

Copy to  
S. Downing  
know

## INFORMATION REPORT

### Proposed Abalone Transplant into Oregon

Recently while in California I had opportunity to visit a shellfish hatchery. This hatchery is privately owned by three individuals who have both the money and inclination to pioneer in the field of shellfish culture. One of these gentlemen offered to give us about 100 one-inch red abalone to experiment with in Oregon. The purpose of this report is to outline a proposed pilot study on the introduction of juvenile red abalone and regulations needed to implement this study.

#### Abalone in Oregon

The red abalone in Oregon was first reported in 1955 in the Brookings area. In 1957 this animal was reported from near Coos Bay. In 1958 the Fish Commission entered into a contract agreement with two commercial fishermen to explore for commercial concentrations of red abalone. At the end of four years of work the shellfish staff and commercial fishermen had found limited numbers of red abalone from Brookings to Coos Bay. No red abalone were found north of Coos Bay, however a few northern green abalone were found in the Newport and Boiler Bay areas. In 1962 the contract agreement was terminated and only limited work since then has been conducted by the staff.

#### Abalone Transplant

We propose to transplant red abalone into the Newport - Depoe Bay area—specifically Whale Cove. This proposal is based on several considerations. The Washington Department of Fisheries recently transplanted 100 adult red abalone into the San Juan Islands. These animals survived and did well until discovered by SCUBA divers. Red abalone do well in the San Francisco Bay area where water temperatures are quite comparable to those in the Newport - Depoe Bay area. The red abalone has a short 5-7 day free-

swimming period. At the end of this period it must settle out in an area of rocks and algae. The area north of Coos Bay is devoid of suitable habitat, being composed of sand beach for many miles. This may constitute a natural barrier to the northern distribution of the red abalone.

The proposed site of planting in Whale Cove has several advantages: (1) limited access because of private ownership of the land surrounding the area (local property owners contacted were enthusiastic about the idea); (2) Whale Cove covers a limited area of 15-20 acres that can be easily defined; (3) all of the known foods of the red abalone occur in abundance in the area; and (4) rocky reefs and boulders are in the area for suitable "home spots."

#### Discussion

We recommend transplanting 500 juvenile red abalone into Whale Cove for a pilot study to determine the feasibility of introducing this species into north-central Oregon.

There are two ways that the introduced abalone can be protected: (1) bring them in and quietly plant them without publicity and hope that no one discovers them; or (2) close Whale Cove to the harvest of all shellfish and fish by any means other than hook and line. The latter approach seems the most desirable. The abalone would be protected from divers and left undisturbed so that we would have a better idea of survival and growth. In addition we could obtain valuable publicity and improve our public image by conducting this program. The estimated cost of this program would be \$100.

If the program proved successful and the animals grew and reproduced we could eventually have either a personal-use or commercial fishing on this species. If they grew well, but did not reproduce successfully, an "aquaculture" type of operation might be considered.

Summary and Recommendations

The red abalone was first reported in Oregon in 1955. Since then it has been found as far north as Coos Bay. It is believed that a physical barrier limits distribution beyond this point. Water temperatures and food supply appear to meet the requirements of this species in the Newport - Depoe Bay area.

In view of the foregoing it is the staff's recommendation that: (1) we buy 500 juvenile red abalone at 5-cents each for transplanting into Whale Cove for a pilot study to determine the feasibility of introducing hatchery-reared abalone into Oregon; and (2) Whale Cove be closed to the harvest of all fish and shellfish, except by hook and line, to protect the introduced abalone during the pilot study. The cost of this project would be about \$100, which includes cost of the abalone, transportation, planting, and observation.

C. Dale Snow  
Shellfish Investigations  
Research Division  
December 29, 1966