



The Northern Abalone

HAIDA TRADITION

The first people of Haida Gwaii have several names for abalone depending upon dialect, among them galgaahliiyaang and galguuhlkyan. In Haida legend, it is said that the northern abalone descended from the northwestern toad during the “Time of the Raven”. For thousands of years, the Haida harvested northern abalone for food along rocky intertidal shores throughout Haida Gwaii, hand picking animals exposed in the intertidal at low tides and spearing animals down to six feet below the water surface. Diving was not a harvest method and thus, only the intertidal and a very small portion of the upper subtidal abalone population were exploited. Traditionally, the two-pronged seafood spear was made by lashing (using spruce root twine) two sharpened pieces of huckleberry stem to each side of a long pole made of spruce or red cedar. Collection of abalone using this spear required practise and skill. If the animal was speared and not twisted off the rock in the same motion, it might adhere to the rock with its strong foot and be hard to retrieve. If the animal was speared too lightly, it might be knocked off the rock and fall away to depths beyond reach. Once caught the foot of the abalone was removed and eaten raw — sometimes the gonads were also eaten. Shell from the California red abalone was traded throughout the Northwest Coast and used for decoration and currency. In the early days Haida people travelling to the Skeena and Nass Rivers sold dried abalone to the Chinese people.

ECOLOGY

For thousands of years, northern abalone populations lived in balance with the voracious sea otter, a predator that can eat one-third of its body weight a day! Abalone also shared the semi-exposed nearshore rocky habitat with other herbivores, the most prominent being the red sea urchin. The relationships are complex and not fully understood, but in general terms, abalone provided sea otters with one of a kaleidoscope of invertebrate and fish food sources. Foraging sea otters created a balance that provided



photo Rick Harbo

abalone and other creatures with ample kelp forests for shelter, food and reproduction. Red sea urchins grazed kelp, maintaining areas for coralline algae to thrive, thus assisting with successful settlement of abalone larvae and survival of juveniles. Localized hunting of sea otters around Haida village sites likely reduced predation on abalone in the vicinity of these sites.

About 100 years ago, the sea otter was hunted to extinction along the shores of Haida Gwaii. As a result of their absence, sea otter prey species, including abalone and red sea urchins, thrived and multiplied. Over time, the subtidal extent of kelp beds decreased as sea urchin grazing progressed unabated. The ecological balance in the semi-exposed nearshore rocky habitat we see today is much different than that which existed in the presence of healthy sea otter populations.

COMMERCIAL FISHERY

About 50 years after the sea otter disappeared, another predator arrived — armed with funny looking rubber suits, SCUBA tanks, masks and prying bars. Abalone populations eventually succumbed to commercial harvesting pressure. The fishery proceeded gradually at first fuelled by new technology, a ready supply, and markets. In 1976, abalone landings reached a then-record high of 274 tonnes. In less than a year, the commercial harvest took more than the 4 previous years combined (1972 to 1975) and possibly more than the 62 years before that (1910 to 1971)! In 1977, BC coastwide landings increased to 428 tonnes, over 8 months of fishing from 29 licenses, with almost all the catch coming out of North Coast waters. In fact, since 1976, over 75% of the landings occurred consistently from the North Coast and much of that was harvested from Area 1 (north Graham Island) and Area 2E (east Moresby Island) around Haida Gwaii. After 1979, quotas continued to be reduced year after year as selling prices continued to increase. By 1987, the overall quota for the fishery was set at 47 tonnes and the price had reached over \$18 per kg (compared to \$0.92 per kg in 1970 and \$3.14 per kg in 1976).

In December 1990, Fisheries and Oceans Canada (DFO) acknowledged a problem: Fisheries management policies had failed to sustain the abalone population. Under threat of abalone population collapse, DFO closed commercial, recreational and First Nations fisheries for northern abalone throughout the BC coast, in hopes that the population would naturally rebuild.

Over the short, devastating course of the commercial fishery, more than 750 tonnes of northern abalone were taken around Haida Gwaii, including 72 tonnes from Cumshewa Inlet over one year alone.

STOCK ASSESSMENT

Fishery independent stock assessment of the abalone population was initiated by the DFO after the distressing record harvest in 1976. Prior to that, only anecdotal information was available. Rough estimates made in the early 1980s indicated that the density of abalone decreased by 60 to 90% in harvested areas of the North Coast between 1976 and 1978. Later estimates indicated an 80% overall decrease in density along east Moresby Island between 1978 and 1984. Although patchy distribution of abalone made stock assessment difficult, it was clear that a precipitous decline in population had occurred since the start of assessments in 1976.

In 1998, eight years after total closure of the abalone fishery, continuing DFO stock assessment concluded that “there was no statistical evidence of recovery of northern abalone stocks in the south east coast of the Queen Charlotte Islands”.

CURRENT STATUS

On April 23, 1999, the BC northern abalone was designated a “threatened” species by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), the first Canadian marine invertebrate to be listed. In official terms, this means that the species is “likely to become endangered if limiting factors are not reversed”.

Today, the harvest of northern abalone is legally prohibited along the British Columbia coast. Despite 10 years of fishery closure, continuing stock assessment by DFO has shown no apparent increase in the abalone population around Haida Gwaii. Monitoring sites show a continuing decline in abalone numbers. Clouded by an illegal harvest of abalone whose history is as long as the closure and whose breadth has been estimated at up to 5 times the former legal quota, solid explanations for the continued population decline remain elusive. Contributing factors include overharvesting, poor or periodic survival of juveniles, natural predation, environmental factors affecting survival of one or more life stages, continued poaching and lack of enforcement, and reduced kelp bed areas since elimination of sea otters.

The Haida Gwaii Abalone Stewardship Program is an important tool for rebuilding of local abalone populations. Today, assessment of abalone population health continues with partnerships between the Haida Fisheries Program, DFO and more recently, community groups, Parks Canada and Environment Canada. Our Island communities must work together to ensure the survival of the northern abalone around Haida Gwaii.



Haida Gwaii Abalone Stewardship Project

partners

Council of the Haida Nation
Haida Fisheries Program

Laskeek Bay Conservation Society

Gwaii Haanas National Park Reserve/Haida Heritage Site

Haida Gwaii Marine Resources Group Association

World Wildlife Fund

Fisheries and Oceans Canada

Environment Canada