

STATUS AND UTILIZATION OF OREGON'S RAZOR CLAM STOCKS

INTRODUCTION

Investigation of the razor clam stocks began in 1947. The clam stocks have been utilized by both a commercial and sport fishery. About 90% of the fishery is located on the 18 mile Clatsop Beach between Tillamook Head and the Columbia River; in this area, the 2 mile Seaside Beach supports nearly one-half of the fishery. This report discusses a review of regulations, status and utilization of the clam stocks, and management problems.

REVIEW OF REGULATIONS

Prior to 1954 the sport limit on razor clams was 36 clams per digger per day. In 1954 the limit was reduced to the first 24 clams dug regardless of size.

Commercial diggers prior to 1954 were prohibited from digging in the cove area at Seaside (OFC General Order No. V) and had a 3½-inch minimum shell length regulation. Hirschhorn^{1/} presented data in July 1954 to show that a large number of first year clams were being taken by commercial diggers. Postponing the harvest of young clams until spring of the following year would cause a significant gain in weight and greater yield from the resource. In September 1954 the minimum shell length was increased to 4¼-inches.

In 1963 the Seaside Cove restriction for commercial diggers was lifted allowing digging in this area.

Prior to 1967 there were no closed periods during the year. Sampling data indicated an increase in the harvest of young clams had been occurring progressively earlier in the season since 1958 and that wastage was high. In 1967 a summer closure was established to reduce wastage and increase the size of the harvestable clams.

^{1/} Hirschhorn, 1962. Growth and mortality rates of the razor clam *Siliqua patula* on Clatsop Beaches, Oregon.

In a public hearing in October 1972 industry requested that the minimum shell length of $4\frac{1}{4}$ inches be reduced. Clams could then be taken earlier in the year. This request was granted and the minimum shell length was reduced to $3\frac{3}{4}$ inches.

STATUS OF THE CLAM STOCKS

The abundance of razor clams fluctuates markedly on different Oregon beaches. Beaches south of Tillamook Head are subject to considerable erosion and due to the unstable conditions the success of yearly sets of clams is sporadic. Harvestable numbers can be found at times on those beaches that are favorable to clams as far south as Myers Creek Beach at Gold Beach, Oregon.

The stability of Clatsop Beach is favorable to yearly sets of clams. The annual fluctuations in the abundance of clams are shown in Table 1, which lists the number of clams harvested by year class. The recent slight downward trend in clam numbers is similar to that observed from 1957 to 1962.

The age composition for clams harvested has shown little variation over the years. The bulk of the clams continue to be harvested before their third year of life and three year old and older clams contribute little to the fishery.

UTILIZATION OF THE CLAM STOCKS

The utilization of the clam stocks has changed over the last 30 years. In the "forty's" about 90% of the harvest was taken by the commercial fishery, today 90% of the harvest is taken by the sport fishery. Figure 1 shows the changes in the sport and commercial fisheries and the fluctuations in the harvest. Part of fluctuation in the annual harvest can be attributed to the availability of clams. Weather, beach, ocean conditions and clam abundance are factors of availability.

Sport Fishery

The number of digger-trips over the last 20 years has remained fairly constant as observed in Table 2. The relative number of digger trips fluctuates comparatively

with the annual harvest.

The average age of sport dug clams has not changed over the years as seen in Table 3. A substantial part of the sport harvest is composed of first year clams in both good and poor years of production. Clams in their first year of life usually range from 1 to 4-1/8 inches in length. Generally the harvest of the first year class remains relatively low until the latter part of the season when the number of older clams and larger clams have been reduced and when first year clams are somewhat larger.

Wastage becomes a problem when large numbers of first year clams enter the fishery. Wastage is a factor of sorting out and replacing small or damaged clams to the beach. Figure 1 shows annual fluctuation and amount of wastage. Education of the public and increase law enforcement effectively reduces wastage but does not stop it. The summer closure reduced wastage significantly and increased the percentage of second year and older clams. Table 4 lists the 5.6% increase by age class.

Commercial Fishery

The number of diggers in the commercial fishery has been reduced over the last thirty years as seen in Table 2. The number of diggers also fluctuate with the availability of clams.

The average age of commercial dug clams has not changed since 1954 when the minimum shell length was increased from 3½ to 4¼ inches (Table 5). The reduction in the minimum shell length from 4¼ to 3-3/4 inches in 1972 has not caused any appreciable change in age composition. The commercial fishery continues to operate on second year clams or older. Generally the harvest of first year clams is restricted to the fall months when they began to enter the fishery.

Since the 1972 minimum size change an increase in wastage has been observed from the commercial fishery during the fall months. The fall increase in wastage

comes from the high rate of sorting and the increase in the number of inexperienced diggers in the fishery over the last few years.

MANAGEMENT PROBLEMS

1. Wastage continues to be a problem on given years and public education and increased law enforcement should be used when needed.
2. Commercial digger should be made to return sublegal clams to the sand. The practice of throwing clams into the surf is wasteful and causes problem in sport digging areas.
3. A time limit for possession of commercial dug razor clams before selling them is needed by law enforcement officers. This would help reduce the personal use of commercially dug razor clams by the digger.
4. A regulation change is needed for better enforcement.

Daily limit - first 24 dug regardless of size or condition. Not more than 48 may be held in possession or taken in any 7 consecutive days.

CHANGE TO

Daily limit - 24 clams. It shall be unlawful to return any clam to the beach regardless of size or condition. Forty-eight may be held in possession.

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