

# Ocean Fishing Outlook In California Good In 1959 Due To Warm Current

SACRAMENTO (UP)—The California Fish and Game Department already is giving indications that ocean fishing off California will be good this year.

The reason is the same one that made fishing good for the past two years: The Pacific Ocean is heating up.

Here's some facts outlined in the agency's monthly report that give an indication of things to come:

There were 770,000 barracuda and 400,000 bonito reported caught during 1958 and the bonito still were abundant in January of this year.

Rock fish sports fishing during January bore all the marks of midsummer fishing with fewer anglers.

San Diego, which usually leads in the yellowtail catch, was second in January to the port of Long Beach.

The striped bass party boat fleet in the San Francisco Bay is the busiest group in the state.

The F&G Department quoted a figure from the Scripps lab of La Jolla that temperature of the water was 4½ degrees on the average above the mean temperatures during the years from 1917 to 1955.

Scientists are puzzled about the warmup. Dr. Robert C. Miller, director of the California Academy of Sciences at San Francisco, has one theory.

He said that the temperature of

the water depends to some extent on the strength of prevailing northwesterly winds. And they have been lighter than usual in the past few years, allowing less upwelling of the cold water from the ocean bottom.

But Miller says there is another possible reason: The increased accumulation of smog and other carbon dioxide products of combustion in the atmosphere.

"This forms a blanket in the atmosphere that absorbs solar radiation in a greenhouse effect. The heat gets in but can't get out. Any increase in solar radiation over the ocean tends to heat up the water."

There also is an effect on land because, according to Miller, the warm water heats the air above it and that air moves toward shore and inland thus increasing the amount of warming rain.

It's not an easy matter to heat an ocean — even one degree.

A 1957 report of California's research agencies made that clear by saying the energy contained in half the oil reserves on earth would be required to produce the change observed in 1957 in salt content on the 200,000 square miles of the California coast.

That report also states that about four times more solar heat than the area actually received would be needed to explain the change that occurred.

Summing up the effect to fishermen:

Sardine spawning has been unique because although most of it takes place in a coastal band from Punta Baja to San Pedro, some spawned north of Point Conception.

There was an enormous increase in the percentage of young sardines in the live-bait catch, perhaps up to six per cent compared with three tenths of one per cent in 1955.

Yellowtail have been caught off all Southern California sportsfishing ports and in large numbers south of Port Hueneme. Occasionally boats landed yellowfin tuna, skipjack and dolphinfish.

White seabass were caught off the Golden Gate near San Francisco and one was reported caught off shore from Alaska.

The warm water probably accounts for a tremendous increase in anchovies off the Central California Coast. Marine biologist Donald P. Abbott of the Hopkins Marine Station at Pacific Grove reported that some 4,000 schools of the herring-like fish were spotted in a recent aerial survey.

## Douglas Fir Tests Well For Tension

OREGON STATE COLLEGE — Second-growth Douglas fir appears to be as strong as old-growth in tension parallel to the wood grain, a study made by an Oregon State College forester, Antone C. Van Vliet, shows.

The study is part of a continuing, long-range program of research by OSC on second-growth timber—the timber of coming decades when old-growth stands are exhausted.

Age of second-growth forests ranges up to 160 years while old-growth stands are many hundreds of years old. Properties of the second-growth timber do not always conform to the qualities established for old growth, however, and the OSC studies are aimed at supplying information on the differences and at establishing standards for the new-growth wood.

Information about tension strength parallel to the grain has been scanty. In the past because wood exhibits great strength along the grain and because of lack of practical fasteners, it was uncommon for a clear, straight-grained piece of wood to be pulled apart lengthwise before the fasteners failed, Van Vliet pointed out.

Recent developments in the improvement of adhesives and fasteners and shortage of large, clear structural material have ushered in a new era of wooden truss designs and engineered beams, however, he continued. For the first time, acquiring knowledge about tension parallel to grain has become important.

Van Vliet's study indicates that the second-growth timber has tension strength characteristics comparable to the old-growth material. His work was a cooperative project of the OSC forest research division and the Oregon Forest Research Center, located in Corvallis.

### WRONG FAMILY

BURLINGTON, Vt. (UP)—The musk ox really isn't an ox at all, according to research by the University of Vermont. The zoology department said blood samples showed that the musk ox is closer to sheep and goats than to cattle.



IT TAKES A LOT of practice to turn out a well rounded script. Here Colin Larson makes with the round sounds while rehearsing a script for Pelicana, which will be presented April 10.

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