribution and abundance of mackerel schools, 2) to estimate the level of school utilization by the fleet, 3) To describe the operational characteristics of the fishing fleets associated with spotter pilots, and 4) To describe environmental and other factors affecting fishing operations and school distributions.

g. Summary of Work:A log book system to record information on number and size of mackerel schools sighted by spotter pilots was designed and implemented in the 1988 Florida winter fishery. A similar interview log book was designed and implemented with selected fishing boat captains associated with air spotting activities. Preliminary data analyses resulted in valuable information on previously unknown dynamic interactions between fish schools and fishing activities. Project tasks will include: preparation, distribution, monitoring and retrieval of log books; interviews with pilots and captains; integration, analysis and interpretation of all data collected and preparation of interim and annual reports. Analyses will include: geographical distribution of observed and fished schools; distances of schools from main fishing ports; estimates of biomass available; rates of school utilization; and environmental effects on school distributions and fishing success.

h. Total MARFIN Funds Requested:

FY 1989	$25,000	(Percent of total 50%)
FY 1990	$25,000	(Percent of total 50%)

i. Project costs to be provided from non-Federal Government: No other sources of funding are contemplated although in-kind contribution is expected from the fishing industry.

j. Total Project Costs: Two years $50,000

MARFIN PROJECT SUMMARY

a. Project Title: Mississippi (MS) National Marine Fisheries Service (NMFS) King and Spanish Mackerel Sampling Program

b. Project Status: New ___ Con't X

c. Project Duration: Start Date 02/01/91 End Date 01/31/92

d. Name, Address, and Telephone Number of Applicant:

Mississippi Department of Wildlife Conservation
Bureau of Marine Resources
Post Office Drawer 959
Long Beach, MS 39560

e. Principal Investigator(s) and "Brief" Statement of Qualifications:

Fred Deegen - Ph.D., Chief, Saltwater Fisheries, 10 years Fisheries experience
Michael Buchanan - B.S., Fisheries Biologist I, 4 years Fisheries experience
Wildlife and Fisheries Technician I - to be hired

f. Project Objective:

To collect King and Spanish Mackerel biological information for use in state and federal fisheries management programs.

g. Summary of Work: (For continuing projects, include, briefly, progress to date)

1. In the 88-89 grant year 380 Spanish Mackerel lengths have been recorded and 277 tissue and otolith samples have been obtained and sent to the NMFS, (Panama City Lab). Thirteen king mackerel lengths were recorded and eleven otolith and tissue samples were sent to NMFS (Panama City Lab).

2. Collection of length, sex, tissue and otolith samples from King Mackerel landed on the Mississippi Gulf Coast. Target quotas for length data will be 250 fish per year (FY 89,90,91). Target quota for otolith and tissue samples will be 100 per year (FY 89,90,91).

3. Collection of length, sex, tissue and otolith samples for Spanish Mackerel landed on the Mississippi Gulf Coast. Target quota for length information is 500 and 100 otolith and tissue samples will be obtained per year (FY 89,90,91).

h.

Project Funding	Year 1(88-89)	Year 2(89-90)	Year 3(91-92)	Percentage of Total
Federal	$24,811	$26,856	$28,945	(100% of Total)
Matching	$ --	$ --	$ --	(___% of Total)
i. Total	$24,811	$26,856	$28,945	(100% of Total)

MARFIN PROJECT SUMMARY

Project Title: Age, Growth, and Reproductive Biology of Greater Amberjack (Seriola dumerili) and Cobia (Rachycentron canadum) from Coastal Louisiana Waters--Year Two.

Project Status: New Con't X Start Feb. 1, 1991 End Jan. 31, 1992

Applicant: Louisiana State University
Coastal Fisheries Institute
Baton Rouge, LA 70803-7503
(504) 388-6337

Principal Investigator(s): Bruce A. Thompson Ph.D., Charles A. Wilson and Jeffrey H. Render

Project Objectives: For both Greater Amberjack and Cobia, (1) to validate aging periodicity using otoliths via marginal increment analysis, (2) to determine age and growth patterns, (3) to determine sex ratios, fecundity, timing, and location of gonad development to understand reproductive cycle, (4) to compare data from objectives two and three from major sources of specimens, including commercial, charterboat, and recreational fishing rodeo catches, and (5) to compare our data with previous information on each species--Burch (1979), Greater Amberjack and Richards (1967, 1977), Cobia.

Summary of Work: We will continue to obtain Greater Amberjack and Cobia from commercial processing plants, charterboats, and recreational saltwater fishing rodeos. We will obtain the following information for these species: (1) fork and total length, (2) total and empty body weight, (3) sex, (4) gonad weight, (5) otoliths, and (6) maturation stage of gonads.

This information will be used to derive age estimations for both species after validating the periodicity of otolith increments. Size-at-age and age-at-maturity profiles will be done for both species. Length/weight and other selected body proportion relationships will be determined.

Reproductive patterns will be monitored via gonadosomatic indices, macroscopic staging, and validation of these two procedures from histological sections of representative gonads. Two hundred cobia, previously collected during 1987 and 1988 will be analyzed as part of this project.

This work is proposed as year two of a two year project.

Project Funding	Year Two Funds Requested	Total Funds Requested	Percentage of Total
Federal	$ 66,800	$133,600	(82.6% of Total)
Matching	$ 14,106	$ 28,212	(17.4% of Total)
Total	$ 80,906	$161,812	(100% of Total)

PROJECT SUMMARY

Project Title: Age, Growth, Diet and Spawning Dates of Yellowfin Tuna, Thunnus albacares, about the Mississippi River Plume

Project Status: Continuation

Project Duration: 1 February 1991 to 31 January 1992

Name, Address, and Telephone Number of Applicant:
Coastal Fisheries Institute
Center for Wetland Resources
Louisiana State University
Baton Rouge, LA 70803-7503

Principal Investigators:
1. Dr. Richard F. Shaw
2. Ms. Kathy L. Lang

Project Objective:

The goal of Year Two of this two year project is to continue to generate information on age, growth, diet and spawning dates of yellowfin tuna that is relevant to evaluating the importance of the Mississippi River plume as a spawning area and source of recruits to Gulf of Mexico fisheries.

Summary of Work to be Performed:

We will use approximately 1,000 larvae and small juveniles collected on Mississippi River plume cruises by LSU and by NMFS, Panama City, FL in July and September of 1987 to estimate age, growth, back calculate spawning dates, and determine diet. Any additional young yellowfin tuna collected during other LSU or NMFS research cruises to the Mississippi plume will also be available for use by this project. Age and growth are being estimated from otolith microstructure as observed and recorded on an optical pattern analysis system. Diet will be determined from quantitative analysis of stomach contents, and food availability estimated from ichthyoplankton and zooplankton collections made when specimens were captured. These data will be utilized by LSU and NMFS scientists in their ongoing efforts to evaluate the importance of the Mississippi plume as a spawning area and source of recruits.

Project Funding	Total Funding Requested (2 years)	Funds Requested 91-92	Percentage of Total
Federal	$ 47,880	$ 23,940	82%
Matching	$ 10,196	$ 5,098	18%
Total	$ 58,076	$ 29,038	100%

MARFIN PROJECT SUMMARY

A: Project Title: The Variation of Year-Class Strength and Annual Reproductive Output of Red Drum, Sciaenops ocellatus, and Black Drum, Pogonias cromis, from the Northern Gulf of Mexico

B: Project Status: New __ Cont. _X_

C: Start: Oct. 1, 1989 End: Sep. 30, 1992

D: Name, Address, and Telephone Number of Applicant:
Louisiana State University
Coastal Fisheries Institute, Center for Wetland Resources
Baton Rouge, Louisiana 70803-7503
(504) 388-6283

E. Principal Investigators: Charles A. Wilson and Daniel W. Beckman

F. Project Objective: To provide age, year-class strength, and reproductive information needed for management of red drum and black drum in the northern Gulf Mexico, including: 1) Determination of age frequency distributions of populations each year for 3 years, 2) Comparison of year-class strengths and annual growth rates with environmental variables, 3) Estimation of adult mortality rates, 4) Estimation of spawning frequency and batch fecundity and identification of relationships between reproductive output and age, size, and year-class strength, 5) Collection of age, growth, and reproductive information on species caught incidentally with red and black drum.

G. Summary of Work: Red drum and black drum will be randomly sampled from purse seine landings in northern Gulf of Mexico federal waters. Red drum purse seine samples will be collected during the spawning season, and may be augmented with samples from commercial long-line catches. Black drum purse seine samples will be augmented with fish sampled at commercial seafood houses. Length, weights, and sex will be recorded and otoliths and gonads removed from fish sampled. Otoliths will be sectioned and annuli counted for age determination. Female gonads will be sectioned and stained for histological examination, and oocytes will be staged.

Population age-class structure will be compared between years and with environmental variables. Mortality estimates will be made using decline in abundance of consecutive year classes and changes in abundance of individual cohorts over time. Spawning frequency will be estimated utilizing the ratio of spawning females to total mature females. Batch fecundities will be estimated gravimetrically through hydrated oocyte counts. The relationship between batch fecundity, spawning frequency, and age will be determined.

Project Funding	Initial Funds Requested	Total Funds Requested	Percentage of Total
Federal	$ 84,200	$252,600	(90% of Total)
Matching	$ 8,909	$ 26,726	(10% of Total)
Total	$ 93,109	$279,326	(100% of Total)

MARFIN PROJECT SUMMARY

Project Title: BIOLOGICAL AND CATCH/EFFORT SAMPLING FROM THE DOMESTIC TUNA AND SHARK FISHERIES IN THE NORTHERN GULF OF MEXICO

Project Status: Continuation (2nd year)

Project Duration: October 1, 1989 - September 30, 1992 (3 years)

Applicant: Louisiana Department of Wildlife and Fisheries
P.O. Box 98000
Baton Rouge, Louisiana 70898-9000
(504) 765-2371

Principal Investigators: Joseph A. Shepard
Louisiana Department of Wildlife & Fisheries
&
Sandra J. Russell (504) 388-6507
Coastal Fisheries Institute
Center for Wetland Resources
Louisiana State University
Baton Rouge, Louisiana 70803-7503

Project Objectives:

The goals of this project are to collect biological and catch/effort data from the domestic tuna and shark longline fisheries in the northern Gulf of Mexico, and to collect biological and catch/effort data from the inshore/nearshore shark gill-net fishery in Louisiana.

Summary of Work to be Performed and Work Performed to Date:

LSU observers are placed aboard commercial tuna and shark longline vessels to record such otherwise unobtainable biological information as species composition, length frequencies, sex ratios, alive/dead status, and reproductive conditions from both the catch and by-catch of each set. Also documented are catch/effort parameters for each observed set such as fishing locations and depths; gear configurations (including any variations or innovations); soak times; species and condition (alive/dead) of bait; boat length; moon phase; crew size; numbers of each species retained and discarded; and any details of hotlining if applicable.

LDWF personnel target inshore/nearshore commercial shark gill-net boats to obtain similar biological and catch/effort information.

From October 1, 1989 through May 11, 1990, LSU observers took 20 trips aboard 13 different vessels (9 had Asian-American crews) for a total of 158 sea days. They recorded data from 56 sets (1 for sharks, 20 for swordfish, 35 for tuna) which landed 405 yellowfin tuna, 174 swordfish, and 52 sharks, and discarded 15 blue marlin, 7 white marlin, 12 sailfish, 2 leatherback turtles, 3 bluefin tuna, and 69 sharks. Baitfish stocks appear to be declining and average sizes of yellowfin tuna and swordfish are decreasing.

Project Funding:	Total Funds Requested	Funds Requested 2nd Year
Federal	$175,400.00	$87,700.00
Matching	16,134.00	8,067.00
Total	$191,534.00	$95,767.00

MARFIN PROJECT SUMMARY

Project Title: Enhancing the Benefits Derived from Shrimp in the Gulf of Mexico through Optimizing Shrimp Management in Louisiana

Project Status: New___ Con't_X_ Start: Feb. 1, 1991 Ends: January 31, 1992

Name, Address, and Telephone Number of Applicant:
Marine Fisheries Division
Louisiana Department of Wildlife and Fisheries (LDWF)
P.O. Box 98000
Baton Rouge, Louisiana 70898-9000
(504) 765-2370

Principal Investigator(s):
Jerry Clark, Ph.D.
Phil Bowman, M.S.
Michael Wascom, J.D., LL.M.
Deborah Fuller, M.S., M. Ap.Stat.
Richard Condrey, Ph.D.
Claude Boudreaux, B.S.
Walter Keithly, Ph.D.

Project Objective:

Develop a fishery management plan for saltwater shrimp from Louisiana waters which will maximize the economic benefit derived from the resource by Louisiana and the region. While management will encompass all saltwater shrimp occurring in Louisiana waters, brown, white, pink, and sea bob shrimp will be emphasized.

Summary of Work:

A comprehensive fishery management plan will be developed in the first year and a half, which will be consistent with the National Standards in the Magnuson Act. The plan's goal recognizes that this is a regional resource whose magnitude and potential represent the single most effective way in which Gulf fisheries can be enhanced. This goal will be achieved by modeling shrimp population dynamics and socioeconomic factors; the possibilities that shrimp may be spawner-recruit over fished, that critical nursery habitat is being lost, and that the goal may only be attainable through incremented adjustments will be addressed. The initial draft of the plan will be reviewed in a series of public hearings. Input from the hearings will be incorporated into the plan. The final plan will be completed by February 1992.

In the first quarter, efforts were directed toward collecting existing biological, sociological, and legal data and in developing yield models. Requests were made to NMFS for desegregated, "raw", shrimp catch data. Historical data and published accounts were obtained and examined. An initial draft of the biological profile section was completed. Compilation began of Louisiana's historical shrimp laws, and of relevant socio/economic data.

Project Funding	Segment Funds Requested
Federal	$126,000
Matching	$ 53,753
Total	$179,753

MARFIN PROJECT SUMMARY

Project Title: UTILIZATION OF FISHERIES-INDEPENDENT DATA: FUTURE MANAGEMENT IMPLICATIONS

Project Status: New Con't X Start 1 Oct. 1990 End 30 Sept. 1991

Name, Address, and Telephone Number of Applicant:
Louisiana State University
Coastal Fisheries Institute (504) 388-6734
Center for Wetland Resources
Baton Rouge, Louisiana 70803-7503

Principal Investigator(s):
R. F. Shaw, Ph.D., Associate Professor, LSU
J. G. Ditty, M.S., Research Associate IV, LSU
J. L. Lyczkowski-Shultz, Ph.D., Associate Biologist, Gulf Coast Research Lab (GCRL)
B. H. Comyns, M.S., Research Associate, GCRL
J. R. Warren, M.S., Associate Biologist, Data Analyst, GCRL

Project Objective: Years 2 and 3. Utilize fisheries-independent data on early life stages of selected species of commercial and recreational importance in the Gulf of Mexico to: (1) continue to develop spawner biomass estimates (SBE) for Atlantic thread herring and scaled sardine; (2) refine and continue time series of SBE's for red drum; (3) investigate for red drum the relationship between the abundance of offshore larvae and inshore postlarvae; (4) provide fisheries-independent data (spawning ecology and early life history) for our selected species of current or potential commercial and recreational fisheries concern, i.e., striped mullet, amberjacks, cobia, bluefish, Atlantic spadefish, and tripletail; (5) recommend options regarding long-term monitoring of adult populations using early life stages and data on reproductive parameters.

Summary of Work: Years 2 and 3. Continue to calculate SBE utilizing a recently-generated gulfwide, larval clupeid database (1982-86) following and updating the methodologies employed by Houde (1977a, b, and c) for those species, and compare the estimates. Provide estimate of red drum spawner biomass for the 1990 season using larval abundance data from a survey of the east LA-MS-AL-west FL inner shelf planned for September 1990. Areal coverage and sampling effort will be same as in 1989 survey and, thus, should yield as precise an estimate of spawner biomass. Precision of the time series (1987-1989) of annual red drum SBE's will be analyzed in relation to the use of larval surveys as a means of indexing and monitoring fluctuation in adult red drum population in the northeastern Gulf. Begin analysis of compiled postlarval red drum abundance data from a daily (1987-) and twice-monthly (1973-) estuarine sampling associated with the Mississippi Fisheries Assessment and Monitoring (FAM) Program; evaluate the 1990 daily and/or tri-weekly sampling regime for red drum; compare these data with offshore larval red drum collections; and ultimately develop an offshore larvae to inshore postlarvae recruitment index. Year 3. Continue investigating linkage between offshore larvae and inshore postlarvae utilizing selected offshore and estuarine databases from Mississippi and Louisiana waters. Begin analysis of gulfwide, SEAMAP-collected ichthyoplankton samples and supporting data for our targeted species of fisheries concern.

Project Funding	Total Funding Requested (3 yrs)	Funds Requested 91-92	Percentage of Total
Federal	$ 238,800	$ 79,600	(80% of Total)
Matching	$ 58,450*	$ 19,858**	(20% of Total)
Total	$ 297,250	$ 99,458	(100% of Total)

*Includes $42,544 of match support from GCRL.
**Includes $13,636 of match support from GCRL.

1990 NMFS MARFIN SUMMARY SHEETS

MARFIN PROJECT SUMMARY

90NMFS01

Project Title: MARFIN Program Management

Project Status/: Duration **New** ___ **Con't** X ___ **Start Date** 10/01/89 **End Date** 09/30/90

Name, Address, and Telephone Number of Applicant:

Donald Ekberg
NMFS SER
9450 Koger Blvd.
St. Petersburg, FL 33702

Principal Investigator(s) and "Brief" Statement of Qualification:

Donald R. Ekberg, MARFIN Program Officer
Ellie Roche, Grants Specialist
Linda Stevens, Secretary

Project Objective:

Management of FY 1990 MARFIN Program

Summary of Work: (For continuing projects, include, briefly, progress to date)

The three major areas of MARFIN Program Management are -

Documents prepared and dissemination include: Federal Register Notice, MARFIN Annual Report, MARFIN Executive Summary, MARFIN Conference Agendas, MARFIN Conference pre-prints, MARFIN Conference proceedings, MARFIN Board meeting agendas, MARFIN Board meeting minutes, and MARFIN operating procedures.

Proposals/Grant Management includes: Proposal receipt, review and dissemination to Board, preparation of "ready proposal" for submission to NCASC, project officer duties as described in DOC orders, maintenance of grant files, and tracking of grant reports and technical monitor coordination.

MARFIN Contractor Guidance includes: Board meetings, Board conference calls, MARFIN conference, and publications.

Project Funding	Initial Funds Requested	Total Funds Requested	Percentage of Total
Federal	$ 75,000	$ 75,000	(100 % of Total)
Matching	$	$	(% of Total)
Total	$ 75,000	$ 75,000	(100 % of Total)

MARFIN PROJECT SUMMARY

Project Title: Educational Tool for Marine Recreational Fishermen to Promote Wise Use and Conservation of Gulf Fishery Resources.

Project Status/: New___ Con't X Start 10/1/89 End 9/30/90

Name, Address, and Telephone Number of Applicant:

Ronald L. Schmied
Special Assistant for Recreational Fisheries
NOAA/NMFS/SERO
9450 Koger Boulevard
St. Petersburg, Florida 33702 (813/893-3141)

Principal Investigator(s) and "Brief" Statement of Qualification:

Ronald L. Schmied - Principal Investigator.
As Special Assistant for Recreational Fisheries, Mr. Schmied directs NMFS' recreational fisheries program in the Southeast Region. Ron was awarded a B.S. in Biology from George Mason University (1971) and a Masters' degree in Marine Recreation and Resource Development from Texas A&M in 1975.

Project Objective:

To promote conservation, management and wise use of Gulf fishery resources by saltwater anglers by making them more aware and supportive of ethical angling practices.

Summary of Work: (For continuing projects, include, briefly, progress to date)

Under previous MARFIN projects, educational tools have been developed dealing with varying aspects of ethical angling. These have included a brochure summarizing federal sportsfishing regulations for the Gulf area, a 28-minute broadcast quality video entitled "Pass It On" which promotes catch and release fishing, 3 public service announcements on catch/release fishing, a "NMFS Catch and Release Quick Reference Card," and a poster/sticker series urging anglers to rise to the challenge of ethical angling. Additional related "angler ethics" educational materials have been developed using other MARFIN and Saltonstall-Kennedy grants which focus on fishing tournaments, expanded use of non-traditional species, and expanded gamefish tagging efforts.

This project continues the angler ethics program and has two parts.

Part 1 - Produce a brochure that provides an overview of the angling ethics program and a point-by-point discussion of each ethical behavior promoted by the poster/sticker series. The discussion will provide background and rationale as to why each behavior is encouraged. It will also provide contacts/sources of additional information available to anglers. Brochure content and layout will be developed by SERO staff with the assistance of a local commercial artist. Printing will be procured through the Government Printing Office.

Part 2 - Reprint approximately 150,000 copies each of the "NMFS Catch and Release Quick Reference Card" and "Angler Ethics" sticker. These will be distributed directly to anglers primarily through bait and tackle shops.

Project Funding	Initial Funds Requested	Total Funds Requested	Percentage of Total
Federal	$ 16,000	$_____	(75 % of Total)
Matching	$ 5,213	$_____	(25 % of Total)
Total	$ 21,213	$_____	(100 % of Total)

12-4-89

FUNDING

MARFIN PROJECT SUMMARY

TITLE: Economic Data Collection for the Gulf of Mexico Commercial and Recreational Reef Fish Fisheries

STATUS: New

DURATION: Start Date: 1/90 End: 3/92[1]

APPLICANT: Economic Analysis Group
National Marine Fisheries Service
Southeast Regional Office
9450 Koger Boulevard
St. Petersburg, FL 33702

PRINCIPAL INVESTIGATORS:

James R. Waters
NMFS Beaufort Laboratory
Beaufort, N.C. 28516

Jonathan L. Platt
Southeast Regional Office
St. Petersburg, FL 33702

OBJECTIVES:

The purpose of this proposed project is to collect primary economic data with which to determine the economic value of the commercial and recreational reef fish fisheries. Specifically, the objectives are to:

(1) Survey fishermen to collect information about fishing activities and financial performance in the commercial sector of the fishery.

(2) Collect recreational data from a sample of reef fish anglers utilizing three distinct survey approaches: mail, telephone and logbook.

SUMMARY OF WORK:

This proposal requests funding to collect data with the assistance of subcontractors. Commercial data would be collected by personal interviews. All three recreational surveys would be conducted as supplements to the NMFS Marine Recreational Fishery Statistical Survey (MRFSS). Analyses of these data would be performed after the completion of the data collection by the principal investigators as part of their regular duties.

MARFIN FUNDS REQUESTED: (Data collections only) $150,000.

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[1] Despite the fact that this project involves a multiple year time horizon, from a MARFIN funding perspective this involves but one year of funding. Funds for the data collection will be committed to the contractors by October 1990.

90NMFSEC

MARFIN PROPOSAL

Title: Latent Resources Research in the Gulf of Mexico

Status: Continuing Duration: October 1989 through September 1990

Applicant: Dr. Andrew J. Kemmerer
NMFS/SEFC/Mississippi Laboratories
Post Office Drawer 1207
Pascagoula, Mississippi 39568-1207

Principal Investigators (Other than Applicant):
Wilber R. Seidel, Chief
Division of Harvesting Systems and Surveys Mississippi Laboratories

Walter F. Gandy, Chief
Division of Engineering Research and Development
Mississippi Laboratories

Objectives: To develop information for wise use and management of coastal herring and butterfish resources in the Gulf of Mexico. This will be achieved through field surveys to determine safe harvest levels considering ecological implications (e.g., predator-prey relationships) and environmental relationships, investigating fish handling and processing protocols for safe and efficient use of captured fish, including surimi production from latent and low economic value fishery resources, monitoring a recently developed butterfish fishery, and interacting with industry for technology transfer.

Work Summary: An advanced acoustic integrator system recently installed on the NOAA Ship CHAPMAN will be used in conjunction with standardized midwater and high opening bottom trawls, and a new remotely operated submersible to survey coastal herrings seasonally in the eastern Gulf. Data acquired during these surveys will be used with existing life history data to estimate safe harvest levels for selected components of the coastal herring complex. Additionally, research will be continued on environmental relationships based on satellite and surface truth information. Newly acquired image processors will play an important role in this work. A limited observer activity will be continued for butterfish vessels, although much of the work will target port sampling for biological data. This will include butterfish, bottomfish (i.e., pet food), and coastal herring landings. Increased emphasis will be placed on the developing experimental seafood processing plant in Pascagoula, with research on nutritional and contaminant profiles, product development, and fish handling and processing techniques (especially salt uptake in chilled water systems). Several videos will be produced on butterfish fishing and handling requirements, and emphasis will be continued on technology transfer through workshops, demonstrations, and direct technical assistance.

MARFIN Funds Requested: $460,000(36%) Contributed Funds: $807,100(64%)

Total Cost: $1,267,100

NMFS 07

MARFIN PROJECT SUMMARY

Title: Shrimp Trawl Bycatch Reduction

Status: New Duration: October 1989 through September 1990

Applicant: Dr. Andrew J. Kemmerer
NMFS/SEFC/Mississippi Laboratories
Post Office Drawer 1207
Pascagoula, Mississippi 39568-1207

Principal Investigators (Other than Applicant):
Wilber R. Seidel, Chief
Division of Harvesting Systems and Surveys
Mississippi Laboratories

John W. Watson, Chief
Branch of Harvesting Systems
Mississippi Laboratories

Objectives: Conserve southeast fishery resources by development and demonstration of selective trawling gear for shrimp which also reduces the bycatch of finfish and other non-target components.

Work Summary: Indiscriminate catch of unwanted bycatch in shrimp trawls is a significant problem. Several pounds of finfish are caught for each pound of shrimp landed. Some of the finfish bycatch is utilized, but most is discarded. These discards contain species with commercial potential as well as those of recreational importance. In many areas, resource surveys show a decrease in finfish levels and in size of fish caught. Thus, while resources are decreasing in abundance, the number of people using them is increasing with a growing conflict between the user groups. A method to allow unwanted fish to escape from shrimp trawls could eliminate much of the problem and provide flexibility in management and utilization of public resources. This project will initiate studies to design and test finfish separator modifications to certified Turtle Excluder Devices (TEDs). Currently, the NMFS TED can exclude 50-70 percent of finfish bycatch without significant shrimp loss. Studies will investigate the behavior of finfish and shrimp in the other certified TEDs. Video cameras and remotely operated vehicles will be used in actual fishing conditions to investigate the behavior of finfish and shrimp in these TEDs. Modifications will be developed to allow finfish separation without significant shrimp loss. Work will be conducted cooperatively with principal shrimp associations, commercial net manufacturers, Sea Grant and state groups, and members of the shrimp industry to assess and define problems, identify potential designs, develop prototype systems, and to effectively test the modifications for finfish separation and shrimp retention rates under commercial fishing conditions.

MARFIN Funds Requested: $200,000 (55%) Contributed Funds: $165,000(45%)

Total Cost: $365,000

49NMFS.5

MARFIN PROPOSAL

Project Title: Evaluation of the Impacts of Turtle Excluder Devices (TEDs) on Shrimp Catch Rates in the Gulf of Mexico

Project Status: Continuation Start Date: 1 October 1989
End Date: 31 January 1991

Name, Address and Telephone Number of Applicant:

National Marine Fisheries Service (NMFS)
Southeast Fisheries Center, Galveston Laboratory
4700 Avenue U
Galveston, TX 77551-5997
(409) 766-3500

Principal Investigator: Edward F. Klima, Ph.D., Director, SEFC-Galveston Laboratory

Project Objectives:

1. Compare catch rates of shrimp, fish and turtles for TED-equipped trawls and trawls without TEDs in selected shrimp fishing areas of the Gulf of Mexico.

2. Provide data, results and biological simulation model to the Economics Analysis Branch of the NMFS for economic evaluation of impacts on TEDs.

Summary of Work:

The Office of Management and Budget requires an economic evaluation of impacts of TED utilization on the shrimp fishery be completed before 1990. Delays in implementation of the TED regulations coupled with limited participation from the shrimp industry prevented collection of sufficient data during 1988 and 1989 which were required to perform this evaluation.

The success of this study depends on shrimpers volunteering to let NMFS personnel collect data on their vessels. NMFS does not tell the shrimpers where to fish or which certified TED to use. Therefore, at this time we do not have the broad data base which we expected. Through March 1989, a total of 286 sea days have been expended in the Gulf of Mexico which includes 2,896 fishing hours. Data were collected for an additional 89 sea days (642 hours of fishing) in the South Atlantic under a separate funding. Shrimp catch information is essentially restricted to the Georgia Jumper (with and without accelerator funnels) over

Project Summary:

13NMFS C-

Title: Eastern Gulf Reef Fish Catch and Effort Data

Status: New Duration: 03/01/90 to 03/01/91

Applicants: Dr. Walter Nelson
Miami Laboratory
Southeast Fisheries Center
National Marine Fisheries Service
75 Virginia Beach Dr.
Miami, Florida 33149

Principal Investigator: Dr. James A. Bohnsack
Miami Laboratory
Southeast Fisheries Center
National Marine Fisheries Service

Objective: To determine catch-per-unit-effort, size-frequency, and catch and landings composition of reef fishes by fishing gear type from the eastern Gulf of Mexico. Comprehensive and quantitative fisheries data is essential for reef fish stock assessment purposes. However, these data are almost non-existent on the species level for major reef fish producing regions of the eastern Gulf of Mexico, particularly the Florida Middle Grounds and the Florida Keys. Specific data are needed to properly manage several reef fish species, particularly amberjack, Nassau grouper, black grouper, jewfish, mutton snapper, and hogfish. Data are also needed about the amount of unreported bycatch and the fishing characteristics of different fishing gears, especially wire fish traps.

Work Summary: Research consists of the data collection and analysis. Field researchers will sample species composition, abundance, size-distribution, and catch-per-unit-effort of commercial reef fish catch and landings by major fishing gears in the sample area. Commercial fishing vessels will be contracted to carry observers from NMFS and MOTE Marine Laboratory to collect detailed catch, effort, and bioprofile data using the Trip Interview Program (TIP) format developed by the SEFC. Personnel from MOTE Marine Laboratory will be receiving support funds as part of separate MARFIN proposal, or other sources. Catch will be analyzed for total reported landings and bycatch discards by fishing gear type. Florida trip ticket data will be compared and calibrated with random samples of actual catches. The data will be specifically used to (1) predict potential impacts of wire fish traps on Florida reef stocks; (2) estimate total catch versus actual reported landings; (3) develop models to apply to analysis of eastern Gulf of Mexico reef fish stocks; and (4) generate advice for reef fish management for the Fishery Management Councils. NMFS will also provide training for state and university scientists on the use of applicable fishery models and analysis techniques.

Federal Funds Requested: $55,000

MARFIN PROJECT SUMMARY 90 NMFS 10

Title: TED Technology Transfer

Status: Continuing Duration: October 1989 through September 1990

Applicant: Dr. Andrew J. Kemmerer
NMFS/SEFC/Mississippi Laboratories
Post Office Drawer 1207
Pascagoula, MS 39568-1207

Principal Investigator (Other Than Applicant):
Wilber R. Seidel, Chief
Division of Harvesting Systems and Surveys Mississippi Laboratories

John W. Watson, Chief
Branch of Harvesting Systems
Mississippi Laboratories

Objectives: To support adoption of TEDs in the southeastern United States by the shrimp fishery, and to provide certification of new TEDs at Cape Canaveral, Florida. This will be achieved by assisting industry, Sea Grant and state agencies with TED expertise, through workshops and training demonstrations, and through evaluations on commercial shrimp vessels.

Work Summary: TED Technology transfer will be continued through demonstrations and direct technical assistance to commercial shrimp vessels. Federal TED regulations may be expanded to allow a choice of 90-minute tow times or the use of TEDS. The choice of a TED over tow time restriction will be common in the south Atlantic because TED reduces jellyballs, horseshoe crabs, rays, etc. which regularly cause problems, and because tow time restriction schemes designed for enforcement purposes may not be compatible with general shrimping operations in many of the south Atlantic fishing areas. The state of Florida is implementing its own TED regulations as has South Carolina, and vessels captain will need TED information and support particularly in areas of south Florida that encounter loggerhead sponge, grass, soft sponge and other types of troublesome bycatch. In these areas, the type of TED selected and its proper use is very important for satisfactory results. Whenever possible, support will be provided through industry associations, Sea Grant and state agencies. In addition to transfer of technology activities, one certification trial for new TEDs will be planned at Cape Canaveral. Evaluation of new TEDs will be organized and advertised to identify TEDs with good potential for operational success. It is anticipated that a certification trial of new TEDs will be conducted within the guidance of a Southeast Regional TED Committee established to review and guide TED implementation in the southeast. Continued assistance will be provided to TED economic impact evaluations conducted by the NMFS Galveston Laboratory and to state studies to monitor the effects of TEDs in their waters.

MARFIN Funds Requested: $45,000(27%) Contributed Funds: $120,000(73%)

Total Cost: $165,000

90NMFS 11

MARFIN PROPOSAL

Projected Title: Continuation of the Improved Sea Turtle Stranding and Salvage Network (STSSN) in Shrimp Statistical Subareas 17-21, Southwest Louisiana and Texas.

Project Status: New _____ Continuing __x__

	Beginning	Ending
Project Duration: Date:	1 October 1989	Date: 30 September 1991

Name, Address, and Telephone Number of Applicant:

Dr. Edward F. Klima, Director
National Marine Fisheries Service
Galveston Laboratory
4700 Avenue U
Galveston, TX 77551-5997
(409) 766-3500

Co-Principal Investigators:

Dr. Charles W. Caillouet, Jr.
Chief, Life Studies Division
NMFS Galveston Laboratory
4700 Avenue U
Galveston, TX 77551-5997
(409) 766-3525

Marcel J. Duronslet
Fishery Biologist (Research)
NMFS Galveston Laboratory
4700 Avenue U
Galveston, TX 77551-5997
(409) 766-3516

(See Resumes - Attachments II and III)

Project Objectives:

(1) Continue year-round, semi-monthly systematic sampling of sea turtle strandings through the Sea Turtle Stranding and Salvage Network (STSSN). Coverage of sea turtle strandings will encompass barrier beaches along the Texas and Southwest Louisiana coasts of the Gulf of Mexico in Statistical Subareas 17-21 (Figure 1). Table 1 gives frequency of coverage by zone;

(2) Determine temporal-spatial distribution of sea turtle strandings in the surveyed area;

(3) For each stranding, and to the extent possible, identify species, determine size, sex, location, condition, external injuries, mutilations, fouling and abnormalities. Complete a standarized stranding form (field data sheet) and submit it to the appropriate State Coordinator of the STSSN;

(4) Provide sea turtle carcasses to Texas A&M University at Galveston (TAMU) for necropsy, food habits analysis, curation, etc. (under the NMFS-TAMU Cooperative Agreement);

(5) Coordinate documentation of sea turtle strandings with other projects including those conducting necropsies of sea turtle carcasses (TAMU), documenting debris-entanglement events through barrier beach sampling surveys, conducting radio- and sonic-tracking studies, and rehabilitating live-stranded sea turtles (NMFS Galveston Laboratory). Other projects are separately funded (matching funds);

(6) Provide live-stranded sea turtles for rehabilitation, tagging, release and tracking by other projects at the Galveston Laboratory (matching funds);

(7) Provide data for the National Academy of Sciences'/National Research Council's review of the status of sea turtles and impact of shrimping on sea turtles, for sea turtle stock assessments related to effectiveness of restricted trawling times or use of the Turtle Excluder Devices (also Trawling Efficiency Devices or TEDs), and for Minerals Management Service concerning petroleum platform salvage operations (using explosives) in reducing at-sea mortalities in sea turtles.

Summary of Work:

Documentation of sea turtle strandings on a systematic, year-round basis offers one of the simplest and most cost-effective ways of determining temporal-spatial distribution and year to year trends in sea turtle mortalities at sea. Under this continuing MARFIN project, barrier beaches in Texas and southwestern Louisiana have been divided into 5 zones or strata (Table 1), each of which is surveyed at least semi-monthly year-round. Such intensive coverage began in March 1986 (1986 was a peak year for reported sea turtle strandings on the coasts of Texas and southwestern Louisiana). Year-round systematic surveys increase the chances that stranded turtles are found before they get redistributed by tides, destroyed by decomposition and carrion feeders, or mutilated or removed by man. More frequent sampling would be desirable, but semi-monthly surveys are considered adequate if conducted in a consistent manner at the same intensity year-round. Such consistency is essential to determining seasonal distribution of strandings and year to year stranding rates as related to man's activities at sea. A multi-year stranding data base can contribute significantly to assessment of impacts of federal regulations aimed at reducing at-sea mortality in sea turtles.

The surveyed coastline encompasses the entire Texas coast from the Rio Grande River to the Sabine River (excluding the Padre Island National Seashore surveyed for strandings by National Park Service - NPS, and the Wynn Ranch portion of Matagorda Island, surveyed for strandings by the U.S. Fish and Wildlife Service - FWS), and the southwestern Louisiana coast from the Sabine River to the Mermentau River. The surveyed coastline is traversed using 4-wheel-drive vehicles, 4-wheel all-terrain-vehicles, or dirt bikes, depending upon remoteness and accessibility. It represents all accessible barrier beaches in Texas and southwestern Louisiana where turtles can be found stranded. Overwater transportation is required to gain access to some barrier beaches (e.g., west Matagorda Peninsula and Matagorda Island). The NMFS beach surveyors also respond to reports of strandings from other agencies and from the general public.

When a stranded sea turtle is found, observations are taken on species, size, sex, location, condition, external injuries, mutilations, fouling and abnormalities and recorded on standardized Sea Turtle Stranding and Salvage Network (STSSN) stranding reports (field data forms; Figure 2). Table 2 summarizes the number of strandings by species for years 1986-1989. Data for 1989 are incomplete.

It is proposed that this project be continued at the same level of sampling covering the same coastline for another 2 years, to continue establishing a multi-year stranding data base to be used as one means of evaluating impacts of federal regulations on at-sea mortality of sea turtles.

Source of Funds	Total Funds Requested (1 year)*	Percentage of total
Total Federal Funds Requested (MARFIN)	40	41%
Matching in-kind (NMFS NWAFC)	20	20%
Matching in-kind (NMFS SEFC)	38	39%
Total project costs	98	100%

* Second year breakdown is the same.

Project Description:

12-04-89

90NMFS 12

NMFS MARFIN PROPOSAL PROJECT SUMMARY

Title: Coastal Resources Research in the Southeast

Status: Continuing **Duration**: October 1989 through September 1990

Applicant: Eugene L. Nakamura, Manager
Coastal Pelagics Program
NMFS/SEFC/Panama City Laboratory
3500 Delwood Beach Road
Panama City, Florida 32408

Principal Investigator Other Than Applicant:
Dr. Herman E. Kumpf, Chief
Research Group
Panama City Laboratory

Objectives: The objectives of this project are to obtain data on harvest levels, catch composition by species, size, sex, and age structure, and charterboat catch per unit of effort for the purpose of assessing the status of Gulf of Mexico stocks of coastal pelagic and coastal demersal fishes. Principal target species will be king mackerel, Spanish mackerel, cobia, and greater amberjack. Secondary species will be dolphin, red snapper, vermilion snapper, gag, and scamp.

Work Summary: Existing bioprofile sampling for king and Spanish mackerels will be continued through incorporating efficiency developed in previous years of this project and expanded to include cobia and greater amberjack, and also, as opportunities permit, dolphin, and various snappers and groupers. Field sampling will include length measurements, sex determinations, and collections of ageing structures. Sampling in various locations of the Gulf will be coordinated with cooperating state and academic agencies. Charterboat captains in the southeast will be surveyed to obtain catch and effort data on coastal pelagics and reef fishes. For this purpose, the Southeast Region has been divided into 15 areas. Over 1,700 charterboats have been identified. A target of 10% of the effort in each area will be surveyed by selecting charterboat captains who will maintain daily fishing logs and submit them weekly to the SEFC. All landings, vital statistics, and CPUE data will be computerized, with data bases formatted for ready use in stock assessment analyses.

MARFIN Funds Requested: $205,000 (53.5%) **Contributed Funds**: $178,400(46.5%)

Total Cost: $383,400

APPENDIX C

BOARD MEETING MINUTES

THE ENDMARK CORPORATION

14 November 1989

MEMORANDUM FOR: Marine Fisheries Initiative Program Management Board

FROM: Barbara W. Miller per Dr. Donald Ekberg B. Miller

SUBJECT: MARFIN BOARD MEETING MINUTES

REFERENCE: Marine Fisheries Initiative Program Management Board Meeting of 22 September 1989

ENCLOSURE: MARFIN Board Meeting Minutes

1. The enclosed MARFIN Board Meeting Minutes are being forwarded for your information. All comments and/or corrections received have been incorporated.

2. Questions or comments should be directed to Dr. Don Ekberg.

Copy to: Dr. Donald Ekberg
Ms. Nikki Bane
Dr. Bradford E. Brown

1215 JEFFERSON DAVIS HIGHWAY • CRYSTAL GATEWAY 3 • SUITE 1106 • ARLINGTON, VIRGINIA 22202 • (703) 486-5570

MARINE FISHERIES INITIATIVE
PROGRAM MANAGEMENT BOARD MEETING
Friday, 22 September 1989
New Orleans, Louisiana

MINUTES

The meeting of the Marine Fisheries Initiative (MARFIN) Program Management Board (PMB) held at the Le Pavillon Hotel was called to order at 7:30 am by Dr. James Cato. It was noted that Dr. Cato would be chairing the meeting for Mr. Thomas Murray, who could not attend. The following individuals were in attendance.

Members

Dr. James C. Cato, Sea Grant, Gainesville, FL
Dr. Andrew Kemmerer, NMFS, Pascagoula, FL
Mr. Robert Jones, Commercial Industry, Tallahassee, FL
Dr. Robert Shipp, Recreational Industry, Mobile, AL
Mr. Larry Simpson, GSMFC, Ocean Springs, MS
Mr. William Perret, Gulf States, Baton Rouge, LA
Mr. Wayne Swingle, GMFMC, Tampa, FL
Ms. Jean Martin-West, NOAA/CASC, Kansas City, MO

Staff

Dr. Donald Ekberg, NMFS, St. Petersburg, FL
Ms. Barbara Miller, ENDMARK, Arlington, VA

Others

Ms. Nikki Bane, NMFS, Miami, FL
Dr. Bradford Brown, NMFS, Miami, FL

Adoption of Agenda

Dr. Cato presented the agenda for adoption. It was proposed that a conference evaluation discussion be added to the agenda as the first item of business. Without objection, the agenda was approved as amended.

Adoption of Minutes

Dr. Cato asked if there were any PMB minutes to be approved. It was noted that the minutes of the meeting held 13-14 June

1989, Tampa, FL, had been sent to the Board members for their review. However, since copies were not available, it was agreed that approval of these minutes would be delayed until the next Board meeting.

Conference Evaluation

Dr. Cato opened the floor for discussion to evaluate the conference held the previous two days. Concern was expressed that possibly only projects that have been completed should be presented. It was noted that it was not a wise use of time for the participants or presenters to include projects that have not reached completion. Mr. Swingle suggested that the conference dates be shifted so that all projects would have reached completion. It was noted that there are always extensions and it would not be feasible to base the conference dates on this premise. Dr. Cato suggested that the conference be held annually or bi-annually and invite only the projects that have been completed. He noted that this would still include an 18-month lag time for some projects due to extensions.

Dr. Kemmerer suggested that better coordination be utilized between PIs and that a panel format be maximized. He noted that there needs to be better advertising. It was suggested that the conference be structured as a two-day conference, i.e., one day for presenters, a half day for panel discussions, and a half day for panel summaries.

General discussion continued noting that there needs to be a concerted effort to expand the knowledge of MARFIN, especially in industry and that the conference could be held in conjunction with other meetings in order to make MARFIN more widely known.

Dr. Cato suggested that he, Mr. Jones, and Dr. Kemmerer would survey the PMB and develop a summary of how the conference should be structured. It was agreed that within three to four weeks, Cato, Jones, and Kemmerer would circulate this summary to the Board. It was stressed that more emphasis needs to placed on the needs and makeup of the conference and getting this information out to other meetings. Cost is a major issue, especially the travel portion.

Status of FY 89 Applications

Since Ms. Martin-West had not yet arrived, Dr. Cato turned this item over to Dr. Ekberg for discussion. Dr. Ekberg related that inputs were received from the technical monitors and the applications were submitted to Kansas City the first part of July. He noted that the process is very slow and that review in legal counsel can take up to two months. In the past, the goal has been one week. State grants take up to three months. Mr. Perret asked if there were any significant problems or are they looking at everything. Dr. Ekberg noted that there seems to be a tendency for legal counsel to put their own rules on the process and that the system is very sensitive at the present time. He said that the Department of Commerce has not relaxed any rules. He related that he does not know the status of the applications. Ms. Bane noted that she is aware of some that have gone to the FARB but no one has been notified.

Dr. Ekberg noted that three contingency projects discussed at the previous Board meeting were funded and the results were released.

Ms. Martin-West joined the meeting and related to the Board that most of the applications will be awarded by 30 September.

She stressed that the majority of the applications were in good shape but that the workload is tremendous. Dr. Kemmerer asked if things were expected to get better and have goals been established to streamline the system. Ms. Martin-West said that streamlining is taking place and that things should be working better in six to nine months. She stressed that the delays are primarily in legal counsel due to personnel problems/vacancies and that more in-depth reviews are being done. The dates for accepting applications are 31 August through 15 September; however, she noted that an application can be hand-carried as late as 29 September.

At this time, the FY 1989 MARFIN Budget Allocation (Revised 9/15/89) was reviewed and discussed. Dr. Ekberg was asked what the original allocation was, why the G-R-H cut, and who authorized the cut. He related that they are only notified of the initial allocation and that the cut was taken arbitrarily, as was the congressional decrease. Dr. Ekberg noted that he would attempt to obtain information concerning the budget process from the NMFS Finance Officer.

Review of FY 1990 Federal Register Priorities

A line-by-line review was conducted of the FY 1990 NMFS Federal Register Priorities. It was the general consensus that the Board should go on record as objecting to how the introduction is written. Dr. Ekberg was asked to contact legal counsel to see if the introduction could be changed. Dr. Ekberg agreed to do so.

1. Shrimp. Discussion took place concerning the category of shrimp. Sub-paragraph (h) was specifically pointed out as not being specific enough. After further

discussion, it was agreed that sub-paragraph (h) should be left as it stands. It was determined that sub-paragraphs (b), (d), (g), and (i) should be deleted since these are no longer viable projects to the program. The remainder of the sub-paragraphs, i.e., (a), (c), (e), (f), and (h) should stand as written.

2. Menhaden. Dr. Kemmerer noted that menhaden projects have received various funding cuts and that the menhaden industry has been a strong supporter of MARFIN. It was decided to rephrase sub-paragraph (a) to better explain all facets of the menhaden industry. Sub-paragraph (a) was amended to read "(a) Economic enhancement of products (e.g., surimi, oil, meal, etc.)". Sub-paragraph (b) was agreed to be adequate as it presently reads.

3. Coastal Pelagics. It was determined that sub-paragraphs (b) and (c) under this category should be deleted as they are no longer necessary.

4. Reef Fish. Discussion concluded that all proposals under this category are important. However, it was noted that under sub-paragraph (h), the word "secondary" should be deleted. Sub-paragraph (h) now reads "stock assessment information on target species such as triggerfish, amberjack, etc.".

5. Coastal Herrings. It was the general consensus that all sub-paragraphs under this category are important. Dr. Cato reaffirmed that there was no reason to change anything under this category.

6. Ocean Pelagics. Mr. Swingle noted that the emphasis on sharks is missing and asked whether it should be added under this category. Dr. Shipp noted that sharks are a difficult group to specify since there are so many species. It was agreed that a new category should be added for sharks in order to be more specific. Dr. Shipp was asked to write up the category for sharks and that this category would become a new Number 7 and the remainder of the categories would be renumbered to reflect this insertion.

7. Sharks. New entry to read as follows: (a) Biological profiles of principal species and effort, and (b) Characterization of the Gulf shark fishery (including catch statistics, participants and landings).

8. Marine Mollusks. Previous Number 7. It was noted that sub-paragraph (a) lends itself to only basic knowledge of depuration systems and that there are many unknown factors such as usefulness of ozone, etc. It was questioned whether MARFIN should initiate major efforts towards this. The consensus was that further efforts could prove to be very expensive and that this sub-paragraph takes into account the original MARFIN priorities for shellfish. It was agreed that sub-paragraphs (b) and (d) are adequate as written. Sub-paragraph (c) was amended by deleting the words "oyster varieties". It now reads "development of improved culture methods, and technology transfer".

9. Crabs and Lobsters. Previous Number 8. It was agreed that sub-paragraphs (a) and (e) should be deleted as they are no longer necessary. Sub-paragraphs (b), (c), and (d) remain as written.

10. Bottomfish. Previous Number 9. Dr. Kemmerer stated and the Board agreed that all sub-paragraphs continue to be valid and should remain as written.

11. Marine Mammals and Endangered Species. Previous Number 10. Approved as written.

12. Estuarine Fish. Previous Number 11. Mr. Perret stated under sub-paragraph (a), the words "age structures" should be deleted as no longer valid. Mr. Swingle noted that age structures continue to be important since additional groups have been discovered, such as sheepshead. He also noted that there has been difficulty finding the "teenagers" of the red drum and therefore age structure remains an important factor. It was agreed that sheepshead should be added and the words "and catches" deleted. Sub-paragraph (a) now reads "Improving estimates of age structures of red and black drum and sheepshead". Sub-paragraph (b) was rewritten to read "measurement and understanding of escapement dynamics of juvenile red and black drum to offshore stock". Sub-paragraph (c) was deleted as no longer valid. The word "sciaenids" in sub-paragraph (d) was changed to "species". Sub-paragraph (d) now reads "enhancing knowledge of recruitment of early juvenile stages of economically important species, including habitat requirements".

13. General. Previous Number 12. General discussion concluded that this category should be rewritten to include more emphasis on recreational fishing inshore, for all sub-paragraphs. Dr. Cato rewrote category Number 13 and the Board accepted the rewritten version.

Category 13 now reads "(a) Conduct economic research applicable to each Gulf of Mexico fishery, including cost and return analysis, (b) estimate supply and demand functions for important recreational and commercial fisheries, (c) describe the economic linkages among recreational or commercial multi-species fisheries, (d) analyze the economic and political boundaries affecting the foreign trade of Gulf of Mexico fisheries, (e) describe the economic structure, conduct and performance of the inshore recreational guide-boat sector, (f) describe the economic structure, conduct and performance of the support sector (e.g., bait/tackle shops) for the recreational fishing industry, (g) describe procedures to implement limited entry for existing or developing commercial or recreational fisheries such as reef fish, shark, stone crab, or butterfish, and (h) develop alternative methods to handle or use by-products generated from seafood processing common to the Gulf of Mexico."

Dr. Ekberg stated that all the priorities would be retyped and circulated among all Board members to ensure that all were in agreement on how the priorities are presented.

Dr. Kemmerer raised the question as to whether it would be appropriate to put out pre-proposal notices in order to promote a better understanding of MARFIN and to outline what MARFIN is looking for in proposals. Dr. Ekberg related that the Federal Register is readily available. He stated that there could be legal problems involved in sending the proposal information out early, in that someone would have to decide on a list and that the possibility of a group not receiving the information could have legal ramifications. Ms. Martin-West stated that a Notice

of Intent can be put in the Federal Register but that involves a short turnaround in order for everyone to be notified. It was suggested that a brochure could be developed that would explain MARFIN and the success rate of proposals (past and present), and it should also mention the annual conference. It was agreed that more information circulated would enhance competition and result in better proposals and possibly more cooperation among research facilities.

Mr. Perret raised the question that once the Federal Register has been published, is there a problem for any Board member to grant a meeting with an agency interested in responding to a proposal listed in the Federal Register. Dr. Ekberg related that it could be construed as not proper especially if another agency questioned why it was not allowed to meet with a Board member. He stated that there could be legal problems since the proposals are open competition. It was the general opinion of the Board that if a Board member is contacted by an agency concerning any proposals, the agency should be referred back to the NMFS Program Officer.

NMFS Proposals/Pre-proposals for FY 1990

Discussion opened by matching the project numbers to the priority proposals listed in the 1990 MARFIN Program Research Proposal Project Summaries presentation, dated 22 September 1989. It was noted that Project #90NMFS07 was reviewed last year and was not approved. A review of each proposal followed.

Project #90NMFS08 - Evaluation of the Impacts of Turtle Excluder Devices (TEDs) on Shrimp Catch Rates in the Gulf of Mexico. It was noted that this proposal is at the same funding rate as last year and should have been done. It was

agreed that this is a viable proposal and that the regulations have not imposed any problems on continuing this work. Approved.

Project #90NMFS10 - TED Technology Transfer. Dr. Kemmerer stated that the funds requested for this proposal provide for two people and the addition of one person and certification. He emphasized that this program has a non-research component in that it is responding to the needs of industry. Mr. Jones agreed that this is a good program and provides an avenue to solve problems. Dr. Kemmerer related that other monies are available but are administratively tied up. Overall Board consensus was for approval. Approved.

Project #90NMFS07 - Shrimp Trawl Bycatch Reduction. As previously noted, this is a new proposal that was reviewed last year. However, it still remains a critical item. Dr. Kemmerer stated that attempts have been made to receive internal funding and that there is a good chance for funds in FY 1991. It was noted that there is an expense for shrimp trawl hires and that there needs to be increased cooperation of leaders in the shrimp industry. There also needs to be increased identification of industry contacts. There is approximately $15,000 to $30,000 set aside for industry involvement. Mr. Jones stated that the concept is good but questioned the wording. It was stated that this proposal is the first step to begin incorporating industry into solving the by-catch problem. Approved.

Project #90NMFS12 - Coastal Resources Research in the Southeast. It was stated that efforts are continuing to

obtain internal funding for this project but that funding has not yet been made available. It was the consensus of the Board that this proposal is not specific enough and that the operations plans will be drawn up at a later time. It was noted that a revised version may be submitted. It was agreed that this proposal should be resubmitted.

Project #90NMFS09 - Eastern Gulf Reef Fish Catch and Effort Data. It was noted that this is a new project that the Board has not reviewed. Mr. Swingle explained that this project collects size frequency information for stock assessments. It is a one year project. The Board requested that it be resubmitted following rewrite and peer review.

Project #90NMFS03 - Economic Data Collection for the Gulf of Mexico Commercial and Recreational Reef Fish Fisheries. It was stated that this is a one year project and will gather information not presently readily available. It was noted that this project emphasizes the need for ongoing increased priorities in reef fish areas. Dr. Cato stated he was concerned about the lack of details in the proposal. It was noted that this proposal has not had peer review and therefore, the Board could not provide funding support at this time. It was agreed that this proposal should be resubmitted after peer review is accomplished.

Project #90NMFS06 - Latent Resources Research in the Gulf of Mexico. Dr. Kemmerer related that as a continuing project, this proposal makes up the bulk of the MARFIN contributions. He stated that they are one year into the project and that a five year plan is associated with this project to include newer trawls, satellite work, and hydroacoustics. He explained that other funds should become available and

therefore the funding from MARFIN would be reduced each year, and that the end result would be that this project would become pure resource-related. He expects that this project will require MARFIN funding for two to three years more. Approved.

Project #90NMS11 - Continuation of the Expanded and Improved Sea Turtle Stranding and Salvage Network (STSSN) in Shrimp Statistical Subareas 17-21, Southwest Louisiana and Texas. It was noted that this is a continuing project and that collection is being contracted out using volunteers. This project documents the impact of TED regulations over a two-year period and directly depends upon compliance. The Board was in agreement that this is a viable project. Approved.

Project #90NMFS02 - An Educational Tool for Marine Recreational Fishermen to Promote Wise Use and Conservation of Gulf of Fishery Resources. Dr. Shipp related that this project includes the reprinting of developed material and brochures and the addition of related "angler ethics" educational materials in order to increase awareness and support of ethical angling practices. Approved.

Project #90NMFS04 - Economic Impact of Fishery Regulations on the King Mackerel Industry. It was noted that this project was late being submitted, had not had peer review, and therefore would not be considered at this time. A resubmission of the proposal is required.

Project #90NMFS05 - Economic Analysis of Finfish Bycatch in the Gulf of Mexico Shrimp Fishery. It was noted that this project was late being submitted, had not had peer review, and therefore would not be considered at this time. A

resubmit is required.

In summary, Dr. Cato reaffirmed, with the Board consensus, that Projects 3, 4, 5, 9, and 12 require resubmission and will not be addressed for funding during this meeting. The remaining projects received Board approval.

Other Business

Mr. Jones stated that he will be circulating a paper, "Sea Turtles on Beaches", to the Board for their review.

Next Board Meeting

Dr. Cato asked if the Board needed to set a date for the Board to convene in order to consider the resubmission of proposals. It was agreed that a conference call would be appropriate after all the Board members had reviewed the resubmissions and that there was no need at this time to confirm a date for the next formal meeting. It was stated that plans for the next conference should be put into the system and that it should be tentatively scheduled for late September 1990.

With no further business to be considered, Dr. Cato adjourned the meeting at 1:30 P.M.

MARFIN PROGRAM MANAGEMENT BOARD (PMB)
Tuesday, June 19/Wednesday, June 20, 1990
St. Petersburg, Florida
MINUTES

DRAFT

The meeting held in the conference room of the NMFS Southeast Regional Office was called to order at 9:00 am by Vice Chairman Jim Cato. The following were in attendance:

Members

Larry B. Simpson, GSMFC, Ocean Springs, MS
Bob Shipp, Recreational Industry, Mobile, AL
Jim Cato, Sea Grant, Gainesville, FL
William S. "Corky" Perret, Gulf States, Baton Rouge, LA
Wayne Swingle, GMFMC, Tampa, FL
Eddie McCulla, GASAFDFI, Houma, LA
Robert Jones, Commercial Industry, Tallahassee, FL
Jean West, ex-officio, NOAA Grants, Silver Spring, MD
Walter Nelson, NMFS, Pascagoula, MS

Staff
Don Ekberg, NMFS, St. Petersburg, FL
Lucia Hourihan, GSMFC, Ocean Springs, MS

Others
Ellie Roche, NMFS, St. Petersburg, FL
Patricia Gordon, NOAA Grants, Silver Spring, MD
Brad Brown, NMFS, Miami, FL
Sally Long, NMFS, St. Petersburg, FL
Dave Pritchard, NMFS, St. Petersburg, FL
*Andy Kemmerer, NMFS, St. Petersburg, FL

*In attendance on June 19, 1990 only.

Adoption of Agenda

The agenda was adopted as presented.

Election of MARFIN Board Chairman

Bob Shipp was elected chairman by acclamation. Jim Cato was re-elected vice chairman by acclamation.

Status of NMFS Projects

D. Ekberg distributed a listing of the ten NMFS projects (attachment 1) which had been approved for a funding total of $1.3 million. L. Simpson questioned the late start date on project 90NMFS03,

"Economic Data Collection for the Gulf of Mexico Reef Fish Fishery", as stated in the May progress report. It was clarified that funds going to NMFS to be spent by or on NMFS personnel must be expended prior to the end of said fiscal year and funds to be contracted out must be obligated prior to the end of said fiscal year.

Status of FY89 Financial Assistance Projects

Ekberg reported that financial assistance projects for FY89 were not obligated before the end of the fiscal year. Carry-over status was not received until about the first of January. Most of the projects were awarded in February and March. Some of the investigators have asked for pre-award costs.

J. West remarked that FY89 had been an unfortunate year in getting MARFIN awards out, partly due to the consolidation of the Grants Office and delays in General Counsel. She said that if pre-award costs were justified and were approved by the program officer then they would likely be approved. West stated the prognosis was very good for having FY90 MARFIN awards made by September 30. The deadline to have approved FY90 proposals submitted to NOAA Grants has been moved up to July 1. West further stated there will be no pre-award costs for FY90. She recommended project start dates be no earlier than October 1, preferably November or December 1. Investigators would be at risk to start work without receipt of a signed document.

Grants Management staff are trying to get the concept of expanded authority beyond universities which would allow for pre-award costs up to 90 days. West stated the goal for processing awards was 90 days -- 30 days with the program office (NMFS) and 60 days in grants management (review process to approval). A. Kemmerer stated the 30 days allowed for NMFS may be shortened to 15 because NMFS is now focusing all program officers in the Regional Office.

Presentation of NMFS Priority Listing of Proposals

Kemmerer stated that he relied heavily on SEFC to provide technical review and to go out to external reviewers extensively. He expressed confidence in the SEFC's breakdown of the projects into three general categories - Highly Recommended (H), Recommended (R), Not Recommended

(N) (attachment 2). The projects not recommended were basically for technical reasons, not necessarily on the types of projects. Without good rationale behind the PMB recommending a project rated "N", Kemmerer said he would not send those proposals on.

Kemmerer informed the PMB that he would like them to comment if they found a project requiring changes or if projects needed to be combined. He also stated that if a priority area had been missed, a separate RFP could be published. He said a reef fish plan is critically needed and asked the PMB to consider reserving a set amount of money to go out on an RFP to develop a reef fish plan. Such plan could be used as a basis for subsequent RFPs. Kemmerer expressed his appreciation to the PMB.

There was discussion regarding bait fish as a proposed needed category. Kemmerer said that the PMB needed to be specific in RFPs as to types of projects desired.

There was discussion regarding the current policy which says it is illegal for cooperation between NMFS personnel and university/state personnel on MARFIN projects. In two other NOAA programs (Global Climate Change and Coastal Ocean Enrichment) such cooperation is encouraged and cooperative proposals are given highest priority for funding. The PMB would like to see such cooperation recommended for MARFIN proposals. West will look into this inconsistency in policy.

Kemmerer stated that individual recommendations of PMB members will be a heavy influence on his final decision. He suggested there be some proposals recommended in contingency in case some proposals drop out. Before a final decision is made, Kemmerer will advise the PMB.

Ekberg distributed a breakdown of the FY90 MARFIN allocation (attachment 3) showing $726,000 going to continuing multi-year projects and a balance of $893,000 available for competitive projects.

W. Nelson briefed members on the NMFS sequential review of proposals and external reviewers comments. Going through the proposals (1-54) grading basically on quality of science and usefulness of work, NMFS identified five proposals as highly recommended. An additional 24 proposals were recommended (fair to good science, would provide useful information, based on criteria established in the RFP). Twenty-four proposals were not recommended (primarily poor science, didn't respond

or outside RFP). Two projects were recommended to be put on hold pending the development of a Gulf-wide bycatch plan.

Ekberg reported on a conference call between B. Brown, J. West, Des McLearen and himself. It was determined that projects could be modified to include needed areas but could not be scratched and started over.

* J. Cato moved that the PMB take the most highly ranked (H) group of proposals and discuss them and then move sequentially through the remainder. The motion carried unanimously.

W. Nelson commented on review results of each proposal as they were individually discussed. PMB members recused themselves from any deliberation from which they or their employing institution could benefit. As a result of the first day's session consideration of the following projects was deferred indefinitely as the projects were felt to be inappropriate for FY90 MARFIN funding.

11.A.04, FDNR (Systematic Survey for Stranded Sea Turtles in Statistical Zones 4 & 5).

3.A.02, Mote Marine Lab (K & Spanish Mackerel Migration and Stock Assessment Study in S. Gulf of Mexico).

10.B.01, LSU (Life History Characterization of Gulf Butterfish).

2.A.01, National Fish Meal & Oil Assoc. (Enhancement of Menhaden Oil for Human Consumption).

4.K.02, Univ. of TX at Austin (Early Life History Studies of Red Snapper).

5.A.01, MS State Univ. (Coastal Herring Processing & Product Evaluation).

5.E.01, Univ of S FL (Study of Genetic Mixing Among Fishery Stocks of Spanish Sardine).

9.C.04, FDNR (Genetic Stock Ident of Blue Crab Pop With Emphasis on GOM Pop).

11.A.03, TX A&M Research Foundation (Assessment of Non-shrimping Mortality of Sea Turtles).

12.C.01, TX A&M Research Foundation (Behavioral Responses of Postlarval Shrimp Estuarine Olfactants).

12.C.04, Univ. of TX at Austin (Loc of Spawning Sites & Immigration to Nursery Grounds in Spotted Seatrout).

12.C.07, LSU (Influence of Microhabitat Selection on Growth & Predation of Estuar Dep Fishes).

4.D.01, Univ. of Miami (Method to Solve Problems of Competition Between Rec & Com Reef Fisheries in W FL).

4.G.01, Univ. of W FL (Determining Attributes of Art Reef & Site Location to Enhance Productivity).

4.G.02, NOVA Univ. Oceanographic Center (Art Reefs as Mitigation for Marina & Dockg Facility Impacts).

4.K.03, MS State Univ. (Dev of Rearing Techniques for Early Life History Stages of Red Snapper).

5.A.02, MS State Univ. (Rel of Fish Qual & Energy Use as Function of Freezing Method for Coastal Herring).

7.A.01, Univ. of S FL (Study of Genetic Stock Structure of Blacktip Shark in GOM & Caribbean).

7.A.02, Univ. of S AL (Electrophoretic Ident of Sharks Using Skeletal Muscle & Blood).

8.A.01, Univ. of CA (Simple One-Day Test for Coliforms and E. coli in Oysters and Seawater).

8.A.02, MS State Univ. (Eval of On-shore Depuration of Gulf Oysters).

9.0.01, Old Dominion Univ. (Limits to FL Spiny Lobster Recruitment: Assmt of Art Enhancement Techniques).

9.A.01, MS State Univ. (Dev Prototype Method of Est Rec Impact on GOM Blue Crab Fishery).

9.C.01, ADCNR (Assessment of AL Blue Crab Stocks).

10.C.01, Gulf Shrimp Res. & Dev. Found., Inc. (Integrated Assmt of Bycatch Issues in W. GOM).

11.A.01, Univ. of Rhode Island (Investigate Acute Anoxia in Sea Turtles & Dev Methods of Resuscitation).

12.C.03, GCRL (Effect of Eddies & Fronts on Larval OF Recruitment Selected Comm Species).

12.C.06, Mote Marine Lab (Ident, Char, & Inventory of Critical Nursery Hab of Red Drum in FL).

13.0.01, GASAFDFI (Estab & Conduct a TED Technology Dev and Transfer Program).

The remaining 25 projects requesting a total of $1,531,100 were held over for further discussion on the following day.

The first day's session was adjourned at 5:00 pm to reconvene at 9:00 am on the following day.

Wednesday, June 20, 1990

Chairman Bob Shipp reconvened the meeting at 9:04 am. New sheets showing the 25 proposals remaining as a result of the first day's discussions were distributed.

It was the consensus of the members to discuss the "N" (not recommended) proposals first, going from back to front. Discussion and PMB members' approval of projects resumed.

The following projects were deferred indefinitely as the projects were felt to be inappropriate for FY90 MARFIN funding.

13.A.01, TX A&M Res. Foundation (Management Policies to Increase Econ Returns to Shrimp Fishery in GOM).

12.0.01, SE LA Univ. (Life History & Pop Assmt of Garfish in Estuarine Waters).

11.A.02, Univ. of FL (Hatchery Tech for Propagation of Fingerling Gulf Sturgeon).

9.B.01, E. Carolina Univ. (Limited Entry in Stone Crab Fishery: A Multi-Species Approach). (Send letter asking to come back next year if funds are available.)

9.C.03, LSU (Seasonal Abundance, Transport & Recruitment of Blue Crab in Bay Ecosyst).

3.A.01, TX A&M Res. Foundation (Population Genetic Studies of King Mackerel in GOM).

The following 19 projects were considered to be appropriate and approved for FY90 MARFIN funding.

12.B.01, LSU (Age Structure & Reprod Potential of NGOM Offshore Pop of Red Drum) at $38,785.

4.K.01, ADCNR (Propagation & Dev of Rearing Techniq for Prod of Taggable Red Snapper into GOM) at a reduced funding level of $10,000 and reduced scope to only do larval food analysis for red snapper.

4.H.01, Univ. of S. AL (Species Ident & Management of Amberjacks) at $18,893 -- suggest remove section to estimate species composition in the recreational and commercial fisheries in the Gulf but include sufficient field sampling to get live specimens. (Note Southeast Fisheries Association will be happy to volunteer amberjack samples from a variety of locations).

13.D.01, GASAFDFI (Japanese & Taiwanese Trade Barrier Analysis for GOM Butterfish) -- suggest only do objectives 3 and 4 of project for $50,000.

12.C.02, LSU (Larval Food, Growth & Microhabitat Select: Affecting Cruit of Depend Fish) at $83,530.

7.B.01, TX A&M Res. Foundation (Social & Economic Characterization of GOM Rec & Com Shark Fisheries) -- suggest remove commercial aspect and fund at $50,000.

5.B.01, FDNR (Investigations of Inshore & Offshore Pop Dynamics of Spanish Sardines in W FL) at $50,906.

4.H.02, LSU (Mortality Rates & Movement of Hook & Line Caught & Released Red Snapper) at $30,568 -- suggest eliminate 15 meter category and increase deeper replicates.

4.A.01, TPWD (Socioeconomic Impacts of Rec Reef Fish Fishermen in TX) at $11,535 -- suggest add sociologist.

Nelson proposed NMFS' putting together an outline for a coordinated/integrated research plan for bycatch and then returning to the two applicants in question and asking them to do segments of priority work identified. Project 1.A.03, GASAFDFI (Management of Bycatch in Directed Com Fisheries in GOM) was suggested to be included at a reduced level of $100,000. Project 1.A.01, Gulf Shrimp Res. & Dev. Found. (Finfish Excludg Gear in Shrimp Trawls in W GOM) was suggested to be included at $47,135 (with the addition of observers) for one year only.

12.B.02, Univ. of TX at Austin (Dynamics of Estuarine & Offshore Red Drum Stocks) at $26,393.

1.A.02, Southeast Fish. Assoc. (Conf on Reduction of Bycatch Shrimp Trawlg Operations & Alter Harvtg) at $31,650 -- suggest include New England and Hawaii.

3.A.03; Mote Marine Lab (Cobia, Amberjack, Dolphin Migration & Life History Study Off SW FL) at reduced level of $75,000 with deletion of dolphin.

4.H.03, TX A&M Res. Foundation (Genetic Studies to Det Stock Structure of Reef Fishes n GOM: Phase 1) at $54,623.

9.C.02, Marine Environmental Sciences Consortium (Recruitment & Habitat Util by Blue Crab: Importance of Juv Nursery Habitat) at $58,287.

4.B.01, CMRC (Spawning Biology of Shallow-Water GOM Groupers) at $76,350.

12.A.01, FDNR (Age Validation of Adult Black Drum in FL) at $4,000 -- has to show personnel.

12.C.05, FDNR (Spawning Stock & Exploit/Escape of Black Mullet) at $57,731.

Projects which had been previously deferred were considered again and listed in contingency in the following rank order:

1. 3.A.01, TX A&M Res. Foundation (Population Genetic Studies of King Mackerel in GOM) for $69,614.

2. 3.A.02, Mote Marine Lab (K&S Mackerel Migration & Stock Assmt Study in SGOM) -- suggest eliminating tagging work and distribution information and possibly reducing to $65,000.

3. 9.C.03, LSU (Seasonal Abundance, Transport & Recruitmt of Blue Crab in Bay Ecosyst) for $60,575.

4. 10.B.01, LSU (Life History Characterization of Gulf Butterfish) for $48,562.

There was discussion regarding the Gulf and South Atlantic Fisheries Development Foundation. West stated the DOC is withholding funds until audit questions are resolved. An appeal has been filed. If the situation is not cleared up, any projects approved for MARFIN funds could not go on to FARB.

The total amount of funding for approved projects was $875,386, which would leave a reserve amount of $18,000 for a reef fish plan.

Discussion of Plans for 1990 Technical Conference

"An Analysis of MARFIN Conference and Recommendations for Future Conferences" prepared by Cato was distributed (attachment 4) and discussed. There was a consensus to limit presentations to those PIs with completed or nearly completed projects and to try to increase the audience.

* C. Perret moved the PI conference be held in Orlando with Sea Fare in November. The motion was seconded.

* J. Cato amended the motion to allow L. Simpson and L. Hourihan to take the recommendations of the PMB to heart and make plans to hold the PI conference in November with Sea Fare. The amended motion carried unanimously.

It was concluded that November was too late to set priorities for the Federal Register notice. It was recommended that Ekberg distribute a "straw" notice to PMB members ahead of the next meeting. The PMB will meet in New Orleans on Monday, September 17 from 12:00 noon - 5:00 pm to set priorities for FY91.

New Business

Ekberg distributed the draft FY89 Annual Report and asked for comments to be mailed to him. He stated he would like to see more accomplishments included. He also briefly reviewed the history of MARFIN.

A discussion ensued regarding distribution of funds. Table 4 in the Annual Report shows a breakdown of funds going to Universities, States, Industry and NMFS.

The June 13-14, 1989 meeting minutes were approved as written.

Simpson will check with State Directors regarding the Gulf States representative as the term is expired.

Simpson asked for permission to reprint copies of the MARFIN document. It was agreed to reprint 100 copies. There was discussion regarding revising the five-year plan with a focus on key issues.

There being no further business the meeting was adjourned at 3:10 pm.

FY 1990 MARFIN NMFS PROJECTS

12/04/89

PROJ#	APPNAME	PROJNAME	PI	STARTDAT	ENDDATE	YR/TYPE	AWARD
90NMFS01	SERO, EKBERG	MARFIN PROGRAM MANAGEMENT	EKBERG, DONALD	10/01/89	09/30/90	1/1	$75,000.00
90NMFS02	SERO, SCHMIED	EDUC. TOOLS FOR MAR. REC. FISHERMEN TO PROMOTE WISE USE & CONSERVATION OF GULF FISHERY RES.	SCHMIED, RON	10/01/89	09/30/90	1/1	$16,000.00
90NMFS03	SERO, PLATT/WATERS	ECONOMIC DATA COLLETION FOR THE GULF OF MEXICO REEF FISH FISHERY	PLATT/WATERS	01/01/90	12/31/90	1/1	$100,000.00
90NMFS06	SEFC, KEMMERER	LATENT RESOURCES RESEARCH IN GOM	KEMMERER, ANDREW	10/01/89	09/30/90	1/1	$460,000.00
90NMFS07	SEFC, KEMMERER	SHRIMP TRAWL BYCATCH REDUCTION	SEIDEL, WILBER	10/01/89	09/30/90	1/1	$200,000.00
90NMFS08	SEFC, KLIMA	EVAL. OF THE IMPACTS OF TED ON SHRIMP CATCH RATES IN GOM	KLIMA ,ED	10/01/89	01/31/91	1/2	$107,000.00
90NMFS09	SEFC, NELSON	EASTERN GULF REEF FISH CATCH AND EFFORT DATA	BOHNSACK, JAMES	03/01/90	03/01/91	1/1	$55,000.00
90NMFS10	SEFC,KEMMERER	TED TECHNOLOGY TRANSFER	SEIDEL, WILBER	10/01/89	09/30/90	1/1	$45,000.00
90NMFS11	SEFC, KLIMA	CONT. OF IMPROVED SEA TURTLE STRANDING AND SALVAGE NETWORK (STSSN) IN SHRIMP STATISTICAL SUBAREAS 17-21, SW LA AND TI	CAILLOUET, CHARLES	10/01/89	09/30/91	1/2	$40,000.00
90NMFS12	SEFC, NAKAMURA	COASTAL RESOURCES RESEARCH IN THE SE	NAKAMURA, GENE	10/01/89	09/30/90	1/1	$205,000.00
			Total				$1,303,000.00

Attachment 1

PROJECT #	APPLICANT	PRINCIPAL INVESTIGATOR	PROJECT NAME	YR/TYRS	START DATE	END DATE	$ REQUESTED YEAR 1	$ REQUESTED YEAR 2	$ REQUESTED YEAR 3	TOTAL $ REQUESTED	AVERAGE SCORE	# OF REVIEWS	NMFS RECOMMENDATION
90MF01.A.01	GULF SHRIMP RES & DEV FOUND	GIBBS, LUCY	FINFISH EXCLUDG GEAR IN SHRIMP TRAWLS IN N. GOM	1/2	10/01/90	09/30/92	$47,135.00	$51,635.00		$98,770.00	66	8	R
90MF01.A.02	SOUTHEAST FISHERIES ASSOC	JONES, ROBERT	CONF ON REDUCTION OF BYCATCH SHRIMP TRAWLG OPERATIONS & ALTER HARVTG	1/2	11/01/90	11/01/92	$31,650.00	$99,650.00		$131,300.00	75	6	R+
90MF01.A.03	GASAFDF	JAMISON, JUDY	MANAGEMT OF BYCATCH IN DIRECTED COMMERCIAL FISHERIES IN GOM	1/1	10/01/90	09/30/91	146,858.00			$146,858.00	76	5	R
90MF02.A.01	NATIONAL FISH MEAL & OIL ASSOC.	LASSEN, THOR ET.AL.	ENHANCEMENT OF MENHADEN OIL FOR HUMAN CONSUMPTION	1/1	06/01/90	09/30/91	143,390.00			$143,390.00	84	5	R
90MF03.A.01	TX A&M RES FOUND	GOLD, JOHN DR.	POPULATION GENETIC STUDIES OF KING MACKEREL IN GOM	1/2	01/02/91	12/31/92	$69,614.00	$74,141.00		$143,755.00	89	5	R
90MF03.A.02	MOTE MARINE LAB	BURNS, KAREN	K & SPANISH MACKEREL MIGRATION & STOCK ASSESMT STUDY IN SGOM	1/1	11/01/90	12/31/91	$99,675.00			$99,675.00	86	4	R+
90MF03.A.03	MOTE MARINE LAB	BURNS, KAREN ET.AL.	COBIA, AMBERJACK,DOLPHIN MIGRATION & LIFE HISTORY STUDY OFF SW FL	1/1	11/01/90	12/31/91	$96,850.00			$96,850.00	81	5	R+
90MF04.A.01	TX PARKS & WILDLIFE DEPT	MATLOCK, GARY DR. ET.AL.	SOCIOECONOMIC IMPACTS OF REC REEF FISH FISHERMEN IN TX	1/1	10/01/90	09/30/91	$11,535.00			$11,535.00	80	5	R
90MF04.B.01	CARIBBEAN MARINE RES CENTER (CMRC)	COLIN, PATRICK DR. ET.AL.	SPAWNG BIOLOGY OF SHALLOW-WATER GOM GROUPERS	1/2	09/01/90	08/31/92	$76,350.00	$83,539.00		$159,889.00	82	5	N
90MF04.B.01	UNIV OF MIAMI	EHRHARDT, NELSON DR.	METHOD TO SOLVE PROBLEMS OF COMPETITION BETWEEN REC & COM REEF FISHERIES IN W FL	1/1	12/01/90	11/30/91	$68,942.00			$68,942.00	42	5	N
90MF04.G.01	UNIV OF W FL	BORTONE, STEPHEN DR.	DETERMG ATTRIBUTES OF ART REEFS & SITE LOCATION TO ENHANCE PRODUCTVTY	1/3	09/01/90	12/31/93	$49,503.00	$53,142.00	$57,143.00	$159,788.00	66	5	N
90MF04.G.02	NOVA UNIV OCEANOGRAPHIC CENTER	LANDMEIER, DENNIS	ART REEFS AS MITIGATION FOR MARINA & DOCKG FACILITY IMPACTS	1/1	07/01/90	06/30/91	$58,625.00			$58,625.00	38	6	N
90MF04.M.01	UNIV OF S AL	MCAFEE, PRIDGET	SPECIES IDENT AND MANAGEMENT OF AMBERJACKS	1/1	10/01/90	09/30/91	$18,893.00			$18,893.00	80	5	N
90MF04.M.02	LA STATE UNIV	RENDER, JEFFREY DR. ET.AL.	MORTALITY RATES & MOVEMENT OF HOOK&LINE CAUGHT & RELEASED RED SNAPPER	1/2	10/01/90	09/30/92	$30,568.00	$47,655.00		$78,223.00	74	5	R
90MF04.M.03	TX A&M RES FOUND	GOLD, JOHN DR.	GENETIC STUDIES TO DET STOCK STRUCTURE OF REEF FISHES IN GOM; PHASE 1	1/1	10/01/90	09/30/91	$54,623.00			$54,623.00	70	5	R+

Attachment 2

PROJECT #	APPLICANT	PRINCIPAL INVESTIGATOR	PROJECT NAME	YR:TYRS	START DATE	END DATE	$ REQUESTED YEAR 1	$ REQUESTED YEAR 2	$ REQUESTED YEAR 3	TOTAL $ REQUESTED	AVERAGE SCORE	# OF REVIEWS	NMFS RECOMMENDATION
90MF04.K.01	AL DEPT CONS & NAT RES	HINTON, R. VERNON ET.AL.	PROPAGATION & DEV OF REARING TECHNIQ FOR PROD OF TAGGABLE RED SNAPPER INTO GOM	1/2	10/01/90	09/30/92	$60,000.00	$60,000.00		$120,000.00	61	5	N
90MF04.K.02	UNIV OF TX AT AUSTIN	HOLT, G. JOAN DR.ET.AL.	EARLY LIFE HISTORY STUDIES OF RED SNAPPER	1/2	10/01/91	09/30/92	$53,344.00	$55,772.00		$109,116.00	88	6	R
90MF04.K.03	MS STATE UNIV	ROBINETTE H.R. DR.	DEV OF REARING TECHNQ FOR EARLY LIFE HISTORY STAGES OF RED SNAPPER	1/2	01/01/91	12/31/92	$88,345.00	$85,485.00		$173,830.00	59	4	N
90MF05.A.01	MS STATE UNIV	KIN, JIN DR. ET.AL.	COASTAL HERRING PROCESSING AND PRODUCT EVAL.	1/2	09/01/90	08/31/92	101,920.00	$108,550.00		$210,470.00	67	4	R
90MF05.A.02	MS STATE UNIV	POTE, JONATHAN DR. ET.AL.	REL OF FISH QUAL & ENERGY USE AS FUNCTION OF FREEZG METHOD FOR COASTAL HERRG	1/1	10/01/90	09/30/90	$77,870.00			$77,870.00	52	4	N
90MF05.B.01	FLBMR	SUTTER, FREDERICK ET.AL.	INVESTIGATIONS OF INSHORE & OFFSHORE POP DYNAMICS OF SPANISH SARDINES IN N.FL	1/1	02/01/91	01/31/92	$50,906.00			$50,906.00	78	4	R
90MF05.E.01	UNIV OF S FL	WILSON, RAYMOND JR. DR.	STUDY OF GENETIC MIXING AMONG FISHERY STOCKS OF SPANISH SARDINE	1/2	02/01/91	01/31/93	$56,523.00	$47,622.00		$104,145.00	82	4	R
90MF07.A.01	UNIV OF S FL	WILSON, RAYMOND JR. DR.	STUDY OF GENETIC STOCK STRUCTURE OF BLACKTIP SHARK IN GOM & CARIBBEAN	1/3	03/01/91	02/28/94	$72,399.00	$54,339.00	$60,668.00	$187,406.00	58	4	N
90MF07.A.02	UNIV OF S AL	DONACHY, JULIE DR.	ELECTROPHORETIC IDENT OF SHARKS USING SKELETAL MUSCLE & BLOOD	1/2	07/01/90	06/30/92	$45,695.00	$46,280.00		$91,975.00	50	4	N
90MF07.B.01	TX A&M RES FOUND	DITTON, ROBERT DR.	SOCIAL & ECONOMIC CHARACTERIZATION OF GOM REC & COM SHARK FISHERIES	1/1	10/01/90	09/30/91	$87,938.00			$87,938.00	84	5	R
90MF08.A.01	UNIV OF CA	CHANG, GEORGE DR.	SIMPLE ONE-DAY TEST FOR COLIFORMS AND E.COLI IN OYSTERS AND SEAWATER	1/3	07/01/90	06/30/93	$62,383.00	$69,650.00	$75,774.00	$200,649.00	85	5	N
90MF08.A.02	MS STATE UNIV	HOMZIAK, JURIJ DR. ET.AL.	EVAL OF ON-SHORE DEPURATION OF GULF OYSTERS	1/1	10/01/90	09/30/91	144,830.00			$144,830.00	65	7	N
90MF09.0.01	OLD DOMINION UNIV RES FOUND	BUTLER, MARK DR. ET.AL.	LIMITS TO FL SPINY LOBSTER RECRUITMENT: ASSESSMT OF ART ENHANCMT TECHQ	1/3	09/01/90	02/28/93	$71,354.00	$69,844.00	$6,338.00	$147,536.00	92	4	N
90MF09.A.01	MS STATE UNIV	BURRAGE, DAVE	DEV PROTOTYPE METHOD OF EST REC IMPACT ON GOM BLUE CRAB FISHERY	1/1	10/01/90	09/30/91	$32,505.00			$32,505.00	67	4	N
90MF09.B.01	E CAROLINA UNIV	ORBACH, MICHAEL DR. ET.AL.	LIMITED ENTRY IN STONE CRAB FISHERY: A MULTI-SPECIES APPROACH	1/2	01/01/91	12/31/92	$99,256.00	$80,918.00		$180,174.00	69	5	N
90MF09.C.01	AL DEPT CONS & NAT RES	HEATH, S. ET.AL.	ASSESSMENT OF AL BLUE CRAB STOCKS	1/1	04/01/91	03/31/92	$60,000.00			$60,000.00	60	4	N

PROJECT #	APPLICANT	PRINCIPAL INVESTIGATOR	PROJECT NAME	YR/TYRS	START DATE	END DATE	$ REQUESTED YEAR 1	$ REQUESTED YEAR 2	$ REQUESTED YEAR 3	TOTAL $ REQUESTED	AVERAGE SCORE	# OF REVIEWS	NMFS RECOMMENDATION
90NF09.C.02	MARINE ENIRONMENTAL SCIENCES CONSORTIUM	MORGAN, STEVEN DR. ET.AL.	RECRUITMT & HABITAT UTIL BY BLUE CRAB: IMPORTANCE OF JUV NURSERY HABITAT	1/2	10/01/90	09/30/92	$58,287.00	$59,861.00		$118,148.00	88	5	H
90NF09.C.03	LA STATE UNIV	POWER, JAMES DR.	SEASONAL ABUNDANCE, TRANSPORT, & RECRUITMT OF BLUE CRAB IN BAY ECOSYST	1/3	10/01/90	09/30/93	$60,575.00	$61,449.00	$45,563.00	$167,587.00	82	5	R
90NF09.C.04	FLDNR	BERT, THERESA DR. ET.AL.	GENETIC STOCK IDENT OF BLUE CRAB POP WITH EMPHASIS ON GOM POP	1/3	10/01/90	09/30/93	$35,446.00	$41,779.00	$42,512.00	$119,737.00	92	5	R
90NF10.B.01	LA STATE UNIV	ALLEN, ROBERT	LIFE HISTORY CHARACTERIZATION OF GULF BUTTERFISH	1/2	10/01/90	09/30/92	$48,562.00	$51,578.00		$100,140.00	82	5	R+
90NF10.C.01	GULF SHRIMP RES & DEV FOUND, INC	GIBBS, LUCY	INTEGRATED ASSESSMT OF BYCATCH ISSUES IN N. GOM	1/2	09/01/90	08/31/90	125,307.00	$130,142.00		$225,449.00	53	8	N
90NF11.A.01	UNIV OF RHODE ISLAND	WOLKE, RICHARD DR.,ET.AL.	INVESTIGATE ACUTE ANOXIA IN SEA TURTLES & DEV MTHODS OF RESUSCITATION	1/2	10/01/90	09/30/92	103,441.00	$99,830.00		$203,271.00	40	5	N
90NF11.A.02	UNIV OF FL	CHAPMAN, FRANK	HATCHERY TECH FOR PROPAGATION OF FINGERLING GULF STURGEON	1/1	01/01/91	01/01/92	$24,519.00			$24,519.00	85	5	N
90NF11.A.03	TX A&M RES FOUND	SIS, RAYMOND, DR. ET.AL.	ASSESSMENT OF MONSHRIMPG MORTALITY OF SEA TURTLES	1/3	02/01/91	09/30/93	$71,985.00	$97,758.00	$101,147.00	$270,890.00	70	5	R
90NF11.A.04	FLDNR	FOLEY, ALLEN	SYSTEMATIC SURVEY FOR STRANDED SEA TURTLES IN STATISTICAL ZONES 4 & 5	1/1	10/01/90	09/30/91	$63,817.00			$63,817.00	90	3	H
90NF12.0.01	SE LA UNIV	HASTINGS, ROBERT DR.	LIFE HISTORY & POP ASSESSMT OF GARFISH IN ESTUARINE WATERS	1/2	09/01/90	09/30/92	$38,790.00	$33,158.00		$71,948.00	83	4	N
90NF12.A.01	FLDNR	MURPHY, MICHAEL ET.AL.	AGE VALIDATION OF ADULT BLACK DRUM IN FL	1/3	02/01/91	01/31/92	$4,000.00	$4,000.00	$4,000.00	$12,000.00	87	5	H
90NF12.B.01	LA STATE UNIV	WILSON, CHARLES DR. ET.AL.	AGE STRUCTURE & REPROD. POTENTIAL OF NGOM OFFSHORE POP OF RED DRUM	1/2	10/01/90	09/30/92	$38,785.00	$38,785.00		$77,570.00	80	6	N
90NF12.B.02	UNIV OF TX AT AUSTIN	FUIMAN, LEE DR.	DYNAMICS OF ESTUARINE & OFFSHORE RED DRUM STOCKS	1/2	09/01/90	02/28/91	$26,393.00	$21,013.00		$47,406.00	71	5	R+
90NF12.C.01	TX A&M RES FOUND	ALDRICH, DAVID DR.	BEHAVIORAL RESPONSES OF POSTLARVAL SHRIMP ESTUARINE OLFACTANTS	1/2	07/01/90	06/03/92	$54,742.00	$61,130.00		$115,872.00	74	5	R
90NF12.C.02	LA STATE UNIV	BALTZ, DONALD DR. ET.AL.	LARVAL FOOD, GROWTH & MICROHABITAT SELECT: AFFECTING CRUIT OF DEPEND. FISH	1/1	02/01/91	01/31/92	$83,530.00			$83,530.00	85	4	R
90NF12.C.03	GULF COAST RES LAB	STEEN, JOHN ET.AL	EFFECT OF EDDIES & FRONTS ON LARVAL OF RECRUITMT SELECTED COMM SPECIES	1/3	10/01/90	09/30/93	158,262.00	$163,422.00	$167,488.00	$489,172.00	72	5	N

PROJECT #	APPLICANT	PRINCIPAL INVESTIGATOR	PROJECT NAME	YR/TYRS	START DATE	END DATE	$ REQUESTED YEAR 1	$ REQUESTED YEAR 2	$ REQUESTED YEAR 3	TOTAL $ REQUESTED	AVERAGE SCORE	# OF REVIEWS	NMFS RECOMMENDATION
90MF12.C.04	UNIV OF TX AT AUSTIN	HOLT, SCOTT ET.AL.	LOC OF SPAWNG SITES & IMMIGRATION TO NURSERY GROUNDS IN SPOTTED SEATROUT	1/1	01/01/91	12/31/91	$85,778.00			$85,778.00	88	6	H
90MF12.C.05	FLDNR	MAHMOUDI, BEHZAD DR.	SPAWNG STOCK AND EXPLOIT/ESCAPE OF BLACK MULLET	1/1	10/01/90	09/30/91	$57,731.00			$57,731.00	88	4	H
90MF12.C.06	MOTE MARINE LAB	EDWARDS, RANDY DR.	IDENT, CHAR, & INVENTORY OF CRITICAL NURSERY HAB OF RED DRUM IN FL	1/1	07/15/90	06/30/91	$49,672.00			$49,672.00	86	4	H
90MF12.C.07	LA STATE UNIV	BALTZ, DONALD	INFLUENCE OF MICROHABITAT SELECTION ON GROWTH & PREDATION OF ESTUAR. DEP. FISHES	1/1	10/01/91	09/30/91	$57,929.00			$57,929.00	83	5	R
90MF13.0.01	G&SAFDF	JAMISON, JUDY	ESTAB & CONDUCT A TED TECHNOLOGY DEV AND TRANSFER PROGRAM	1/1	10/01/90	09/30/91	124,320.00			$124,320.00	59	5	N
90MF13.A.01	TX A&M RES FOUND	GRIFFIN, WADE DR.	MANAGEMT POLICIES TO INCREASE ECON RETURNS TO SHRIMP FISHERY IN GOM	1/2	01/01/91	12/31/92	141,107.00	$146,408.00		$287,515.00	70	5	N
90MF13.B.01	G&SAFDF	JAMISON, JUDY	JAPANESE & TAIWANESE TRADE BARRIER ANALYSIS FOR GOM BUTTERFISH	1/1	10/01/90	09/30/91	115,207.00			$115,207.00	83	4	R
	TOTALS:						3797664.00	2,098,535.00	$560,633.00	6,419,674.00			

NATIONAL MARINE FISHERIES SERVICE
SOUTHEAST REGION
FY 90 MARFIN ALLOCATION

INITIAL ALLOCATION:		3000.0
COMMITMENTS:		
REGIONAL OFFICE (ADMIN.)	75.0	
RECREATIONAL FISHERIES	16.0	
ECONOMICS	100.0	
MISSISSIPPI LABORATORIES	705.0	
GALVESTON LABORATORY (A)	152.0	
PANAMA CITY LABORATORY	205.0	
MIAMI LABORATORY	55.0	
SUBTOTAL		1308.0
CONTRACT(S):		
GSMFC (ADMIN.)	73.7	
SUBTOTAL		73.7
OTHER:		
POSTAGE	2.0	
MULTI-YEAR AWARDS	726.0	
SUBTOTAL		728.0
BALANCE REMAINING:		890.3

(A) INCLUDES $5.0K FOR COOPERATIVE AGREEMENT WITH TEXAS A&M (GRIFFIN)

Analysis of MARFIN Conference and Recommendations for Future Conferences

Introduction

This document is written to provide an analysis of the first two MARFIN Conferences and make recommendations for future conferences. The goal is to increase the efficiency of the conference for the industry, academia and government agencies that can utilize the information presented, and to design a conference that will develop future MARFIN research priorities, evaluate project performance, and provide a forum for coordination of projects.

Complaints heard regarding the first two conferences include:

- Each person not given enough presentation time.
- Two days required (travel, etc.) for a 15 minute presentation.
- Covering so many species areas makes the conference too diverse to maintain an interested and cohesive audience.
- Asking researchers to make presentations on work before time is allowed to complete the work.
- No mechanism included to help PMB develop priorities.
- Low attendance from all sectors.

1988 Conference

A total of 42 presentations were made during the 1988 conference (See Table 1). Of that total, 13 presentations were on projects that were complete. Another 14 were on projects that were almost complete. Some of these 14 were likely projects that actually were to be continued but time was not sufficient to make such a detailed analysis. The remaining 15 projects were clearly still in progress with substantial time left for work to be completed. Of the eight MARFIN conference categories, the most presentations were in estuarine fish (Table 3). In general, it appears that only 27 projects (Table 1; categories 1 and 2) were ready for presentation.

1989 Conference

A total of 52 presentations were made (Table 2). Of these, 23 were repeated presentations from the 1988 conference on multi-year projects. All but 4 were actually completed and those four were near completion. Five more were complete and this was the first conference presentation for each. Another eight were almost complete at conference time and 16 more needed substantial time for completion. The categories of presentation were about the same as during 1988 with the exception of shrimp which had more projects during 1989. In general, it appears that at most 36 projects were ready for presentation (Table 2;

categories 1 through 4). This number actually would be lower since it may not have been necessary to repeat some of the presentations that were made in 1988.

Recommendations

1. A subcommittee of the MARFIN PMB be appointed to help plan the annual conference (or at least react to a written conference agenda prepared by NMFS staff). This conference plan and agenda should be prepared at least six months prior to the conference and speakers notified of the dates selected.

2. The conference continue to be scheduled for two days (without an evening session). One and one-half days should be scheduled for technical presentations.

3. Technical presenters should be selected by the staff and proposed to the committee and be limited to 20 to 25 presentations. Only those with completing projects should be selected for presentation. Some would argue that having all presenters there helps check progress. However, that is the role of the NMFS project monitor. This smaller number would give each about 20 minutes, and allow more for discussion. On some occasions we might want mid term results presented on multiyear projects or for projects that were not complete when the conference focus was on a special topic.

4. Each project presenter be required to make recommendations for future research as part of the presentation. This should be made available at the time of the presentation (one page or less).

5. Each presenter would be required to provide an abstract with figures and tables prior to the conference for general distribution and for use in the MARFIN Annual report.

6. Having fewer presenters also would leave open the option of selecting just completing projects or focusing the entire conference on topical areas such as shrimp or estuarine fish.

7. The last one-half day of the conference should be devoted to two one and one-half hour panels of invited participants from industry, academia and government. Perhaps four persons per panel should be asked to present problems and research priorities for the segment they represent. They should be required to present them in writing. Two subjects should be covered (one per panel) at each conference with the idea of the panels helping develop priorities for the next 3 - 4 years for that topic (i.e., turtles, reef fish, etc.). Panel members should

not be PMB members or current researchers with MARFIN funding. MARFIN should pay for travel and expenses of the panel members and give them a specific charge to help insure adequate participation. Each MARFIN funding area would thus get in depth attention every 3 or 4 years.

Another alternative would be to have three panels (one each for academia, industry and government) and address only one species group each year. Each panel could be for one hour. They also might meet concurrently and then report back during a combined panel discussion.

8. A final recommendation would be to associate the conference in some way with one to publicize the results of S-K funded projects. This might be accomplished if NMFS took responsibility for the S-K portion and there was not too much "presenter overlap." That is, if many of the presenters are the same, they might resist such a time commitment. This recommendation will need full discussion and is only offered as an idea concept at this time. Another option would be to hold MARFIN and/or S-K conferences in association with Sea Fare in Orlando in November of each year. This would give a built in audience to some degree.

9. The MARFIN PMB should meet the next morning and use the priorities turned in by the researchers, and panel members to help define Federal Register priorities.

Table 1. Project Presentation Data on September, 1988 MARFIN Conference

Categories of Projects Presented	Number
1. Projects completed by at least 1-12 months	13
2. Projects underway at least 11 months with 1-2 months left	14*
3. Projects underway 8-10 months with 3 months left	3*
4. Projects underway 8-10 months with 3 months left	11
5. Projects underway 5 months with 6 months left	1
Total	42

* Some of these projects may have asked for additional second year funding.

Table 2. Project Presentation Data on September, 1989 MARFIN Conference

Categories of Projects Presented	Number
1. Project presentations repeated from 1988 conference	23
a. Projects of 20-35 months duration completed by 1 to 12 months before conference -19	
b. Projects of 22-23 months duration needing 1 to 3 months for completion -4	
2. Projects over by 8 months	1
3. Projects underway 20 - 23 months and complete	4
4. Projects underway 4 - 14 months and almost complete	8
5. Projects underway 6 - 25 months with 3 - 25 months left	16
TOTAL	52

Table 3. Categories of Presentations at 1988 and 1989 MARFIN Conferences.

Project Presentation Categories	Number of Presentations			
	1988		1989	
	Number	%	Number	%
Reef Fish	3	7	4	8
Coastal Herrings	3	7	3	6
Crabs/Lobsters	1	2	3	6
Estuarine Fish	13	31	16	31
Marine Mammals	6	14	2	4
Coastal Pelagics	8	19	10	19
Shrimp	4	10	10	19
General	4	10	4	8
TOTAL	42	100	52	101

MARFIN PROGRAM MANAGEMENT BOARD (PMB)
Monday, September 17, 1990
New Orleans, Louisiana
MINUTES

Chairman Bob Shipp called the meeting to order at 1:10 p.m. The following members and others were present:

Members
Bob Shipp, Recreational Industry, Mobile, AL
Lucy Gibbs (alternate for R. Jones), Commercial Industry, Austin, TX
William "Corky" Perret, Gulf States, Baton Rouge, LA
Larry Simpson, GSMFC, Ocean Springs, MS
Jim Cato, Sea Grant, Gainesville, FL
Wayne Swingle, GMFMC, St. Petersburg, FL
Eddie McCulla, GASAFDFI, Houma, LA
Walter Nelson, NMFS, Pascagoula, MS

Staff
Don Ekberg, NMFS, St. Petersburg, FL
Eileen Benton, GSMFC, Ocean Springs, MS

Others
Andy Kemmerer, NMFS, St. Petersburg, FL

Adoption of Agenda

The agenda was adopted as presented.

Adoption of Minutes

The minutes of the meeting held June 19 and 20, 1990 in St. Petersburg, FL were approved as written.

Review and Status of FY90 Award

D. Ekberg reported the FY90 awards are progressing on schedule. Several proposals have already been awarded and he anticipates the remaining proposals will be awarded by the end of September.

C. Perret questioned an issue from the last meeting regarding the legality of cooperation between NOAA and state/university personnel on MARFIN projects. D. Ekberg stated that per his discussion with J. West, current policy does state that it is illegal for cooperation. D. Ekberg and A. Kemmerer clarified that NOAA personnel can not be named on a state/university proposal (i.e., listed as a Principal Investigator) because it is illegal for NOAA personnel to assist in writing proposals for state/university agencies.

It was suggested that proposals involving cooperation between state/university and NOAA personnel, list only the NOAA/NMFS laboratory that will be cooperating.

Southeast Regional Director Modifications

A. Kemmerer reported that he accepted most all the recommendations from the Board regarding FY90 awards. One exception included the Mote Marine proposal, sampling mackerel in Mexico. He stated that he felt very strongly that this project should continue. Funding of the project was accomplished by shifting the marketing program on butterfish into the FY91 fiscal year.

MARFIN Conference

L. Simpson distributed a tentative agenda for the MARFIN Conference and a Calendar of Activities for Sea Fare 1990. The Conference is scheduled for Wednesday, October 31 from 1:00-5:00 p.m. and Thursday, November 1 from 8:00 a.m. - 5:00 p.m. L. Simpson suggested that a Board meeting be scheduled for Friday morning or perhaps a 1-2 hour meeting after the Thursday conference.

The members requested as a first choice a Wednesday morning meeting with Friday morning being an alternate time. L. Simpson stated he will check the schedule and notify Board members of the time frame for the Board meeting. L. Simpson also stated the information regarding hotel accommodations is being finalized and will be forwarded to members as soon as possible.

The Board reviewed the agenda for the Conference. It was noted that J. Cato would not be able to attend the Conference. L. Simpson was named to replace him as Chair of Session I.

Establish Research Priorities for FY91 Awards

The Board members reviewed and commented on FY91 funding priorities distributed by D. Ekberg. Revisions to the FY91 funding priorities made by the Board are attached.

NMFS Projects for FY91

D. Ekberg distributed a list of NMFS Projects for FY91 (attached). He also distributed and reviewed project summaries on NMFS-SERO proposals.

W. Nelson distributed and reviewed project summaries on NMFS-SEFC proposals.

E. Ekberg reported that there are 4 second-year projects at a cost of $916,900 and 5 third-year projects at $294,200 that are to be funded in FY91.

Total Multi-Year Projects	$491,100
Marketing Project on Butterfish	50,000
NMFS FY91 Request	$1,303,160
TOTAL	$1,844,260

Approximate MARFIN FY91 Allocation: $3,000,000 (pending congressional action)

The Board will review these proposals and discuss at the next Board meeting held in conjunction with the Conference.

There being no further business, the meeting adjourned at 4:55 p.m.

II. Funding Priorities

A. Proposals for FY91 should exhibit familiarity with related work which is completed or ongoing. Where appropriate, proposals should be multidisciplinary. Coordinated efforts involving multiple institutions or persons are encouraged. While the areas for priority consideration are listed below, proposals in other areas will be considered on a funds available basis.

1. Shrimp

a. Shrimp Trawler Bycatch (Very high priority)

1. These studies should include collection and analyses of new data using a multi-species approach with emphasis on species under federal or state management.

2. Quantification and further analysis of existing biological data obtained from observers, fishery independent surveys and other sources.

3. Data collection and analyses related to the economic and social consequences of bycatch and various bycatch alternatives in the shrimp fisheries including impact of management options. Capital/labor mobility and effort changes related to costs, management and/or increased fish abundance should be considered. Sociological studies should describe the demographic, social, and cultural characteristics of the fishermen as they may affect vocational and geographic mobility in response to changing fishery regulations. Direct and indirect economic and social consequences should be considered.

4. Development and evaluation of gear and fishing tactics to reduce inshore and offshore bycatch. Biological, economic, and social implications should be considered.

b. Limited Entry

Proposals should concentrate on the development and assessment of models which predict economic changes in total fishing value, distributional effects and costs of fishery management including enforcement and data costs. Sociological studies should describe the demographic, social, and cultural characteristics of the fishermen as they may affect vocational and geographic mobility in response to changing fishery regulations.

2. Oceanic Pelagics

a. Longline Fishery Including Bycatch

1. Quantification and analysis of existing data with special emphasis on existing logbook data.

2. Collection and analyses of new data using a multi-species approach.

3. Development and evaluation of gear and fishing tactics to reduce bycatch. Biological, economic, and social factors should be considered.

b. Sharks (Very high priority)

1. Characterization of the directed commercial, commercial bycatch, bycatch from other fisheries, and recreational fisheries by species and gear type through analysis

of new and existing data.

2. Determination of baseline cost and returns for longline fisheries which target or retain sharks, and estimation of demand curves for shark products and recreational shark fisheries.

3. Development of stock assessment and species profiles for target species.

3. Reef Fish (High priority)

a. Determination of recruitment processes for shallow and deep-water reef fish.

b. Identification of reef fish stock structure.

c. Compilation of existing data on location and areal extent of reef fish habitats.

d. Collection and analysis of life history and catch and effort data for stock assessment with special emphasis on shallow and deep water grouper, amberjack, and grey triggerfish, including longline fishery data.

e. Description of the demographic, social and cultural characteristics of fishermen. Economics proposals should concentrate on the development of models which are capable of determining the economic effects of reef fish management including bag limits, size limits, quotas, seasonal/area closures, gear restrictions and limited entry. Proposals should incorporate biological considerations either endogenously or exogenously. Emphasis should be placed on the development of model structures. These models may be tested using hypothetical

data if sufficient empirical data are unavailable.

f. Studies contributing to the early life history of red snapper, specially related to larval survival.

4. Coastal Herrings & Butterfish

a. Collection of fishery independent data using resource surveys.

b. Description of predator-prey relationships.

c. Development of species profiles of coastal herrings and associated species.

5. Coastal Pelagics

a. Determination of recruitment indices for king and Spanish mackerel, cobia, and dolphin.

b. Collection and analysis of king and spanish mackerel data from the entire Gulf of Mexico.

6. General

a. Determination of hook/release mortality for king and Spanish mackerel, reef fish, amberjack, and dolphin as a function of capture depth, handling, tackle, water temperature and other related factors.

b. Development of educational materials which can be used at sea by recreational and commercial fishermen to identify fish. Special emphasis should be given to sharks and reef fish.

c. Assessment of the changes in recreational and commercial values which have resulted from the implementation of bag limits, size limits, quotas or other management rules for red

drum, mackerels, spotted sea trout, and reef fish.

d. Determination of sources and extent of unreported recreational and commercial catches of major Gulf of Mexico fisheries.

e. Studies that contribute to the economic and biological improvement of the estuarine fish, marine molluscs, and crab fisheries.

B. MARFIN financial assistance for projects started in fiscal year 1986. For fiscal years 1986, 1987, 1988, 1989, and 1990 awards totaled $9.082 million. Funding by fisheries was as follows:

	$ thousand	Percent of total
1. Shrimp (includes TED technology transfer)	1,525.8	16.8
2. Menhaden	70.9	0.8
3. Coastal pelagics	1,228.2	13.5
4. Reef fish	608.9	6.7
5. Coastal herrings	577.6	6.4
6. Ocean pelagics	455.3	5.0
7. Marine mollusks	387.2	4.3
8. Crabs and lobsters	564.4	6.2
9. Bottomfish	89.1	1.0
10. Marine mammals and endangered species	288.2	3.2
11. Estuarine fish	3,200.5	35.2
12. General	85.9	0.9

C. Priority in program emphasis will be placed upon funding projects that have the greatest probability of recovering, maintaining, improving, or developing fisheries, improving our understanding of factors affecting recruitment success, generating increased values from fisheries, and generating increased recreational opportunity and harvest potential. Projects will be evaluated as to the likelihood of achieving these benefits through both short-term and long-term research projects with consideration of the magnitude of the eventual economic benefit that may be realized. Both short-term projects that may yield more immediate benefits and long-term projects yielding greater benefits will receive equal emphasis.

D. Further information on current programs that address the above listed priorities may be obtained from the NMFS Southeast Regional Office (see ADDRESSES).

1991 MARFIN IN-HOUSE PROPOSALS

9/19/90

PROJID	AFFNAME	PROJNAME	PI	STARTDAT ENDDATE	$
91NMFS01	SERO	MARFIN PROGRAM MANAGEMENT	EKBERG, DONALD	10/01/90 09/30/91	$75,000.00
91NMFS02	SERO	EDUCATIONAL TOOLS FOR MARINE RECREATIONAL FISHERMEN IN THE GOM	SCHMIED, RONALD	10/01/90 09/30/91	$29,000.00
91NMFS03	SERO	ECONOMIC ASSESSMENT OF THE GOM COMMERCIAL REEF FISH FISHERY	WATERS, JAMES	10/01/90 09/30/91	$65,160.00
91NMFS04	SERO	ECONOMIC ANALYSIS OF FINFISH BY-CATCH IN THE GOM SHRIMP FISHERY	WARD, JOHN	10/01/90 09/30/91	$22,000.00
91NMFS05	SEFC	EVALUATION OF THE IMPACTS OF BYCATCH EXCLUDER DEVICES (BEDs) ON FINFISH AND SHRIMP CATCH RATES IN THE GOM	KLIMA, EDWARD	10/01/90 09/30/91	$115,000.00
91NMFS06	SEFC	REPRODUCTIVE BIOLOGY OF REEFFISH	NAKAMURA, EUGENE	10/01/90 09/30/91	$25,000.00
91NMFS07	SEFC	DATA COLLECTION FOR SHARKS	CASTRO, JOSE	10/01/90 09/30/91	$55,000.00
91NMFS08	SEFL	SMALL PELAGICS RESOURCE SURVEYS	NELSON, WALTER	10/01/90 09/30/91	$450,000.00
91NMFS09	SEFC	GEAR DEVELOPMENT FOR BYCATCH REDUCTION	NELSON, WALTER	10/01/90 09/30/91	$357,000.00
91NMFS10	SEFL	TED TECHNOLOGY TRANSFER	NELSON, WALTER	10/01/90 09/30/91	$56,000.00

Total: $1,303,160.00

P.O. Box 726
Ocean Springs, MS 39564
(601) 875-5912
(FAX) 875-6604

Gulf States Marine Fisheries Commission

Larry B. Simpson
Executive Director

ROUTE THRU:
DE
DP
ER
SL
LS

M E M O R A N D U M

DATE: November 15, 1990

TO: MARFIN PMB Members & Designees

FROM: Larry B. Simpson

SUBJECT: Minutes

Enclosed for your review and comment are the minutes of the **MARFIN PMB Meeting held November 2, 1990,** in Orlando, Florida.

\cbd

Enclosure

DRAFT

MARFIN PROGRAM MANAGEMENT BOARD (PMB)
MINUTES
November 2, 1990
Orlando, Florida

The Marfin PMB meeting was held in conjunction with the Third Annual MARFIN Conference during the Sea Fare Exposition in Orlando, Florida. Bob Shipp, Chairman, called the meeting to order at 8:35 a.m. The following were in attendance:

Members
Lucy Gibbs, TSA, Austin, TX
Jack Greenfield, G&SAFDF, Tampa, FL
William S. "Corky" Perret, LDWF, Baton Rouge, LA
Walter Nelson, NMFS, Pascagoula, MS
Bob Shipp, Recreational Industry, Mobile, AL
Larry B. Simpson, GSMFC, Ocean Springs, MS
Wayne Swingle, GMFMC, St. Petersburg, FL
Jack Van Lopik, LSU Sea Grant, New Orleans, LA (J. Cato designee)
Jean B. West, NOAA Grants Mgt. Division, Silver Spring, MO (ex-officio)

Staff
Don Ekberg, NMFS, St. Petersburg, FL
Virginia K. "Ginny" Herring, GSMFC, Ocean Springs, MS
Cynthia B. Dickens, GSMFC, Ocean Springs, MS

Others
Ron Becker, LSU Sea Grant, New Orleans, LA
Brad Brown, NMFS, Miami, FL
Gary Graham, TX A&M Marine Advisory, College Station, TX
Jan J. Harper, B&H Seafood, Freeport, TX
Eddie McCulla, G&SAFDF, Houma, LA
Richard Raulerson, NMFS, St. Petersburg, FL
Wil Seidel, NMFS, Pascagoula, MS
Ron Schmied, NMFS, St. Petersburg, FL

Adoption of Agenda

The agenda was adopted as presented.

Adoption of Minutes

The minutes of the meeting held Monday, September 17, 1990, in New Orleans, Louisiana, were adopted as presented.

Status of FY90 Financial Assistance Awards/Status of FY91 "Federal Register" Notice

Don Ekberg reported the FY90 financial assistance awards have all be made with the one exception of the Foundation's grants which have been held up by inquiries by the Inspector General.

Jean West elaborated that all the fisheries awards were made this year by September 30 with the exception of three that were being held at FARB because of the Inspector General's office. These are MARFIN-funded grants to the Foundation which total $357,182. One of the three awards is being held from FY89. She noted the funds will not be lost; they've been requested for carry over. When the problems have been resolved, they will be awarded as FY91 grant awards. She further stated that funds can be carried over from year to year as long as the carry over request is made. The latest word she has is that the IG is working with the Foundation for the requested information. As soon as the IG request is satisfied, the funds will be cleared and grants awarded.

L. Simpson inquired whether or not any previous grants had been terminated and/or funds deobligated due to other than routine close-outs for completed work. Neither D. Ekberg nor J. West knew of any grants which fell into that category. J. West stated that all grants are continuing as they were awarded.

D. Ekberg stated the Federal Register notice has been completed and sent to Washington two weeks ago. The only changes from last year were the priorities and a section about subgrantees was added which states that there has to be substantial involvement by the grantee as well as the subgrantee. He stated they hope to get it through the system faster than last year, but there is no guarantee. An optimistic estimation to get it back would be January or February. J. West volunteered to be the point of contact in the Washington area and hand carry the notice through each of the offices (FARB, Legal, etc.).

Review of NMFS Proposals for FY91 Funds

Presentations were made by either the principle investigator or Walter Nelson on all NMFS Projects for FY91 (Attachment 1). W. Nelson reported funding for Economic Analysis of the Finfish By-catch in the Gulf of Mexico Shrimp Fishery should be $24,000 rather than $22,000.

The Board discussed C. Perret's hesitation in funding travel on one project. The Board agreed, however, that with special projects like this, travel funds should be provided.

L. Gibbs addressed the industry's problem with bycatch excluder devices (BEDs), and W. Nelson noted that NMFS will work as practically as possible with the industry.

W. Swingle stated that project concerns were not adequately dealing with the finfish bycatch problem. He felt that monies should be freed to further address this issue and does think that the NMFS Regional Director is under a Congressional mandate to address the problem.

The Board was concerned about the high costs and long-term nature of some of the NMFS projects. Some members also felt that MARFIN funds were not appropriate for NMFS activities which are a basic part of their mission (i.e., certification of TEDs, FEDs, etc.)

Given these reservations, however, all NMFS projects (Attachment 1) were recommended for funding in FY91.

Other Business

• The Board agreed that a letter under B. Shipp's signature should be written to Jerry Clark and copied to Richard Condrey. The letter should express the Board's disappointment that the scheduled presentation was not made during the MARFIN Conference.

• Jean West mentioned that the FACA issues has arisen again. It was noted that with the exception of notice of their meetings in the Federal Register, MARFIN is in compliance.

• The next meeting will be held around April or May in Tampa, Florida.

• It was the consensus of the Board for Jack Greenfield to give an update on the Gulf and South Atlantic Fisheries Development Foundation. Greenfield reported that the Foundation was intensively audited over the last two years. The office of the Inspector General (IG) came in and audited two 1986 cooperative agreements. Basically, they found no fraud abuse or wrongdoing but disagreed on the acceptance of certifications matching costs. The practice of the Foundation for 10-12 years was to accept certification of Board members in

activities as documentation of match. The IG felt that the only legitimate documentation would be represented by more basic receipts and other tangible actions. Their finding was that the Foundation should repay to NOAA approximately $900,000. That figure was ultimately reduced to $12,000 after appeal. The debt was paid, and the Foundation thought the issue was resolved.

A second administrative audit followed within two to three months of the initial audit. The audit generally examined administrative practices. A 1988 cooperative agreement was audited, and similar problems were found. The Foundation assumed that the match issue had been resolved, and NOAA appeared to have accepted that position until very recently. On October 1, a call was received from the IG stating that three Marfin projects (bycatch, depuration, and TED technology transfer) were being held because NOAA had not sufficiently addressed cost disallowances from the second audit. No official communication had ever been received on this problem. NOAA's guidance to the Foundation was to begin working directly with the IG. An accounting of any missing match was provided to the IG.

The Foundation has acknowledged the documentation problems and has substantially changed administrative practices. The Foundation now requires the documentation that the IG requires.

The IG has concerns with foundations in general. One concern is that the six foundations appear to have functioned as pass-through organizations without substantially contributing to the conduct of projects and yet incurs administrative costs. NOAA has, therefore, adopted a new policy that will apply to all future MARFIN and S-K proposals. This policy states that the applicants must have substantial involvement in the conduct of the work for which they are making proposals.

Generally, the Foundation is going to have to narrow its focus, employ a little more staff, and carry out in part the projects it undertakes. That does not mean that the Foundation won't be contracting for substantial portions of its work, but the Foundation staff and directors have to be substantially involved in working on the conduct of the project itself. During a recent visit to the Foundation, Dr. Fox stated that in order to begin to accommodate some of the general concerns of the IG about the role of foundations and in order to

strengthen NOAA's case that foundations were indeed necessary for industry cooperation, he had decided that it was wise to make these same new policies to some extent retroactive. In doing so, he's challenged the substantial involvement of the Foundation in three S-K projects. Those projects are the Rangia clam project with LSU, the stone crab limited entry project with North Carolina State, and the skimmer trawl project with North Carolina Sea Grant. The Foundation is in the process of developing a more complete explanation of involvement in those projects, but it is likely that one or two of those projects will end up being funded directly.

The IG's role has been substantially strengthened by an act which passed in 1988 that gives them very broad powers of subpoena and very broad powers to step into the process at any point and hold up grant projects because of their continuing investigation.

Greenfield added that the IG is somewhat concerned about his relationship with the government and the Foundation. A conflict of interest opinion from the department's general counsel was sought last spring. He stated that with cooperation from regional office that he was carefully sequestered from grant related activities during the interim. He clarified that he is on two months terminal annual leave from the NMFS which began October 1 and terminates with his retirement December 1. He became an employee of the Foundation on October 1, and he sees no conflict of interest.

Greenfield stated that a meeting to be held very shortly with the IG's office will resolve these issues. He understands that the IG would like to move forward.

Greenfield further noted that a very constructive meeting was held two weeks ago with Grey Castle. It was determined that as far as NOAA is concerned, the Foundation has a clean bill of health, but because of the IG concerns, the Foundation will be watched and scrutinized. As far as NOAA is concerned, the role of foundations in cooperative programs of value to NOAA is well understood and accepted.

There being no further business, the meeting adjourned at 11:30 a.m.

1991 MARFIN IN-HOUSE PROPOSALS

9/19/90

PROJ#	AFFNAME	PROJNAME	PI	STARTDAT	ENDDATE	$
91MMFS01	SEFD	MARFIN PROGRAM MANAGEMENT	EKBERG, DONALD	10/01/90	09/30/91	$75,000.00
91MMFS02	SEFD	EDUCATIONAL TOOLS FOR MARINE RECREATIONAL FISHERMEN IN THE GOM	SCHMIED, RONALD	10/01/90	09/30/91	$29,000.00
91MMFS03	SEFD	ECONOMIC ASSESSMENT OF THE GOM COMMERCIAL REEF FISH FISHERY	WATERS, JAMES	10/01/90	09/30/91	$65,160.00
91MMFS04	SEFD	ECONOMIC ANALYSIS OF FINFISH BY-CATCH IN THE GOM SHRIMP FISHERY	WARD, JOHN	10/01/90	09/30/91	$22,000.00
91MMFS05	SEFC	EVALUATION OF THE IMPACTS OF BYCATCH EXCLUDER DEVICES (BEDs) ON FINFISH AND SHRIMP CATCH RATES IN THE GOM	KLIMA, EDWARD	10/01/90	09/30/91	$115,000.00
91MMFS06	SEFC	REPRODUCTIVE BIOLOGY OF REEFFISH	NAKAMURA, EUGENE	10/01/90	09/30/91	$75,000.00
91MMFS07	SEFC	DATA COLLECTION FOR SHARKS	CASTRO, JOSE	10/01/90	09/30/91	$55,000.00
91MMFS08	SEFC	SMALL PELAGICS RESOURCE SURVEYS	NELSON, WALTER	10/01/90	09/30/91	$460,000.00
91MMFS09	SEFC	GEAR DEVELOPMENT FOR BYCATCH REDUCTION	NELSON, WALTER	10/01/90	09/30/91	$357,000.00
91MMFS10	SEFC	TED TECHNOLOGY TRANSFER	NELSON, WALTER	10/01/90	09/30/91	$50,000.00

Total: $1,303,160.00

(24,000

Attachment 1