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Robson Bight (Michael Bigg)

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Dept. of Geography  
University of Victoria

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ECOLOGICAL RESERVES COLLECTION  
GOVERNMENT OF BRITISH COLUMBIA  
VICTORIA, B.C.  
V8V 1X4

Strategies for Research

ECOLOGICAL RESERVES UNIT  
1019 WHARF ST.  
VICTORIA, B.C. V8W 2Y9  
Kerino

into non-consumptive Use and Management

of Cetaceans on the British Columbia Coast

Rationale

Non-consumptive use of cetaceans is rapidly increasing, at two sites in particular, on the British Columbia coast. At both of these locations a single whale species utilizes the area in a part of their life cycle that makes them accessible to shore-based whale watching. The management and orderly development of this activity currently rests on a frail infrastructure. Although pioneering cetological research has been done on these species at these sites, no work has been undertaken to integrate the human dimensions of non-consumptive whale use and the ecological and behavioural needs of the whales. It is therefore important to begin research into recreational whale watching to ensure that the activity can be managed in such a way that the resource base is not diminished by uncontrolled development that does not account for both social and biological aspects.

Research Strategies

This project will examine two principle aspects of whale watching; the human sphere of activities, and the cetacean subjects. Within these two general areas several specific topics will be addressed:

a) Human Dimensions

1. Human-Whale Interactions

- historical consumptive use
- present regulation of consumptive use
- non-consumptive use
- indirect interaction

2. The Role of Public Opinion

- change in profile and opinion regarding whales
- analysis of printed material regarding whales

3. Resource-Based Recreation

- user groups
- the tourism industry
- the role of government agencies
- the economic value
- recreation management and planning

b) Ecological Dimensions

1. Behaviour of whales at the sites

2. Ecology of whales at the sites

3. Harrassment

- whale movements in relation to watcher craft
- injury to whales by watcher and other craft
- general changes in site use patterns

## Study Areas

### a) Robson Bight

Robson Bight is a 3.5 km wide bay on Johnstone Strait on the northeast coast of Vancouver Island. The site has been a center of research into the biology and behaviour of killer whale (Orcinus orca). The whales use the bight as a social\rest area and are probably attracted to the general area by the feeding opportunity of salmon concentrations in the narrow straits. Robson Bight is also the site of a land use conflict between logging interests who proposed to use the area as a booming ground, and groups who valued the features of the area undeveloped. The situation is currently in a semi-stable state regarding its role in the killer whale life cycle, but as a result of the publicity generated to preserve the area more tourism pressure has been forthcoming.

### b) Pacific Rim Area

The Pacific rim area is a section of the southwestern coast of Vancouver Island, roughly bounded by Clayoquot Sound on the north, and Barkley Sound on the south. It is situated on the migration route of the gray whale (Eschrichtius robustus) between its summer feeding grounds in the Chukchi and Bering Seas and the calving grounds at Baja California. During migration peaks, and to a certain extent during the summer, commercial tour operators take people into visual, and occasionally tactile, contact with the whales. Whale watching is expanding in this area, some of

which is based on summer populations. Although these whales have been observed and documented, very little is known about the factors affecting summer grey whale movements.

c) Other Areas

Several other areas will serve as secondary information sources from which data can be compared.

1. San Juan Islands-killer whale core area
2. California coast-major grey whale watching area
3. Hawaii-official sanctuary proposed for humpback whales.
4. Glacier Bay, Alaska-management of whale watching use
5. Gulf of St Lawrence-whale watching and a protection area proposal
6. Cruise ships that include whale watching

Research Tools

Although specific research methods have not yet been proposed, some general tools can be outlined.

- a) A questionnaire survey of both users and commercial tour operators, delivered in a kit form and returned by mail.
- b) Personal interviews with cetological researchers.
- c) File information from government agencies and commercial tour operators.
- d) Newspaper and magazine articles.
- e) Whale position tracking in relation to watcher craft by

- either instrument tracking or photographic recording.
- f) Published research into whale ecology and biology.
  - g) Contact with other researchers with comparable studies.