

Information Report

Damage to Clam Beds in Yaquina Bay by
the Tidal Wave on March 27, 1964

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for staff only
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The Alaskan earthquake and resultant tidal wave along the Oregon coast caused considerable alterations in the normal ebb and flow of tides in Yaquina Bay. For about 48 hours the water in Yaquina Bay would appear to be flooding then would rapidly reverse itself and appear to be ebbing. This condition apparently altered some of the more unstable bottom areas along the south side of the bay.

On March 30, 1964, an old railroad trestle located on the Southbeach side of Yaquina Bay was noticed. These piling had been buried for many years. According to a local resident they had been visible for 15-20 years.

On April 1, 1964, two SCUBA divers came into the laboratory independently to report having seen large numbers of gaper clams (Schizothaerus nuttalli) lying free on the bottom of the bay in the vicinity of the sixth spur on the south jetty. One diver claimed he could have picked up 500 pounds of clams.

The normal depth of a gaper clam in the intertidal area is from 18-20 inches. The appearance of the clams exposed resulted in immediate concern as to the amount of damage done to the clam beds in Yaquina Bay. Also, one moorage operator said that several people gathered limits of horse clams off the open beach just north of Yaquina Bay.

On April 2 and 3, 1964, an investigation of intertidal and subtidal areas in Yaquina Bay was conducted to ascertain possible damage to clam beds. On the morning of April 2, 1964, the Idaho Point and Southbeach intertidal clam beds were visited. The Idaho Point clam bed appeared to be much firmer than in previous years. Both gaper clams and some cockles (Clinocandium nuttalli) were found. Cockles seemed to be less abundant than in previous years. Gaper clam density could not be assessed because of inability to reach the area of known highest density. One commercial digger who was contacted felt that cockles

were definitely not as numerous as they were prior to the tidal wave.

The bottom area around the old railroad trestle had definitely been eroded to a depth of at least 2-4 feet. However this erosion appeared to be localized to an area of approximately 3-4 acres. This area did not contain any high concentration of clams prior to the tidal wave.

In the Southbeach area between the Highway 101 bridge and the new O.S.U. Marine Science center, the bottom appeared to have shifted considerably and no clams and very few other invertebrates were found.

In the afternoon of April 2, 1964, Irv Jones, Ray Michimoto, and Gene Stewart dove on subtidal beds or beds that were only exposed by a -1.0 foot tide or better. The clam bed situated on the south side of the breakwater revealed that eel grass was still intact, however, it did appear that slight erosion may have taken place. The divers counted 65 clams in one small area that were still in place in the substrate and no clams were observed on the surface.

The subtidal bed located under the docks at the laboratory site appeared to be undisturbed.

The large bed of piddocks (Zirfaca) located under the highway bridge was undisturbed. The gaper clam bed in this area was not located because of poor visibility.

At the 6th spur jetty the divers picked up 6 large live gaper clams, observed six more and observed starfish feeding on 4-5 gaper clams. The divers also noted about 200 clam shells that appeared to be recent mortalities.

Attempts to dive in these areas was repeated again on April 3, 1964, however, poor water conditions made observation impossible.

Based on the above observations it is the writer's conclusion that some damage to clam beds in Yaquina Bay occurred as a result of the recent tidal wave. However, it is believed that this damage was limited primarily to the south side of the bay. This area has always had an unstable bottom and clam

losses have occurred here previously by the shifting of the bottom under less hazardous conditions.

Further observations will be made here and in other bays as soon as daylight minus tides occur. It should also be noted that reports from Tillamook Bay indicate substantial damage to oyster beds, however, no clam losses have been reported.

~~S. Dale Snow~~

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