

other bay fish. Drum are chunky, high-backed, and vary from jet black to silver or bronze in color.

Drum spawn in either bay or Gulf or in connecting passes during late winter between February and April by random release of eggs. By early summer, one-half- to one-inch juveniles are common in shallow creeks and boat basins.

The drum grows to good size, reaching 16 inches in three years, and growing an average of two inches a year thereafter. The largest black drum on record weighed 146 pounds; the Texas angling record is 78 pounds. Most drum caught in Texas weigh 30-40 pounds.

Tagging studies conducted by P&WD biologists have recorded drum migrations of 245 miles in one year, but distances of 10 miles or less are average for spawning migrations or movements to freshwater flows.

Drum are rarely taken on artificial bait since they feed by feel and smell. Cut shrimp, squid, or fish are preferred baits. Since drum feed along the bottom, the basic fishing technique is to put a baited hook on the bottom and wait for the drum to swallow it. Schools of drum feed in shallow water and when drum runs occur, anglers by the score gather at intracoastal canals. Drum seldom jump or make long runs but they are powerful fighters.

During the period December through March, with a peak in February, the bull drum move from the Gulf into the bays and congregate along channels and turning basins. These annual runs result in the most notable sport harvests.

Efforts to Restore Lake Trout to Lake Michigan Continue

Upwards of 958,000 lake trout are being planted in the Wisconsin waters of Lake Michigan this year, with a special attempt to stock 280,000 at two historic lake trout spawning reefs, according to the Wisconsin Department of Natural Resources (DNR).

Ron Poff, DNR Great Lakes fishery supervisor, said that, "We are going to plant 70,000 lake trout at Horseshoe reef in Green Bay and 210,000 at Milwaukee reef in Lake Michigan. Horseshoe reef is located in Green Bay

off Door County and historically produced significant numbers of lake trout. Milwaukee reef, located in midlake Ozaukee and Sheboygan counties, historically contributed significant numbers of lake trout to the southern half of Lake Michigan."

To date, biologists have failed to find any natural reproduction of lake trout in Lake Michigan even though lakers have been stocked since 1965. Lake trout originally reproduced in Lake Michigan until the sea lamprey entered the lake and completely eliminated the lake trout population. "Reef planting is part of a continuing effort by the Department to reestablish lake trout populations," said Poff, "with other efforts including a reduction in the sport fishing daily bag limit to 3 and continued closure of the commercial fishery for lakers. Hopefully these steps will provide more spawners.

Publication

International Navigation Aid Literature Published

The U.S. Coast Guard, in the interest of promoting marine safety through broader understanding of aids to navigation, is distributing informational literature concerning International Association of Lighthouse Authorities (IALA) publications. IALA is a non-government association of services or organizations responsible for the provision or maintenance of lighthouses and other aids to marine navigation. The Coast Guard, as the U.S. Government organization responsible for provision of aids to navigation in the United States, is a member of IALA. The Commandant of the Coast Guard is an ex-officio permanent member of the Association's Executive Committee.

In order to promote the improvement and effectiveness of aids to navigation, IALA has prepared several publications for the use of both providers and users of aids to navigation. Two such IALA publications are: "International Dictionary of Aids to Marine Navigation"; and the "Manual on Radio Aids to Navigation." The "Manual on Radio Aids to Navigation" (Chapters 1-4) is for sale at 30 Swiss francs per copy. It discusses: 1) General Review (of radio navigation

Ultimately our objective is to re-establish a self-sustaining stock of lake trout." Poff added that there have been some encouraging signs, including high survival rates of fish planted in Lake Michigan and that wounding rates from sea lampreys are relatively low, indicating some success in controlling the sea lamprey.

Lake trout planted in Lake Michigan are descendants of lake trout originally from Lake Michigan, which should increase their probability of survival and reproduction. Other species being stocked in Lake Michigan this year include: 1.2 million chinook salmon, 550,000 coho salmon, 23,000 "tiger" trout, 959,950 rainbow trout, 150,050 brown trout, and 27,500 brook trout. Plantings in Lake Superior will include: 18,000 splake, 585,000 lake trout, 145,000 rainbow trout, 24,000 brown trout, and 31,050 brook trout.

aids); 2) Direction Finding; 3) Consol; and 4) Decca. The IALA dictionary is published in English, French, German, and Spanish. Its nine chapters are being published as separate booklets with an alphabetical index in each. The following have been printed: Chapter 1, General Terms, 12 francs; Chapter 2, Visual Aids, 35 francs; Chapter 3, Audible Aids, 9 francs; and Chapter 4, Radio Aids, 25 francs. Orders must specify the language desired.

In addition to these publications, IALA publishes the quarterly IALA Bulletin, which contains articles on technical and operational aspects of aids to navigation, plus information about Association activities. The Bulletin is available from the IALA Secretariat at an annual subscription price of 100 Swiss francs.

Orders for IALA publications must be placed with the Secretariat of the Association. They are not available from the U.S. Coast Guard. Orders should be addressed to: IALA Secretariat, 43, Avenue du President Wilson, 75775 PARIS CEDEX 16, France. Orders must be accompanied by an international money order for the full amount of the order. Publications are mailed postpaid.