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ALABAMA COOPERATIVE EXTENSION SERVICE/AUBURN UNIVERSITY/AUBURN, ALABAMA

ALABAMA'S COMMERCIAL SHRIMP INDUSTRY: A SITUATION REPORT

October 1980

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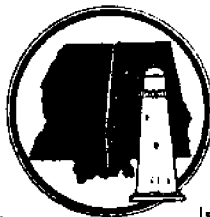
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Our nation's commercial fishing industry has been the subject of considerable attention and discussion in recent months. This is an industry that can truly be characterized as fragmented in terms of location, widely divergent types of species sought and equipment used, and large numbers of relatively small-scale, independent firms. Thus it is quite unusual that the entire industry is receiving nation-wide attention.

Earlier this spring, fishermen in the New Bedford region went on strike for higher prices for their catch. The fishing industry's financial problems are not limited to New England, but extend along the Atlantic Coast and throughout the Gulf of Mexico. Large numbers of shrimp vessels remained at dockside from Florida to Texas for several months in early 1980 because they found it impossible to operate at a profit. These problems also extend to the West Coast where several major fish processing firms are reported to be in serious financial trouble.

Another indication of the extent of the problem was the introduction of a comprehensive fisheries bill, the "American Fisheries Promotion Act," in the U. S. Congress. This measure was introduced by Congressman John B. Breaux of Louisiana and passed in the House. A similar bill, S-1656, has also been passed by the Senate, but because of differences in the two versions, the measures are presently in Conference.



Sea Grant Advisory Service

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During May hearings on this legislation, Congressman Breaux expressed concern for the "very survival" of the industry and proposed "immediate, substantial, and realistic financial assistance." In early September representatives of various segments of the commercial fishing industry met with federal officials to discuss the problems facing the industry. At this meeting, Secretary of Commerce Phillip Klutznick made the following assessment:

The fishing industry is vital to America. We are aware of the seriousness of the plight of the shrimp sector, and will move promptly to find solutions consistent with the President's revitalization program to protect the economic health of affected communities in the industry.

As presently structured, Alabama's seafood industry is based primarily on shrimp which account for 65 percent of the volume and 94 percent of the value of the State's landings. Alabama ranked 13th in the nation based on the value of commercial seafood landings in 1979. The combined dockside value of seafood products landed in Bayou La Batre and Bon Secour-Gulf Shores, our two major fishing ports, was \$49.9 million during that year. It has been estimated that the economic impact of the Alabama seafood industry on the State and the nation exceeds \$190 million annually. The seafood industry's employment of unskilled and semi-skilled labor is of great importance to the economy of Alabama's coastal counties. More than 500 shrimp boats are Alabama-based. These vessels and others involved in commercial fishing provide jobs for nearly 2,000 commercial fishermen. Landings of seafood products support 57 processing plants that provide employment for 1400 year-round and 2,000 seasonal workers.

In recent years numerous shipbuilding and support industries have developed in south Alabama because of the shrimp fleet. Shipbuilding has become particularly important both as an employer and as a revenue producer. During 1977, local yards produced 43 shrimp vessels for the Gulf fleet in addition to numerous others including oil rig crew boats, vessels for use in both the East and West Coast fisheries, and substantial quantities of fishing boats for export. It has been reported that shipyards in coastal Alabama produce more seafood trawlers and work boats than any other area in the United States. This industry, which was initially developed because of the local shrimp fleet, provides direct employment to more than 1300 skilled workers.

The seafood and related support industries are presently very important to the economy of the entire State, but have the potential to make an even larger contribution not only to the region, but to the entire nation. This potential was identified in a recent study entitled "Prospectus for Development of the United States Fisheries" which was prepared for the National Marine Fisheries Service.

Despite past performance and future potential, the Alabama commercial seafood industry is currently facing an economic crisis of grave severity. The crisis is the result of a combination of factors which include higher prices for diesel fuel, lower ex-vessel (dockside) prices for shrimp, and lower amounts of shrimp harvested.

Although businesses and households throughout the nation have been faced with rapid escalation in energy costs and generally declining economic conditions,

the Gulf shrimp industry has been more severely impacted than many other sectors of the economy. The shrimp fleet is heavily fuel-dependent; it has been estimated that the cost of fuel makes up nearly 65 percent of vessel operating costs. Fuel prices in the Gulf during February 1979 ranged from \$0.43 to \$0.52 per gallon; in February 1980 the price ranged from \$0.79 to \$1.00 per gallon or double the price of a year earlier.

The commercial seafood industry must adjust to changing economic conditions. Concerted efforts must be made within the industry itself to bring about changes in both structure and operation. Adjustments are currently being made and as conditions become more clearly defined and understood, change and modification are sure to continue.

However, the most severe problem facing the Alabama shrimp industry is the abnormally low amount of shrimp available for harvest. The low catch rates can be attributed to a unique set of environmental conditions which destroyed large numbers of postlarval brown shrimp.

The shallow waters of Alabama's estuaries play an important role as nursery areas that are required for the growth and development of each year's shrimp crop. Heavy rainfall in March and April 1980 not only caused physical damage due to the flooding of the Mobile River system, but also resulted in excessive quantities of fresh water entering the estuarine system. During this same time, abnormally low water temperatures also occurred. As explained in the "STATUS REPORT," prepared by the Marine Resources Division (Attached), the combination of low water temperature and low salinity is extremely detrimental to the survival of postlarval shrimp.

The high mortalities caused by the concurrence of low salinity and low water temperature appear to be correlated with decreased Alabama shrimp landings. Commercial shrimp landings made at Alabama ports from January through August 1980 are the lowest reported in the last five years. Because similar general weather conditions prevailed throughout most of the Gulf region, shrimp landings in Gulf states have been considerably below normal. The percentage decline in each state was somewhat comparable in the earlier part of the year, but as shown in the table below, based on data through August, Alabama landings have declined by the greatest percentage.

GULF SHRIMP LANDINGS
(thousands of pounds, heads-off weight)

<u>State</u>	<u>Jan.-Aug, 1979</u>	<u>Jan.-Aug. 1980</u>	<u>% of Change</u>
Alabama	8,264	5,419	-35
Florida (West Coast)	12,204	10,049	-18
Louisiana	32,163	26,813	-17
Mississippi	4,282	3,011	-30
Texas	25,700	23,746	-8

Source: Compiled from Shrimp Statistics, U. S. Department of Commerce, NOAA, NMFS, New Orleans, LA.

The Small Business Administration has declared parts of the Texas portion of the Gulf of Mexico (1979), Louisiana portions of the Gulf (1980) and the Mississippi portion (1980) as economic disaster areas due to severe storms and flooding. The decision has been made to make the shrimping and allied industries in these states eligible for Economic Injury Disaster Loans based on reduced levels of shrimp landings.

Alabama's shrimp industry is presently facing a grave financial crisis. The Marine Resources Division estimates a monetary loss of \$11.4 million to shrimpers. This amount represents nearly 25 percent of the value of the 1979 shrimp catch. In addition to the loss to the shrimp fleet, the effects have also been felt by seafood processors, support industries, local shipbuilding firms and other allied industries that make a significant contribution to the economy of the State. The economic impact of these losses on the State and the nation is estimated to be in excess of \$45 million.

STATUS REPORT

1980 Alabama Shrimp Harvest Through July

Marine Resources Division

Alabama Department of Conservation and Natural Resources

September 1980

ABSTRACT

Commercial shrimp landings at Alabama ports from January through July 1980 were the lowest in the past 5 years. Flooding of the Mobile River system during March and April destroyed the postlarval brown shrimp which had earlier entered the estuaries of Alabama. High river discharge and abnormally low water temperature throughout the shrimp nursery areas during April prevented normal recruitment and development of the 1980 shrimp crop. Monetary loss to the fishermen through July is estimated at \$11.4 million less than during the same period of 1979. Loss to the state and local economy is estimated at \$45.6 million.

DISCUSSION

Brown shrimp comprise 80 percent or more of Alabama's shrimp landings, while white and pink shrimp are of lesser importance. Brown shrimp spawn and pass through several larval developmental stages in offshore waters of the Gulf of Mexico before entering the inshore bays, rivers and sounds in late February and early March as postlarvae. Shrimp develop in these shallow nursery areas and later migrate into deeper waters nearer the Gulf as they grow and finally move offshore as they develop into adults. Environmental conditions in these inshore nursery areas during the spring determine the survival and development of the shrimp crop that will be harvested in the summer or early fall. Low water temperature and low salt content (salinity)

of the water are the two main factors which reduce both survival and growth rate of developing shrimp.

It is well documented that low salinities and low temperatures are antagonistic, i.e., low salinity occurring during the same time as low temperature greatly increases the mortality of postlarval shrimp over either factor singularly. Temperatures and salinities were both below normal during most of April 1980 compared to the two previous years (Figure 1). This resulted in a higher than normal mortality of postlarval brown shrimp resulting in a very low abundance of juvenile brown shrimp later in the spring (Figure 2). Not only were there few shrimp available but growth rate was slower resulting in a two-week delay in opening the Alabama shrimp season.

Commercial landings from January through July were 2.6 million pounds less during 1980 than during 1979 which was an average year.

Alabama Commercial Shrimp Landings January-July Various Years

<u>Year</u>	<u>lbs. (1000)</u>
1980	4,066
1979	6,636
1978	7,456
1977	8,327
1976	5,832

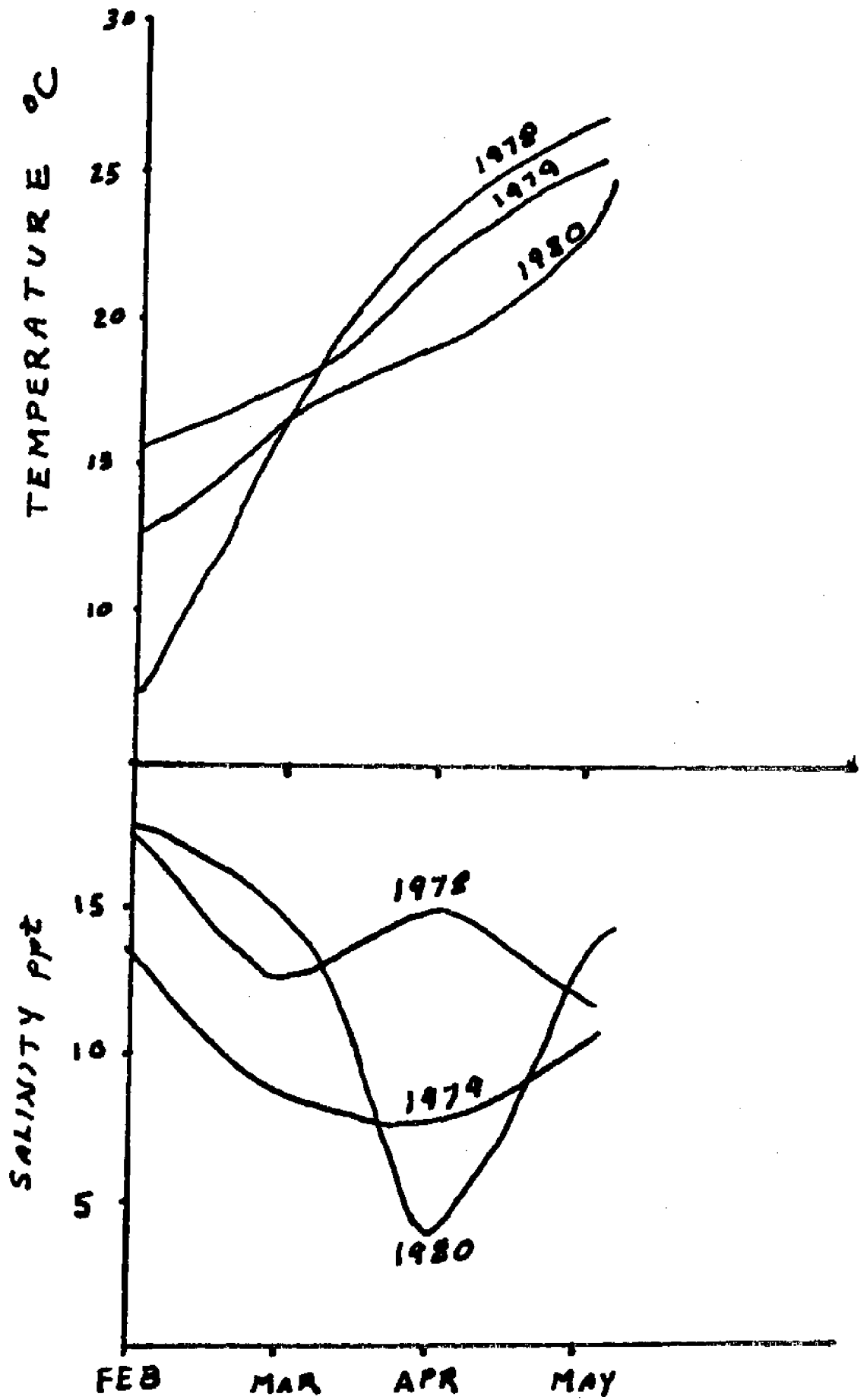


FIG. 1

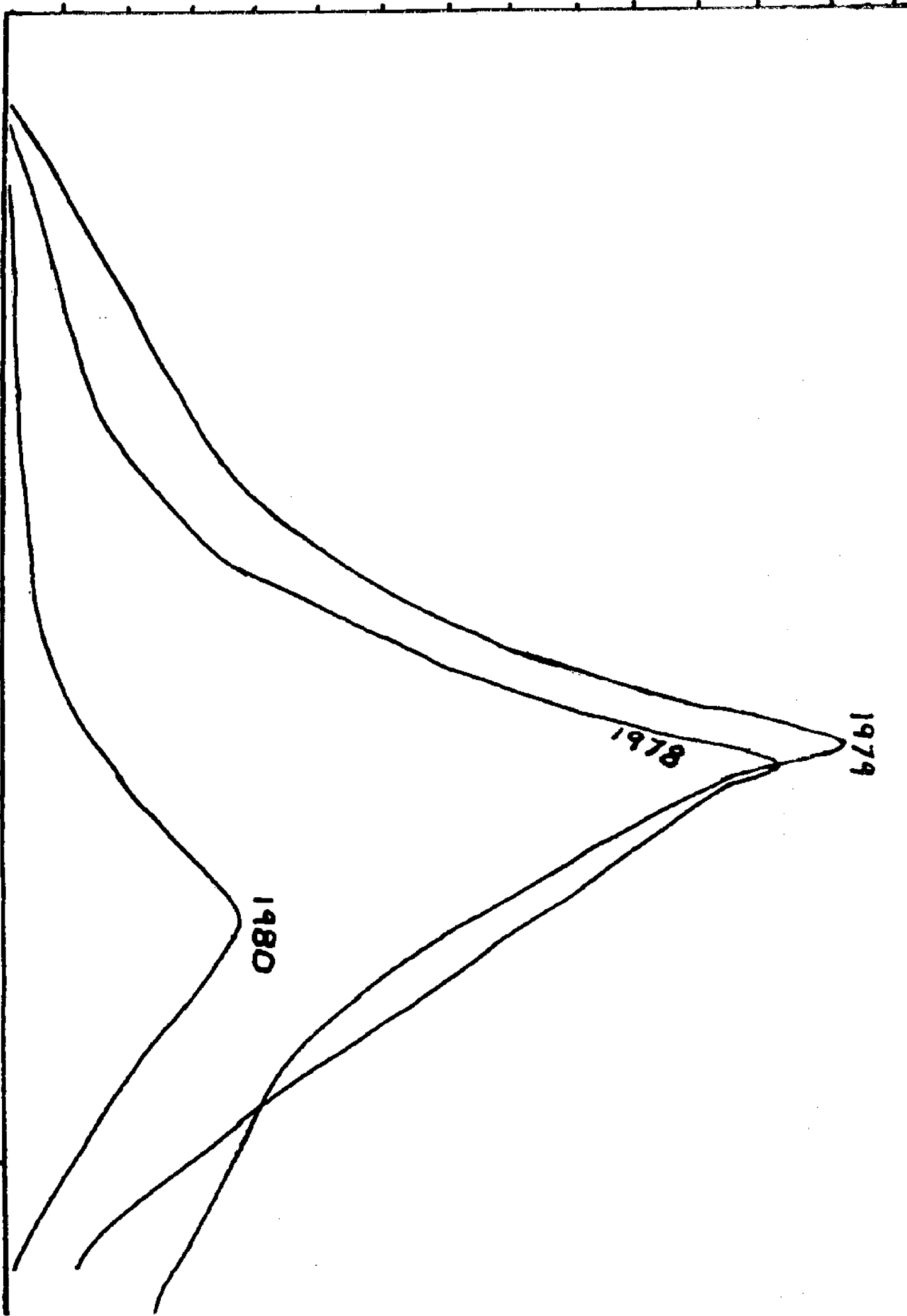
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APRIL

MAY

JUNE

JULY



Conclusion

1. Abnormally low temperatures and salinities occurring during April 1980 resulted in heavy loss of postlarval brown shrimp in the shrimp nursery areas resulting in low abundance of shrimp.
2. Compared to 1979, losses during 1980 to Alabama shrimp fishermen are estimated at \$11,388,000.