

THE MENACE OF OIL POLLUTION.<sup>1</sup>

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THE constantly increasing use by vessels of fuel oil with the resulting discharge by them of oil and oily mixtures brings such ships (including oil cargo carriers) prominently into the foreground as the most important direct cause of oil pollution near the coasts of maritime nations. A better understanding of the possibilities for harm may be had when it is realized that, while in 1914, 501 vessels using oil for propulsion totaled only 1,721,747 gross tons, by 1925 the total number had increased to 3,822 vessels of 19,372,615 tons. These figures include only vessels of five hundred gross tons or over.

Oil tankers returning with salt-water ballast in their tanks and bunkers have been accustomed, upon approaching the three-mile limit, to pump out this ballast, which by that time had become well mixed with the remaining oil in the tanks. Other oil-burning vessels follow similar practices, either in emptying fuel bunkers ballasted with sea-water, or in pumping overboard bilge water and other wastes containing oil or oily mixtures. In a report of the Shipping Board, dated December 18, 1925, it is concluded that "each year possibly as much as 5,500 tons of heavy oil are discharged in non-territorial waters near New York Bay, from ballast water alone, and that a study of winds, tides, and currents indicates that possibly 17% of this may be carried ashore."

It has been found that when birds alight on an oil-covered water surface, their feathers soon become so saturated with the oil that they are unable again to take flight. The fine down that insulates their bodies against cold and water becomes matted and water-soaked, the skin is exposed to the elements and the birds die from cold and hunger, or are mercifully drowned. Live birds in this oil and water-soaked condition have been rescued, washed clean

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<sup>1</sup> This paper has been abridged and summarized from a chapter on Oil Pollution in the book "American Waterfowl, Their Present Situation and the Outlook for Their Future," by John C. Phillips and Frederick C. Lincoln, published (1930) by Houghton Mifflin Co., Boston, Mass. It is published for the purpose of bringing to the attention of ornithologists this menace to our aquatic birds.

with soap or some other solvent or emulsifying agent, dried out, and liberated without suffering any apparent ill effects, but unless human aid is rendered birds that alight in an oil-covered area are almost certainly doomed to death.

Reports of the destruction of Waterfowl through this agency are widespread, but for some unknown reason they have failed to arouse the ornithologists of America to action, possibly because of a belief that since Waterfowl are of chief interest to the sportsman their welfare should be guarded by him. The sportsman is becoming awakened to a sense of his duty in this matter, but ornithologists should be interested even more, not only for the sake of the game species, but for the Gulls, Auks, Murres, Loons, and other aquatic non-game birds.

Space is not available to present all of the cases of destruction of birds from this cause that have been reported, but a few cases will indicate what is happening along our coast lines.

A report from Boston in December, 1923, of conditions at Monomoy is tragic. ". . . the number of poor birds we found down there covered with oil is perfectly awful; Coot (Scoters), Brant, Old Squaws, everything. The amount of oil varied from a little on the breast to so much they could not fly but could only paddle about until they starved. Several had plucked themselves almost clean (bare) trying to get rid of the stuff."

A Massachusetts fish and game warden, reporting in March, 1930, says: "While I was at Nantucket on duty during January and February I counted hundreds of dead Coots (Scoters), Old Squaws, and Eider Ducks, killed by oil. In one day I counted 512 on Eel Point."

In 1919 an oil tanker unloading at East Providence, Rhode Island, broke the hose but continued pumping oil for some time before the break was discovered. The oil covered the upper bay and as a result State officers gathered up and buried 494 Bluebills that had floated ashore. A United States Deputy Game Warden reported in 1921 that in Narragansett Bay he gathered and buried more than nine hundred oil-killed Ducks.

On January 10, 1930, the steamer Edward Luckenback was wrecked on Block Island, Rhode Island, and the oil released killed literally thousands of birds from this island and the adjacent

shores of Long Island, to the mainland of Connecticut, and Rhode Island. Seventeen species were listed as killed, the result of this catastrophe.

The conditions have been particularly bad in Long Island Sound and one observer reports that he could pick up 25 oil-soaked birds any day during the season.

The waters of Chesapeake Bay, Pamlico Sound, and points in the coastal waters of South Carolina, Georgia, Florida, Louisiana, Texas and the Pacific Coast from Puget Sound south to San Diego, have frequently been the scene of great destruction of Waterfowl from oil.

Oil pollution, however, is not confined to coastal waters, and it may be safely stated that all agencies engaged in the production, transportation, handling, or use of oil, must be considered as actual or potential sources of pollution. In addition to the marine sources, consideration must be given to such land sources as wells and fields, oil terminals or loading points, refineries, railroads, and a host of industrial plants of different kinds, not excluding public service stations and garages. For example, a refining company in Illinois has been reported to be running a stream three feet wide and two feet deep into Grass Lake. This stream carries the refuse from the plant and has transformed a famous ducking lake into a veritable death trap that has claimed the lives of great numbers of birds.

The large earthen tanks or reservoirs sometimes used in the oil fields also may become the means of destruction of hundreds if not thousands of birds. Cases of this nature already are on record where Ducks, Killdeers, and even Mourning Doves have been the victims.

Many more instances might be cited which would still further emphasize the great loss of avian life through a man-made agency, at a period when necessity for the conservation of wild life is universally recognized. Furthermore oil pollution ruins bathing beaches, shore property, and fishing streams.

Ranking with our world-famous parks as an important adjunct to human welfare are our coasts and lake shores, river banks, and smaller streams. In fact, to base the comparison solely upon the percentage of the population that is benefited thereby, aquatic

resorts are unquestionably second to none. Literally millions of persons gather each year at watering places for bathing and other water sports, while the streams of the country are a part of the rightful heritage of the great fraternity of anglers and campers. Under no pretense can they be considered a legitimate dump for the waste from industrial plants and from cities.

What is the answer? Many States have passed stringent anti-pollution laws which if vigorously enforced would do much to relieve the deplorable conditions existing in vast areas of coast, river, and marsh. Some States, notably California, have shown a most commendable activity in enforcing these laws, but in others they exist merely on the statute books.

In 1922, Congress passed a resolution authorizing and requesting the President to call a conference of the maritime nations with a view to the adoption of effective means for the prevention of pollution of navigable waters. An exhaustive study of the problem was first made by an interdepartmental committee, containing representatives of the Treasury, War, Navy, Interior, Agriculture, and Commerce Departments, and the Shipping Board, which submitted its report to the Secretary of State in March, 1926. In the meantime Congress passed the "Oil Pollution Act, 1924," which makes it unlawful for any person to discharge oil by any means whatsoever into or upon the coastal navigable waters of the United States. The Secretary of War is charged with the enforcement of this law, which locally is administered by the district engineers.

At the conference on Oil Pollution of Navigable Waters, held in Washington, D. C., June 8-16, 1926, twelve foreign powers were represented. At that time the draft of a convention was adopted intended to prohibit the discharge of oil or oily mixtures in coastal waters. At this time of writing (1930) this convention has been tentatively agreed to by nine of the powers represented at the conference. It, therefore, seems that adequate international laws will be available to care for cases of maritime oil pollution, although the oil released from wrecks will always be a potential source of Waterfowl destruction.

The interior problem must receive attention from State and municipal governments and to this end the sportsman, the nature

student, and the professional biologist should work hand in hand for the common good. Collectively they have the power and the knowledge to protect, preserve, and wisely use the wild life resources of the Nation. The laws enacted should help to reduce the danger from oil pollution, but constant vigilance must be exercised so that still further improvements will be made and that there will be no recurrence of the heavily polluted waters that have already taken such heavy toll from the migratory Waterfowl of America.

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