

ABALONE RECOVERY

An update on the recovery of abalone in British Columbia

Sept 2004

The **ABALONE RECOVERY TEAM** has completed a recovery strategy for the **NORTHERN ABALONE** (*Haliotis kamtschatkana*). The abalone is a marine mollusc related to snails and whelks that has been declining in numbers and distribution in surveyed areas of British Columbia (BC) since the late 1970s. Declines in abundance by more than 75% prompted the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) to list the abalone as **THREATENED** in 1999. In June 2003, abalone were legally protected under the new Species At Risk Act (*SARA*), prohibiting killing, harming, harassing, capturing and taking abalone, and damaging abalone residences and critical habitat.

This newsletter provides an update on recent abalone recovery activities since August 2003.

Research

Fisheries & Oceans Canada (DFO) and Parks Canada Agency scientists, with funding in part from the Interdepartmental Recovery Fund, are continuing their co-operative study in and around Pacific Rim National Park Reserve, exploring methods and factors that improve abalone reproduction and recruitment in selected locations.

Parks researchers have focused on abalone habitat, and found that abalone prefer shallow habitats (2 – 5 m), juvenile abalone (< 45 mm) tend to prefer deeper water (6 – 9 m). Abalone have an affinity for coralline algae, larger but fewer



abalone were found in association with macro-benthic algae, and more abalone were found in association with red sea urchins but these abalone were significantly smaller in size. More abalone, particularly juveniles (<45 mm), were observed at night than during the day.

DFO researchers have been monitoring the movements of 2,000 abalone tagged and aggregated at high quality habitats to increase reproductive capability. While it's a lot of work to track the tagged abalone, in 2002 at least 37% of the tagged abalone have been sticking around - 84 have been observed more than once - which indicates promise for the rebuilding program.

In May 2004, DFO researchers set out on the *M/V Vector* to continue the work with the Haida Gwaii Abalone Stewards and KITASOO Abalone Stewardship Project completing condo surveys, transect surveys, tagging abalone and putting in new condos. The cruise continued on to index site surveys in Queen Charlotte & Johnstone Straits. They are also using their observations to refine a habitat model

designed to assist in defining 'critical habitat' for abalone in BC.

Papers presented at the *2003 Workshop for Rebuilding Techniques for Abalone in BC* are now published in the *Journal of Shellfish Research* (volume 22, number 3, December 2003, pp. 801-855).

Proceedings of the *Workshop on Rebuilding Techniques for Abalone in BC* are now published in the *Canadian Technical Report of Fisheries and Aquatic Sciences* 2482.

Red urchin fishermen have volunteered to collect observations of abalone that will aid in long-term population trends. To date, most reports have seen just a few (2-10) abalone. Abalone are also counted and measured for DFO during urchin surveys.

Surveys – population status



Surveys of key index sites have been conducted by DFO since 1978 to monitor abalone abundance and to evaluate recovery. The results from the most recent index sites surveys will be summarized in the *Abalone Stock Status Report* to be reviewed by the Pacific Scientific Advice and Review Committee (PSARC) in Nov 2004. The preliminary results show that the *objectives of the abalone recovery strategy are not being met: ---*

Abalone continues to decline!

More sites are without any abalone and the

density of mature abalone has dropped further, below the level it was at in 1990 when all fishing was closed!

Although there were a few historic surveys in southern BC, they did not afford the extended coverage provided in the index surveys. Therefore, indices of abundance are being established in southern BC. So far, index sites surveys have been initiated on the west coast Vancouver Is., Queen Charlotte Strait and Johnstone Strait. Overall, the densities of abalone in the south were even lower than the densities of abalone at the index sites in the north. Hardly any abalone at all were observed in Johnstone Strait!

New survey methodology is being developed to better detect changes in the population while abalone are at such low abundance. A 'random stratified survey design' is being developed to improve the statistical power of the surveys.

Habitat Stewardship Program

Four projects on abalone rebuilding are again underway thanks to \$141,250 for 2004/5 from the federal government's Habitat Stewardship Program for Species at Risk http://www.cws-scf.ec.gc.ca/hsp-pih/default_e.cfm. The projects involve coastal First Nations and coastal communities in outreach activities and community-driven programs.

Bamfield Huu-ay-aht Community Abalone Project

Years: 2000-2005

Total: \$155,073

On Nov 7 2003, the Bamfield Huu-ay-aht Community Abalone Project carried out Canada's first out-planting of abalone ('Undersea Experiment Down in Barkley Sound' in *Go Nanaimo* Dec 4, 2003). In June 2004 BHCAP out-planted another 500,000 abalone larvae. Allison Griffiths has started an MSc thesis on outplanting

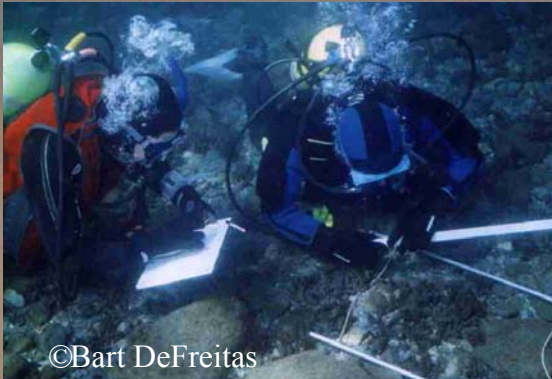
juvenile abalone (3,250 abalone up to 28mm in 2004) and will also be studying their predators.

<http://www.oceanlink.island.net/>

Haida Fisheries Program

Years: 2000-2005

Total: \$255, 000



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In May 2004, the Haida Gwaii Abalone Stewards revisited 40 'condos' (structures to enhance and sample juvenile habitat), deployed 16 new condos, and resurveyed 8 treatment and control sites. They saw about 2 dozen tagged abalone and many shiny tiny (2-5 mm) newly settled abalone on the condos. Education / awareness activities included a booth at the Tlell Fall Fair on the August long weekend and the launch of the Marine Matters web site <http://www.marinematters.org/> with WWF Canada.

Heiltsuk Abalone Stewardship Program

Years: 2005 *NEW*

Total: \$28,050

The Heiltsuk Abalone Stewardship Project was initiated in 2004 after interest was raised at the *Abalone Recovery Strategy* workshop in 2002. The project aims to establish baseline abundance estimates in the area and will build on historic surveys from 1999-2001. The project kicked off their first community workshop Aug 23. Surveys are scheduled for Oct.

Kitasoo Fisheries Program

Years: 2001-2005

Total: \$149,350

In May, the Kitasoo Abalone Stewardship Project managed to tag 1,000 abalone to track success of the rebuilding sites established in previous years. The abalone curriculum developed in 2002-2003, is now in operation in local class presentations, games, and educational exercises.

Abalone Coast Watch

Despite the complete ban on harvest since 1990, there is still no sign of abalone recovery. Illegal harvest is still considered the most significant threat, reducing numbers and spreading mates too far apart for successful reproduction.

To stop the ongoing problem of illegal harvesting, abalone Coast Watch programs are being developed under the lead of the Bamfield Huu-ay-aht Community Abalone Project, Gwa'sala-'Nakwaxda'xw Fisheries, Haida Gwaii Abalone Stewards, Kitasoo Abalone Stewardship Program and the Heiltsuk Abalone Stewardship Program. Co-operation and support in reporting illegal activities is also being provided by other concerned organizations, such as the **Pacific Urchin Harvesters Association** <http://www.puha.org/>.

Reports of abalone poaching receive high priority with Fisheries & Oceans Canada Conservation and Protection Officers. Directed funds mean abalone-related reports receive attention. Local Fishery Officers are also working with groups like the Haida Gwaii Abalone Stewards in developing local Coast Watch programs. Increased fines through the courts and seizure of gear are helping to create deterrents. Genetics studies are ongoing to identify illegal abalone in the marketplace.

An **Abalone Coast Watch meeting** was held May 28, 2004 with contributions from BHCAP, HGAbS, HASP, KASP, Nisga'a Fisheries Program, TRAFFIC <http://www.traffic.org/>, and Dive Watch. The meeting focused on overcoming challenges and repeating successes. BHCAP's *Abalone Watch* has signed up over 70 coastal residents and HGAbS's *Abalone Watch* has just recently signed up 32 local charter operators.

HELP! Stop the illegal harvest and sale of northern abalone

All abalone fisheries in BC are closed.

There are no fisheries for northern abalone anywhere in the world.

Hatchery-raised northern abalone are not yet available for sale. So, if you see northern abalone or BC abalone caught, eaten or for sale, it has been obtained ILLEGALLY!

- DO NOT buy or eat wild BC abalone
- REPORT suspicious or illegal boating activity in Pacific waters to:

1-800-465-4336

Arrests, Convictions & News

Victoria Times Colonist Jan. 22, 2004
Undercover operation saves prized mollusks (front page).

Nanaimo News Bulletin Feb 12, 2004
Saving abalone an uphill battle (p. 3).

Vancouver Sun Apr 2, 2004
Poachers destroying a maritime delicacy (front page).

Victoria Times Colonist May 27 2004
Super Sleuth of the Wild (B1).

[ABALONE POACHER FINED \\$6,000](#)
NR-PR-03-53e - September 16, 2003

[CHARGES PENDING FOR ABALONE POACHING](#)

NR-PR-04-035e - May 20, 2004

More info on convictions is available at:
<http://www.pac.dfo->

mpo.gc.ca/ops/fm/shellfish/abalone/news_e.htm.

West Coast Vancouver Island Marine Species at Risk Workshop

Much of the work on species at risk is focused on terrestrial species and ecosystems, so the Bamfield Marine Sciences Centre hosted a *West Coast Vancouver Island Marine Species at Risk Workshop* June 13-14, 2004. The workshop provided an ideal opportunity for the discussion of issues and sharing of research and ideas that are specific to recovering marine species at risk, including abalone, sea otters and marbled murrelets.

Abalone Recovery Implementation Group

The May 28 meeting of the Abalone Recovery Team recommended that an 'Abalone Recovery Implementation Group' be formed to oversee implementation of the abalone recovery strategy / action plan.

5th International Abalone Symposium

The 5th International Abalone Symposium was held Oct 2003 in Qingdao, China. The total annual world supply of abalone was 22,679t in 2002 (vs. 20,370t in the 1970s – 1980s). Globally, production from abalone culture has now surpassed the wild fisheries. Two major abalone producing countries have closed their fisheries or threaten closure. USA, South Africa, Mexico, Japan have all seen reductions in catch, and Australia has seen a small reduction. Illegal catches are estimated to be significant in USA, Japan, New Zealand, Australia and South Africa. Japan and Mexico have seen reductions in the amount of cultured abalone being

produced. China and Taiwan have seen a slight increase.

6th International Abalone Symposium:
Chile late Feb or early Mar 2006 (before the International Aquaculture Fair).

Update on Sea Otter Recovery

A revised (Sept 2003) draft *Sea Otter Recovery Strategy* is available:

http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/sea-otters/default_e.htm

A draft *Sea Otter Recovery Action Plan* is available: http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/sea-otters/default_e.htm (*check the site for the release of the updated version).

The drafts are currently being reviewed for their compliance with *SARA* prior to being posted to the *SARA* Public Registry for a further 60 day public comment period.

Thank you

- Bamfield Huu-ay-aht Community Abalone Project
- Gwasala-Nakwaxda'xw Stewardship Project
- Haida Gwaii Abalone Stewards
- Heiltsuk Abalone Stewardship Project
- Kitasoo Abalone Stewardship Project
- Kitkatla Stewardship Project
- Pacific Urchin Harvesters Association
- Parks Canada Agency
- Fisheries and Oceans Canada

The federal Minister of Fisheries and Oceans Canada has authority for marine wildlife under the Canada Fisheries Act and leads the recovery team for abalone. The federal Parks Canada Agency is also involved in abalone recovery because of its responsibility for the coastline of Pacific Rim National Park, and because of its proposed Gwaii Haanas National Marine Conservation Area. The Province of BC is also involved, having jurisdiction over the sea bed and foreshore under the BC Land Act, and aquaculture facilities being subject to licencing under the Aquaculture Regulation of the BC Fisheries Act. Recovery Action Groups in local communities are those who are working closely with the recovery team to implement recovery programs.



Links for Further Info

Fisheries & Oceans Canada Abalone Page:
http://www.pac.dfo-mpo.gc.ca/sara/abalone_e.htm

Fisheries & Oceans Canada Species At Risk Page: http://www.pac.dfo-mpo.gc.ca/sara/default_e.htm

Species At Risk Act Public Registry:
<http://www.sararegistry.gc.ca/>

National Recovery Strategy for the Northern Abalone in BC: http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/fisheriesmgmt/abalone/documents/AbaloneRecovStrategy_e.htm

National Recovery Action Plan for the Northern Abalone in BC (Draft):
http://www-comm.pac.dfo-mpo.gc.ca/pages/consultations/fisheriesmgmt/abalone/Abalone_action%20plan_final%20draft%20Aug%2015%202003.htm

Recovery Newsletter June 2003 #24 (see abalone article in 'News Bites')
http://www.speciesatrisk.gc.ca/publications/newsletter/june03/default_e.cfm