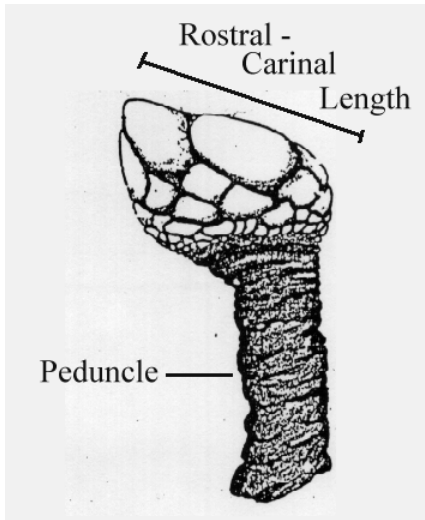
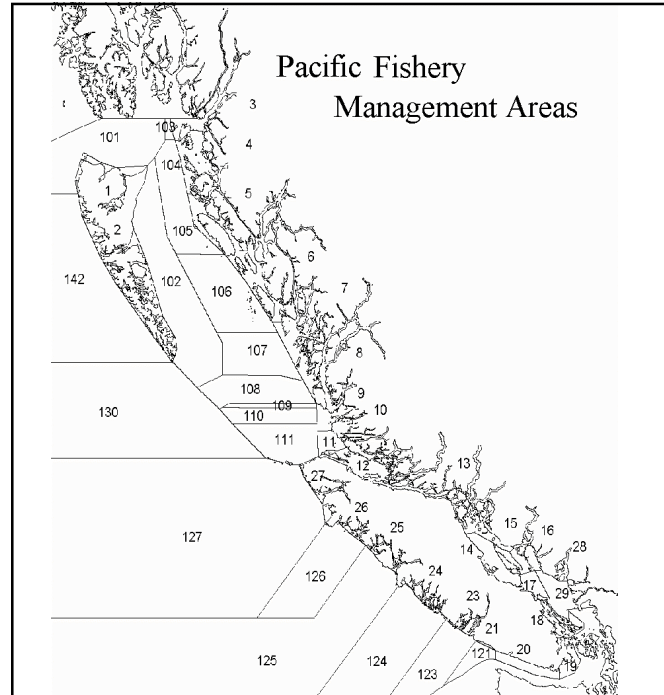




Pacific Region



Goose Barnacle



**Background**

The goose barnacle (*Pollicipes polymerus*) ranges from southern Alaska to Baja California on the mid-intertidal zone on exposed or semi-exposed rocky coasts.

Goose barnacles are hemaphroditic (each individual has both sexes). They mature at a rostral-carinal length of 14 to 17 mm, at between 1 and 3 years of age. Spawning is from late April to early October, with peak spawning in July, producing 475,000 to 950,000 embryos per adult each season. Larvae are planktonic for 30-40 days, and settle in suitable habitat at 0.5mm length..

Growth is rapid the first year (11-15 mm rostral-carinal length) and then slows to 1-3 mm a year. Maximum size is 45 mm rostral-carinal length, 153 mm peduncle length. Maximum age is unknown. The muscular stalk (peduncle) is analogous to the muscular tail of shrimp, prawns or lobster.

The stock status is unknown, as there are no data available for assessments. However, they are abundant in selected but limited habitats. The impact of harvesting is unknown with respect to sustainability and ecological considerations. The fishery closed on May 31, 1999, due to conservation concerns. Before it was closed, the commercial fishery was an open-access fishery with no size limits or annual total allowable catch.

**Summary**

- Stock status is unknown, as there are no data available for assessments.
- They are abundant in selected but limited habitats.
- The impact of harvesting is unknown with respect to sustainability and ecological considerations.

**The Fishery**

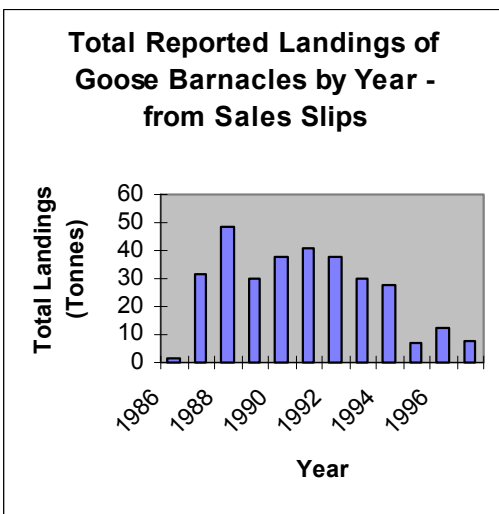
First Nations have long used goose barnacles as food. Goose barnacles have been commercially harvested sporadically since the 1970s, and continuously since 1985. They are hand harvested with modified cutting and prying tools used to free goose barnacles from their substrates. They are then stored and shipped as live product. No power or mechanical devices, including diving gear, are permitted for harvesting goose barnacles.

Goose barnacles have long been recognized as a delicacy in Spain, Portugal and France. The major market for Canadian west coast goose barnacles is Spain, particularly the Barcelona area. The market price in Spain varies with the season and availability from other sources.

Accessibility to the wave-swept areas of the west coast of Vancouver Island, the central coast, north coast, and the Queen Charlotte Islands, and the logistics of live transport from the harvest areas to the European market, limit harvest to a few selected areas. The fishery expanded to the north coast in 1988 and 1989, but shipment of live product proved difficult. There have been no reported landings from the North coast since 1995. From the south coast, reported landings mainly occur along the west coast of Vancouver Island. Harvesting usually occurs steadily throughout the year. Wet storage of harvested product is permitted prior to shipment of the live product to market.

Before the fishery closed, commercial harvesters of goose barnacles required a category Z-6 licence, in addition to a Fishers Registration Card. Since 1995, recreational fishers are required to purchase a Tidal Water Sport Fishing Licence for goose barnacles.

**Catch**



Commercial landings, reported from sales-slip data, grew rapidly from 1985 to a peak of 49 tonnes in 1988. From 1989 to 1993, reported landings ranged between 30 and 40 tonnes. This declined to 19 tonnes in 1994, and 7 tonnes in 1995. The 1997 reported landings of 10 tonnes are preliminary.

In 1988, with the peak catch of 49 tonnes, the number of licences peaked at 467. By 1996, this had declined to 56 licences, with only 14 licences reporting landings. The fluctuations in the number of licences and reported landings are related to market conditions. The present low prices are attributed to lack of suitable and accessible product, and the Spanish retail market.

Number of Goose Barnacle Licences Issued in B.C.

Year	# of Licences	Fishing Days
1985	9	145
1986	25	77
1987	221	789
1988	467	1596
1989	130 Z-6	713
1990	137 Z-6	2278
1991	131 Z-6	3070
1992	125 Z-6	1878
1993	105 Z-6	2049
1994	114 Z-6	1482
1995	65 Z-6	321
1996	56 Z-6	574
1997	49 Z-6	427
1998	39 Z-6	215

Conditions of licence included the daily completion of a harvest log with monthly submission to the Department of Fisheries and Oceans Shellfish Data Unit, and the completion of Fish Slips upon landing product and submission to the Department of Fisheries and Oceans Catch Statistics Unit. The recreational fishing limit was 2 kg per day, with a possession limit of 4 kg.

Goose barnacle landings were recorded by Pacific Fishery Management Area and/or Subarea only, therefore catch and effort histories cannot be developed from past data. However, information

provided on the present harvest log form is sufficiently specific to develop catch and effort histories from specific beds. There are large discrepancies between the fish slip database and the harvest log database. There is a great deal of anecdotal information on unlicensed harvesters and unreported catches from isolated areas.

Until very recently, there were no limits applied in this fishery, as most of the stock is not available for harvest due to inaccessible harvest conditions, difficult logistics in shipping live product, or unsuitable size and quality of product. The lack of suitable and accessible product may be a good indication of localized overfishing. The continued lack of accessibility to suitable product and the price fluctuations in the Spanish retail market indicated low effort and landings would likely continue. Continued illegal harvest activities may jeopardize this fishery by over-harvesting accessible areas and the market by shipping inferior product.

### **Resource Status**

Experienced harvesters indicate that there is a 3-year recovery period following extensive harvest, for recruitment of suitable product. Feasibility studies conducted for commercial fisheries have shown that following harvest, 3 to 5 years are required for recruitment of suitable product. Stock monitoring, area closures, rotational harvesting, and habitat impact assessments will be required to effectively manage a sustainable fishery.

### **Outlook**

Given that there are not sufficient data to recommend biologically based management for goose barnacles, more precautionary measures, including new management controls and assessment programs are being considered. The re-opening and continuation of the goose barnacle fishery must follow the phased approach described in the Pacific Region Policy for New and Developing Fisheries.

### **For more information:**

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