

# MARYLAND TIDEWATER NEWS

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## Oil Effects On Marine Organism

Oil pollution in the Bay caused by the deliberate or accidental discharges of oil and oily refuse or bilge water from ships and industrial plants is a problem of major importance to the fin- and shellfisheries of Chesapeake Bay. Recently, biologists of the Maryland Department of Research and Education reviewed the effects of oil pollution on marine animals. How effective it is in killing animals or rendering their habitat unsuitable is not well-documented in scientific writings. Two very careful fishery research biologists of the U. S. Fish and Wildlife Service, Dr. Walter A. Chipman and Dr. Paul S. Galtsoff, however, summarized most of the American and foreign works that deal with oil pollution and its effect on marine life. They conducted some very unique experiments that are described below.

Oils and oil substances discharged into our waters do not float indefinitely, for they are readily absorbed by silt and other suspended matter in the water. Agitation of the water by currents and wave action helps the settling of the oil saturated material to the bottom, but the oil slick is not securely fixed and may be carried to distant places. That is why oily substances are frequently seen on beaches, sides of boats, and on nets of fishermen, often far removed from the source. Injury caused to ducks and other aquatic birds by oil floating on the surface is well-known. One scientist, Dr. Thurlow Nelson, of Rutgers University, New Jersey, stated, "Oil is, gallon for gallon, as thrown out, the most destructive to aquatic life of all the foreign substances now entering our coastal waters."

The toxicity of oil in sea water has been shown experimentally to be due to water soluble substances extracted from oil, but in most instances only when present in sufficient concentration. Scientists have found that various fishes and marine invertebrates are quickly killed by these toxins when studied in the laboratory under controlled conditions. They assume, therefore, that the same mechanism operates under natural conditions, and that mortalities in the presence of sufficient concentrations of oil pollution must be due to the poisonous elements that go into solution with water.

One aspect of the study by Chipman and Galtsoff was to find a way of eliminating oil slicks where larval oysters and clams occur. These immature stages of mollusks were killed readily because of their habit of swimming close to the surface. From their studies, they concluded that dusting the surface with carbonized sand (a very fine grade sand coated with carbon) was a highly efficient method of removing oil from the surface. The oil becomes bound to the sand and sinks immediately. This does not prevent it from being

harmful, but it does have the major advantage of localizing the pollution, thereby preventing it from spreading to other areas that might be valuable for fishing and shellfish production. So many problems of control present themselves, that, in the final analysis, the solution to oil pollution is one of prevention, rather than control.

## SECURITY YOUR JOB

The U. S. Coast Guard has issued a bulletin, "Port Security Is Part of Your Job," in which the overall problem of port security and its furtherance are treated. In it are set forth examples of espionage and subversive activities and suggestions about reporting them to the Guard or to F. B. I. offices. Copies of the bulletin will be made available in limited numbers to interested watermen and others concerned, and may be obtained through addressing a request to the Captain of the Port, 103 South Gay Street, Baltimore, Maryland.

## NEW ORLEANS MEETING

The forty-fifth annual joint meeting of the Oyster Growers and Dealers Association of North America, Inc., the Oyster Institute of North America, and the National Shellfisheries Association held in New Orleans, should be reported even though some weeks have passed — limited space in **The-News** having caused a delay. Representatives of the industry, conservation officials and fishery biologists from the oyster producing states of the Atlantic and Gulf Coasts attended. Maryland was represented by a number of oyster growers and dealers and by scientists from the Department of Research and Education, the U. S. Fish and Wildlife Service and the Chesapeake Bay Institute.

One of the most interesting features of the program was a field trip to the oyster beds at Grand Isle. Through the courtesy of the Louisiana Oyster Dealers and Growers Association, boats freshly painted and in gala dress met and transported the delegates to the oyster beds and dredged up samples of oysters in the area. Captains and crews of the boats opened oysters for everyone and enthusiastically explained their operations and the problems which they face.

Most visitors were surprised at the rapid growth, fine shape and excellent flavor of the Louisiana oysters. On most of the oyster beds depredations by a large boring snail are so great that all oysters are destroyed during the summer months. However, the planters have a good source of seed east of the Mississippi River where the salinity is too low for the drills to thrive. One-year-old seed, much of it from planted shells, is transplanted to growing beds in October when cool weather checks the activity of the borers. The oysters grow so

rapidly during the fall and winter months that by February, at the age of about 1 1/2 years from setting, they are four inches or more in length and shuck out selects. The whole crop is then harvested before rising spring temperatures permit the activity of the boring snails again to become destructive. Refreshments on the boats and a delightful Louisiana seafood shore lunch were provided at Grand Isle before the visitors left.

Talks by members of the industry and papers given by sanitation officials and oyster biologists provided an interesting program for the remainder of the session. Topics included the problem of higher sustained yields, promoting oysters sales, recent developments on shellfish sanitation control, oyster mortalities, the effects of seismographic exploration on oysters, changes in the James River seed beds and a number more technical in nature. Of especial interest was a half-day symposium on the problem of oyster drill control. Discussion leaders presented the problems of the industry and discussed the biology of the boring snails or drills on the Atlantic and Gulf Coasts.

Entertainment features were provided at night including a Mardi Gras pageant in full costume by the Krewe of Venus and a conducted tour of the French Quarter. A special program for visiting ladies was arranged by the local oyster group. Exhibits of marine motors, ice making machines, depth finders, radar equipment, canning and processing machinery, and other items were shown in booths throughout the meeting. A display showing the excellent work done in promoting oyster sales by Royal Toner, Chairman of the Public Relations Committee, attracted much favorable comment. Of unique interest were samples of processed meats from the large Gulf boring snail which a local dealer is now offering as a new and tasty item of sea food. Consumption of this oyster pest by man may offer an effective means for its control.

## LEVIATHAN WASHED UP

Once or twice a year a whale beaches itself or washes ashore dead along the ocean front of Maryland. Usually, however, such specimens are small and their lengths rarely exceed 40 feet. Last Spring there was a whale on the beach at Ocean City, the length of which was reported to be sixty feet. This is not a record for such gigantic flotsam since an eighty-six foot whale washed up on nearby Assateague Beach some years ago, and perhaps even larger ones have gone unrecorded.

The weight of a sixty-foot whale may be 45 tons or more, a terrific volume of blubber, bone and potential whaleburger meat. The one on the shore in Maryland was far beyond possible use in processing plants because of its state of decomposition. This condition constituted a problem for the Ocean City authorities despite the fact that thousands of people travel even from afar to get a glimpse of a big stranded whale, although they must hold their noses in doing so. The Coast Guard handles such matters and its position is in nowise an easy one. The last big whale that came ashore at Ocean City was dynamited and blown to bits, since its size, position and condition made it impossible to float the mammal and tow it to sea. Particles of the blasted leviathan in varying sizes fell over a wide territory and created a nuisance of proportions and a clamor for a new approach to such a problem should another occasion arise. The new occasion was met by the Coast Guard by which agency the whale was towed to sea and destroyed.

Most of the whales that wash ashore in Maryland bear evidence of injury perhaps having been

struck by boats in the ocean. Typically, they are of two species, the large blue whale (*Sibbaldus musculus*) and the medium sized fin-back whale (*Balaenoptera physalus*). The small sizes that wash ashore are young ones. It is interesting to note that a blue whale has been captured that weighed 139 tons — the weight equivalent of 278 horses of an average of 1,000 pounds.

## ADJUSTMENT DAMAGE CLAIM

Back in 1943 the Federal Government included in a restricted area below the Army Proving Grounds at Aberdeen, Maryland, a comparatively large area of water in which Captain Carrol Jackson, of Tilgham Island, for many years had operated large pound nets with marked success. Captain Jackson died in 1941. However, his estate, through its administrator, William R. Jackson, asked for damages to property rights, and a United States Senate resolution directed that the U. S. Court of Appeals rule on the case. Property rights in this consideration were presumed to rest in the Maryland Fisheries Management Plan and its control of fishing effort, together with the loss of use of nets stored in a building and destroyed by fire of undetermined origin after the appropriation of the property by the Government.

The Court ruled in favor of the agent of the Carrol Jackson estate, holding that the fishing rights in question were property rights in a sense and fixed the sum of \$10,000 as the approximate value of the fishing rights in 1943, and \$1,500 as a fair sum to cover the loss in value of the stored gears. The recommendation of the Court of Claims went to the Senate in bill form and has been passed. Currently it is in the House of Representatives for consideration where, under all of the circumstances that obtain, its passage is likely, and the sum of \$11,500 will be appropriated to complete the record in this interesting case.

## OFFICERS SCHOOL

About sixty men from the Tidewater Enforcement Division pursued a course of training at the Solomons Base during the week August 16-22. Lecturers and technicians from wide sources talked on a variety of subjects designed to step up the thinking, morale and effectiveness of the officers. The subjects ranged from the school of an officer, gathering evidence and presenting it, and court procedures, to biology of marine fishes and on to paper work and the practical matters of handling motors and boats. The "Maud S.," old in structure and experience but new in appearance and action, under Captain Bruce Kinnamon, won the highest honor in the Inspectors' Class of patrol boats. The "Anne Arundel," under command of Captain Howard Shenton, copped top prize in the Supervisors' Class, in a "spit and polish" finish that was won by the thickness of a coat of paint, or something of the kind. The Commissioners of Tidewater Fisheries were enthusiastic about the condition of the Fleet and the appearance and morale of the men in charge of it.

## TREE REEFS

Captain See: "Yes sir, Cap'n Seen, she's a beaut, rigin's lovely but darn near down to bare pole."

Captain Seen: "Yea, but I'll bet that gal's hull is worth a lot mor'n its rigin anyway."

## With the Editor

A unique study is in progress in the middle Atlantic sector of the Atlantic Coast where the fisheries have suffered severely from declines, especially among the croakers and sea trout, or squeteague. By legislative action in North Carolina, Virginia and Maryland, where the two fisheries, among others, are shared in common, a joint Commission has been created to observe conditions and to report them to the respective state assemblies, together with a suggested approach to fact finding and recommendations for constructive action. There was in this action no Federal prompting or advice from existing interstate organizations. Rather, the different legislatures viewed the problem and took action, recognizing that Washington is remote in such matters, that interstate action is circuitous and that essentially the responsibility is largely a local one.

Meetings have been held in Virginia and North Carolina in which specialists from the states concerned have provided considerable information to the Tri-State Commission and offered a general appraisal of the fishery situations involved. At the North Carolina meeting federal and interstate representatives were consulted, those agencies having expressed willingness and desire to cooperate to the extent possible. The third meeting of the Tri-State Commission will be held in Annapolis during the month ahead, at which time it is expected that an overall program will be presented for approval by the group along with recommendations for its implementation. It is particularly wholesome in this case that a decided problem in the fisheries is recognized by legislative officials, that their respective states assumed a responsibility that is theirs, and that it is felt that constructive action is possible directly through state channels.

## SPECTACULAR DECLINES

The Chesapeake area is not alone in suffering declines in certain of its fisheries, notably the croaker and the trout. Marked failure of two of California's outstanding fisheries, those based on the sardine and the mackerel, has created considerable alarm among fishermen, processors and management offices. The mackerel yields there dropped steadily from 146,000,000 pounds in 1936 to 20,000,000 pounds last year, while the sardine, a very big and important fishery, has suffered an even more spectacular decline — from 1,500,000,000 pounds in 1944 to 7,230,000 pounds in 1952. The situation in the sardine fishery appeared so bad that, it is reported, the California Game and Fish Commission was advised by its Chief, Bureau of Marine Fisheries, Richard Croker, to deny granting of permits to operate in the fishery altogether.

Tremendous sums are being spent from private, federal and California sources on a comprehensive study of the declines in these fisheries in an effort to isolate the factor or factors, natural or man-

made, responsible for same. On the basis of such findings it is hoped that recommendations can be made looking to the restoration of sardine and mackerel abundance. Since these fisheries are carried on upon the high sea, such factors as changes in temperature, salt content, disease and other biological conditions relating, say, to enemies, parasites or reproduction can not be controlled under present limitations of knowledge. If over-fishing were established as a major cause it can be controlled by some such system as setting up quotas, limitations imposed on licensed tonnage of fishing vessels, shortening the fishing season, etc. The management plan employed in Maryland originated in a period of decline in the fisheries, a plan based on the reduction of the fishing effort in order to permit (a) the escapement of fish in sufficient quantity to meet the requirement for brood stock, and, (b) to make possible added growth, thus increased poundage for the fisherman and the consumer.

## DRAFT POLICY, FISHERIES

General Lewis B. Hershey, Director of Selective Service issued a policy bulletin some weeks ago on manpower for the Commercial Fishing Industry. This action will place those in the fishing industry on the same basis as agricultural manpower. General Hershey, in issuing Operations Bulletin No. 91, stated: "Policy on Agricultural Manpower, shall be applied in the classification of registrants engaged in the commercial fishing industry." Local boards may contact the Defense Fisheries Administration, through its field offices which, when requested, will furnish information as to the essentiality of registrants engaged in the commercial fishing industry.

## HOME LOVING FISH

White perch, the silver-hued, flavorsome, pan-sized native of Chesapeake tributaries, lives a very circumscribed existence, according to a preliminary analysis of tag returns. Last spring 3,000 white perch were tagged in the Patuxent River system; 10 percent since have been recaptured by fishermen for a reward of 50¢ per numbered tag. Fishermen are urged to look out for fish with plastic disks about the size of a dime attached to their backs just under the top fin. With the exception of a few fish that travelled some 60 miles from the mouth of the river during spawning season to a point above tidewater, white perch seem to be a home-loving fish, rarely moving great distances during the summer and autumn. Not one has been recaptured in Chesapeake Bay proper, according to the biologists at the Chesapeake Biological Laboratory, although one was taken at the very mouth of the river at Little Cove Point. Tagging returns indicate that white perch seem to be restricted generally to specific tributaries.

The study is designed to determine, (a) distances and speed which white perch travel from one locality to another; (b) their movements during the summer months; and (c) the fishing pressure upon the different year classes. The age of these fish can be ascertained by examining the scale for growth rings or annuli that are formed in winter every year if a sufficient number of scales from tagged fish is returned. Thus fishermen are urged to send in their tags immediately upon catching a marked white perch. If anyone knows of persons

who have markers, he should urge them to return the tags for rewards with the following information: (a) exact locality where fish was captured; (b) date and time of capture, and (c) type of gear used to land the fish. Send all tags to CHESAPEAKE BIOLOGICAL LABORATORY, Solomons, Maryland.

## TOO TRUE!

"Of all examples of flagrant violations of the rules of conservation, health and decency, none is worse, none is more explicit, than what we find on the beautiful Potomac River. It is a polluted river. It is a national disgrace." The distinguished Senator, Humphrey of Minnesota, laid the cause directly at the door of the Government, charging, further, that the Capital City "sets the example of being the worst offender." The fisheries in the upper river suffer materially from this, what may be called Washington Shame, in that, among other things, the hatchery at Belvoir must close mid-season due to the ugly condition of the water.

## DERBY AND FAIR

Fish and crabs have been in the forefront throughout Tidewater Maryland recently. Anglers have had marked success pretty much anywhere, while Bay waters have literally teemed with crabs, setting an almost perfect stage for the two unique and well established events that cap the local season. The Crab Derby and the Chesapeake Bay Fishing Fair, 1953 versions, have come and gone. "Blue Coal," a sleek three inch male, copped first place by all ten appendages in a field of seventy entries at Crisfield. A deftly handled rock, just under fifteen pounds, took major honors at the Fair held at Rose Haven.

## TRI-STATE PROGRESSES

Wrightsville Beach, N. C. was the site of the second meeting of the Joint Committees on Migratory Fishes on Monday, August 24. Legislators from Virginia, North Carolina and Maryland reviewed a tentative research program designed by fishery technicians of the three states, and agreed unanimously that the financial and personnel requirements for each state should be made available as promptly as possible to the states' research agencies.

Croakers and sea trout are slated for earliest study in the program which calls for a research boat for Virginia, to replace the obsolete and unsatisfactory one now in service, and one for Maryland, which now has no craft with which to conduct an intensive fishery study. Maryland was represented at the meeting by Senator Frederick C. Malkus of Cambridge, Delegate Albert I. Baker of Queenstown, and Delegate Lloyd L. Simpkins of Princess Anne.

## NEW PATUXENT DAM

Residents of the Washington Metropolitan Area, that is Marylanders who live in the territory near the District of Columbia Line, are to benefit from a dam and reservoir now being constructed in the upper Patuxent River, a short distance above U. S. Route 1, near Laurel. The structure, to be known as Rocky Gorge Dam, will impound fully 6,000,000,000 gallons of water and is to cost \$5,750,000 ac-

ording to an official announcement. Administered by the Washington Suburban Sanitary Commission, the impoundment is intended to serve approximately 500,000 people in a rapidly growing broad community.

Above Rocky Gorge some six or seven miles there already exists a large impoundment of water for suburban citizens, made possible by Brighton Dam. The fish populations of the River were studied by biologists of the State and their findings indicated that no untoward developments are expected from the damming of the Patuxent at these points since the commercial and sports migratory fishes, such as the shad, herrings and rock, do not ascend that far above tidewater, while the benefits to sportsfishing that promise to accrue from the impoundments will more than offset the limited losses caused by the dams in obstructing the passage of the local forms up and down stream.

## FISHERIES LAWYER

The appointment of Mr. Noah A. Hillman as Assistant Attorney General for fisheries has been announced by Governor McKeldin. Mr. Hillman is a marked student of law and, over the years, has been interested in Maryland's seafood problems. His appointment makes available to the Department of Tidewater Fisheries for the first time in history a special representative in the Legal Office to assure interpretations of the laws, if and when need arises, and to contribute to a better understanding of legal situations in civil proceedings.

## BOARD ACTIVE

The Board of Natural Resources met at Solomons Island on September 14-15, with eleven of its twelve members present, including two recent appointees, Messrs. Charles S. Dell, Sr., Annapolis and George Todd of Crisfield. On a busy agenda three major items were listed, to wit: (1) The regular meeting of the Board, (2) A review of the budget requests of the respective Departments of the Board and (3) The programs of related conservation agencies, the Pollution Control Commission and the State Soil Conservation Committee. Members of the Board and the representatives of the related organizations who traveled from Annapolis to Solomons were the guests of the Chesapeake Biological Laboratory overnight.

Of greatest importance at the meeting of the Board was the matter of budget requests now prepared and ready to be submitted to the Budget Bureau and the Governor. The item by item consideration given to the several budgets served not only more thoroughly to acquaint the members with the broad work and the administrations of the several components of the Board but to give the members the opportunity to check programs, administrative developments and the like along with the financial considerations required by law.

## FACTUAL

Most of the earth's space (four fifths) is covered with water. 10,000,000 gallons of rain, snow and hail per person falls in the United States annually, yet the supply of water needed at home and abroad is in short supply. How to make up the deficiency is foremost in the interest of a large group of scientists at this time. The biggest element involved is that of converting salt water into potable water for human use, not only in the home but on the farm, in the factory, irrigation, and many other uses.