

The Pacific Northwest Commercial Fishery for Striped Bass, 1922-74

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The striped bass, *Morone saxatilis*, is a native of the east coast and was introduced in Pacific waters in the 1870's. It is now successfully established in northern California and in the Pacific Northwest. In the Pacific Northwest it had been taken commercially in five rivers in southern Oregon, but that state passed a law in 1975 that ended the fishery the following year. This report describes the commercial fishery in the Pacific Northwest and the events leading to the spread of the species on the West Coast.

STRIPED BASS INTRODUCTION AND RANGE EXTENSION

Striped bass were introduced to the Pacific Coast in 1879, when 132 small fish which had been shipped from New Jersey were planted in San Francisco Bay, Calif. An additional plant of 300 small bass was made in the same waters in 1882 (Morgan and Gerlach, 1950). In several subsequent years up until 1900, transfers were attempted within California and by 1889 a fishery was well established in the San Francisco Bay area (Hart, 1973).

"Considering the small number of fish introduced and their remarkable increase in a few years, the results obtained from the introduction of striped bass into California is one of the greatest feats of acclimatization of new species of fish in the history of fish culture," noted Scofield and Bryant (1926).

From these small plantings in San Francisco Bay the striped bass has spread along the Pacific Coast. Within 20 years of the initial plantings the range of the species extended to south-

ern Oregon. At present its range extends from 25 miles south of the California-Mexico border to Barkley Sound, British Columbia (Miller and Lea, 1972). However, they are not common south of Monterey, California, or north of the Siuslaw River, Oreg. (Fig. 1). Occasionally, striped bass have been caught in the Columbia River but only periodically and in small numbers. In Oregon, the bass are most abundant in the Coos and Umpqua Rivers.

SPECIES DESCRIPTION

The striped bass, characterized by the seven or eight longitudinal stripes following the scale rows, attains a maximum weight of approximately 80 pounds (36.3 kg) on the Pacific Coast (Fig. 2). The average weight of those taken commercially in the past in Oregon rivers was about 6-12 pounds (2.7-5.4 kg)¹.

THE COMMERCIAL FISHERY

From the information available, it appears that striped bass were first taken in commercial quantities in Coos Bay in 1922. Partial landings for 1928 were 8,200 pounds (3,719 kg); for 1929, 8,300 pounds (3,764 kg); and for 1930, 13,400 pounds (6,077 kg) (Morgan and Gerlach, 1950). Statistics for the entire catch are available since 1931, when the catch in Coos Bay was 18,050 pounds (8,186 kg).

¹Mullen, Robert E., 1972. Ecology of shad and striped bass in coastal rivers and estuaries. Manage. Res. Div., Fish Comm. Oreg., Public Law 89-304, Program Annu. Rep. July 1, 1971 to June 30, 1972, August 1972, 31 p. (Typescript).



Figure 1.—West coast range of striped bass.

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In the middle and late 1930's, small commercial catches of striped bass were made in the Smith or Umpqua Rivers, beginning in 1940 in the Coquille River, and beginning in 1946 and 1950-51 in the Siuslaw River (see footnote 1). Table 1, which averages data from Mullen by 5-year periods, gives the average annual commercial landings of striped bass by coastal streams from 1931 to 1974. The largest catch was made in 1945 when a peak of over 250,000 pounds (113,639 kg) was landed. In recent years, the commercial

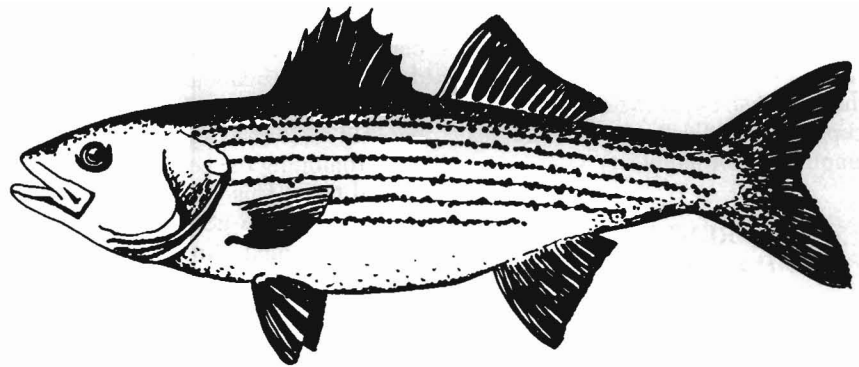


Figure 2.—Striped bass, *Morone saxatilis*.

Table 1.—Average annual commercial landings of striped bass in Oregon coastal streams, 1931-74¹.

Year	Average commercial landings (pounds)					Total
	Siuslaw	Smith	Umpqua	Coos	Coquille	
1931-35	—	212	22,030	—	—	22,043
1936-40	—	36	48,989	18	—	49,037
1941-45	—	6,467	99,527	1,519	—	107,513
1946-50	23	5,474	83,420	725	—	89,642
1951-55	9	619	2,117	21,207	1,578	25,530
1956-60	209	1,055	7,788	13,317	1,188	23,558
1961-65	321	797	19,386	27,730	923	49,157
1966-70	245	1,841	18,825	17,526	679	39,119
1971-74	817	1,593	36,956	9,376	246	48,988

¹Source: Mullen (see text footnote 1) for 1931-71; Jerry MacLeod, Aquatic Biologist, Oreg. Dep. Fish and Wildl., Coos Bay, Oreg., pers. commun. for years 1972-74.
²Smith and Umpqua Rivers combined through 1950.

catch in the Umpqua River increased while the Coos River catch generally dropped off (Table 1). Since 1960, total commercial catches of striped bass from the five rivers listed in Table 1 have ranged from 27,000 (12,449 kg) to nearly 69,000 lb (31,293 kg).

In 1975 Oregon passed a law against commercial fishing for striped bass. The law went into effect in 1976, and now striped bass are taken only by recreational fishermen.

Because the quantities taken commercially were extremely limited, striped bass have been primarily sold as a fresh frozen product, with some sent to California, and some to eastern markets.

A commercial fishing season was authorized in past years for striped bass and American shad, *Alosa sapidissima*, on Oregon's Siuslaw, Smith, Umpqua, Coos, and Coquille Rivers (Fig. 3). Most commercial fishing was conducted in the tidal portion of each river although two kinds of gillnet, set-nets

and drift-nets, could be legally used in the bays (see footnote 1).

The commercial fishery for striped bass was closely related to the shad fishery in the five southern Oregon rivers. Morgan and Gerlach (1950) state that in Coos Bay no fishermen were known to fish solely for striped bass, although when bass were observed in large numbers, the relatively fragile shad nets were pulled and replaced with heavier gear. This probably did not happen more than two or three times during a season, but good catches of striped bass were made at such times. The striped bass fishery was limited to the season of the shad fishery and was more or less incidental to it (Morgan and Gerlach, 1950).

Prior to the ending of commercial fishing in Oregon for striped bass there had been few recent changes in the commercial fishing regulations. The major regulations, consisting of mesh size, gear type, and season restrictions, were primarily designed to protect

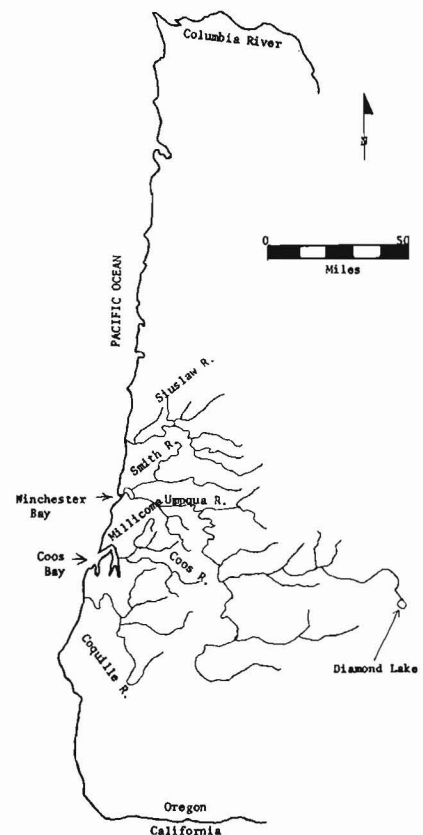


Figure 3.—Location of western Oregon rivers that were the site of commercial fishing operations for striped bass (see text footnote 1).

spring chinook salmon, *Oncorhynchus tshawytscha*, in the early spring and steelhead trout, *Salmo gairdneri*, in the summer. In the set-net fishery, each fisherman was allowed to fish six nets

while drift-net fishermen were restricted to one net. Each fisherman was required to sell his catch to a licensed wholesale fish buyer to facilitate record keeping, tax collection, and biological sampling (see footnote 1).

CURRENT TRENDS AND FUTURE STATUS

The striped bass is a very popular target of recreational fishermen in California and Oregon. In California, increasing fishing pressure by recreational fishermen resulted in the fishery being closed to commercial operations in 1935. In Oregon, the Legislature passed a law in 1973 making the striped bass a game fish but allowing it to be taken incidentally during the commercial shad fishery. The Oregon Fish Commission (since merged with the Wildlife Commission to create the Oregon Department of Fish and Wildlife) was directed to develop methods to minimize the incidental take of striped

bass while shad fishing. The commercial shad season was delayed and some deadlines (or boundaries) modified to reduce the chances of catching striped bass. In 1975 the Legislature passed a law prohibiting the commercial take of striped bass. This law went into effect in 1976. In 1978 gear restrictions will be implemented, limiting the gillnet mesh strength to 69 denier, which will still permit the harvesting of shad but allow most striped bass to break free of the nets.

The northern range of striped bass stocks capable of supporting a fishery appears to be limited by environmental factors. Temperatures of 60°F (15.6°C) and above are believed necessary for spawning, which occurs from April in California to June in Oregon, and an extensive tidal estuary also appears necessary for a nursery area and wintering ground (Forrester et al., 1972). These factors make it unlikely that striped bass will become established in areas further north along the

west coast. Striped bass will likely be strictly a recreational fish in the years ahead.

ACKNOWLEDGMENT

Jerry MacLeod, currently staff biologist, Office of the Director, Environmental Management Section, Oregon Department of Fish and Wildlife, Portland, Ore., kindly contributed information on striped bass legislation in Oregon.

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