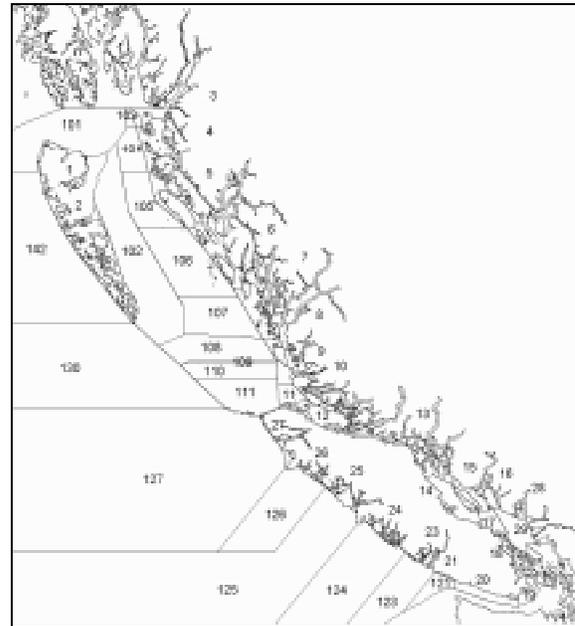




Rostral -
Carinal
Length

GOOSE BARNACLE



Background

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

Goose barnacles are hemaphroditic (one individual has both sexes). They mature at 14-17 mm rostral-carinal length or one to 3 years of age. Spawning is from late April to early October, with peak spawning in July, producing 475,000 - 950,000 embryos/adult /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 slows thereafter to 1-3 mm/yr. Maximum size is 45 mm rostral-carinal length, 153 peduncle length. Maximum age is unknown. The muscular stalk (peduncle) is analogous to the muscular tail of shrimp, prawns or lobster.

Harvesters use a modified cutting and prying tool to free goose barnacles from their substrates and collect and sort them by hand. No power or mechanical devices are permitted for harvesting goose barnacles.

The Fishery

First Nations people 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 various design cutting tools, and then stored and shipped as live product.

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 season and availability from other sources.

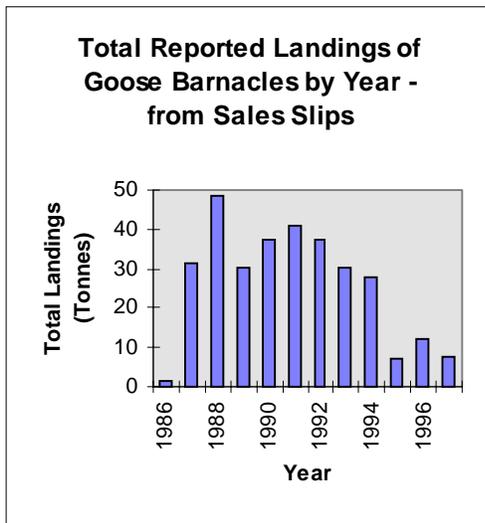
Accessibility to the wave swept areas of the west coast of Vancouver Island (Statistical Areas 20-27), central coast (Statistical Areas 8-12), north coast (Statistical Areas 3-7) and the Queen Charlotte Islands (Statistical Areas 1&2) and the logistics of live transport

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 was very 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, with the majority from Areas 23, 24 and 26. Harvesting usually occurs steadily throughout the year.

At present, commercial harvesters of goose barnacles require a category Z-6 licence, in addition to a Fishers Registration Card. Since 1995, recreational fishers that wish to harvest goose barnacles are required to purchase a Tidal Water Sport Fishing Licence.

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 seven tonnes in 1995. The 1997 reported landings of 7.7 tonnes are preliminary.

Effort

Number of Goose Barnacle Licenses Issued in B.C.

Year	# of Licenses	Fishing Days
1985	9	145
1986	25	77
1987	221	789
1988	467	1596
1989	130	713
1990	137	2278
1991	131	3070
1992	125	1878
1993	105	2049
1994	114	1482
1995	65	288
1996	56	291
1997	49	174

In 1988, with the peak catch of 49 tonnes, the number of licenses peaked at 467. By 1996, this had declined to 56 licenses, with only 14 licenses reporting landings.

The fluctuations in the number of licenses and reported landings are related to market conditions. The present low prices are attributed to lack of suitable and accessible product, and to the Spanish retail market.

Fishery Management

The fishery is open year-round. The commercial fishery is presently an open-access fishery with no size limits or annual total allowable catch (TAC).

Wet storage of harvested product is permitted prior to shipment of the live product to market.

Restrictions include intertidal harvest by hand-picking with hand tools only. Mechanical or power assisted devices are prohibited. Collection by diving is not permitted.

Conditions of licence include 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 sport fishing limit is two kg per day, with a possession limit of four kg.

Resource Status

Goose barnacle landings were recorded by Statistical 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.

There are currently 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.

Outlook

The continued lack of accessibility to suitable product and the price fluctuations in the Spanish retail market indicate continued low effort and landings.

Continued illegal harvest activities may jeopardize this fishery by over-harvesting accessible areas. The market may also be jeopardized by the shipping of inferior product.

Management Considerations

Experienced harvesters indicate that there is a three year recovery period following extensive harvest, for recruitment of suitable product. Feasibility studies conducted for commercial fisheries have shown that following harvest, three to five years are required for recruitment of suitable product. Stock monitoring, area closures and rotations may be required to effectively manage a sustainable fishery.

Licence limitation (to a maximum of 50) has been proposed for the goose barnacle fishery.

References

- Austin, W.C. 1987. A feasibility study of the commercial harvesting of goose barnacle Pollicipes polymerus. Final report to Dept. of Fisheries and Oceans. Khoyatan Marine Laboratory. 171pp
- Austin, W.C. 1992. Goose barnacle survey. Report prepared for Dept. of Fisheries and Oceans. Khoyatan Marine Laboratory. 24 pp
- Lewis, C.A. and F.-S. Chia. 1981. Growth, fecundity, and reproductive biology of the pedunculate cirripede Pollicipes polymerus at San Juan Island, Washington. Can J. Zool. 59: 893-901

For more information

Contact: Raymond B. Lauzier
Shellfish Section
Stock Assessment Division
Pacific Biological Station
Nanaimo, B.C. V9R 5K6

Tel: (250) 756-7023

Fax: (250) 756-7138

E-Mail: lauzierr@dfo-mpo.gc.ca

This report is available from:

PSARC Secretariat
Pacific Biological Station
Nanaimo, B.C. V9R 5K6

Phone: (250) 756-7208

Fax: (250) 756-7209

Email: miltond@dfo-mpo.gc.ca

ISSN 1480-4913 (for English series)

ISSN 1480-4921 (for French series)

*La version française est disponible à l'adresse
ci-dessus.*

