



DEPARTMENT OF THE INTERIOR

INFORMATION SERVICE

UNITED STATES FISH AND WILDLIFE SERVICE

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FISH AND WILDLIFE MANAGEMENT SEES PROBLEMS IN ESTUARINE DEVELOPMENTS

When man invaded one of nature's last strongholds in this country, the estuaries and the coastal marshes, fish and wildlife management was confronted with a problem it was ill-prepared to meet according to officials at the Department of the Interior.

The threat that appears to be looming is to both sport and commercial fisheries, to waterfowl, and to furbearing animals.

Because nature has had undisturbed sway in the marsh and muck of the tidal wastelands there is an alarming lack of information about the ecology of the habitat, such variables as light, salinity and temperature, and a general lack of knowledge about inshore oceanography. There is also much to be learned about the life history of plants and animals which frequent the estuarine world.

Mr. Ross Leffler, Assistant Secretary of the Interior, for Fish and Wildlife, said today, there is general agreement among State and Federal agencies that a research program is needed to meet the problems. A request for appropriate action along that line has recently been made by the National Fisheries Institute and by the Gulf States Marine Fisheries Commission. Formation of a committee to coordinate the activities of the States and the United States Fish and Wildlife Service and to develop a plan of action is underway.

Most of the man-made changes, actual or contemplated, in the estuarine environment are in the South Atlantic and Gulf States but they can and do appear elsewhere on the coast. These changes may take the form of canals, such as the proposed New Orleans to Gulf of Mexico ship canal which is scheduled to cut across a marsh area valuable to sport and commercial fisheries and as an important wintering ground for waterfowl; or it may be in the form of proposed changes and extensions to the intercoastal waterway which rims much of the Nation's coast; in other cases it may be real estate developments or numbers of comparatively small dredging and filling projects. The large projects are threats in themselves at times; the smaller ones are threats by their cumulative force.

Both arms of the United States Fish and Wildlife Service--the Bureau of Commercial Fisheries and the Bureau of Sport Fisheries and Wildlife--and many of the State agencies are agreed upon the fact that there are dangers ahead in this

estuarine development. They also agree upon the premise that considerable more biological information about estuaries and the things which live in them must be accumulated if intelligent solution to the problem is achieved.

The actual acreage lost is not the main source of worry. The chief problem concerns what can be called in a generalized way, a change of habitat conditions. For example, a certain species of shellfish may thrive in an area where water has a certain degree of salinity, where there is a certain amount of light available, where the water temperature remains within a certain range, where water currents are within certain limits of speed and carry certain types of food. A change in any of these factors could have an adverse effect upon that species of shellfish which had adapted itself to that set of conditions. Any estuarine development could, therefore, wreak havoc not only on the resource in the immediate area but also on the larger area which is dominated by the estuary. But the limits to which any or all of these variables can be changed without harm to the species, or the response of the species to the changes are among the things which biologists do not know.

Similarly, fin-fish such as striped bass or menhaden or any number of others, or shellfish like shrimp, must have certain shore and estuarine conditions at some time during their life cycles, either for spawning and hatching, or for feeding and "growing up." Any change in habitat could adversely affect that part of the species using that habitat.

Officials of the Fish and Wildlife Service say that there is an emphatic need for information on the reaction of shellfish, fin-fish, migratory waterfowl and marsh-dwelling game and furbearers to changes in salinity, temperatures, sedimentation and pollution; that information is needed also on the effect of changes in depth, currents and shoreline upon the various organisms important to sport and commercial fish, fowl and furbearers; that more must be known on how changes in the size of outlets to the sea affect the fish and shellfish which spend most of their lives in the ocean but come to the estuaries to spawn.

These officials hope to obtain more data on the hydrography of the estuaries, more about bottom fauna, flora, plankton and the various components of the food chain and how man-made changes affect these things. It is also hoped to show the tolerance of the many organisms to changes and their response to the changes; dispersion of estuarine run-off, distribution of nutrients, the nature of the tidal exchange of sea organisms to shore organisms; and to come up with more knowledge of the inshore oceanography in general, more about the life history of those sport and commercial species which are dependent upon estuarine environment and the extent of that dependence; and the effect of these changes upon waterfowl, furbearers and other marsh-dwelling animals.

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