

Marine Invertebrates – Coral Occurrences I - Groundfish Trawl Surveys

description

Corals are sessile (immobile) benthic organisms that generally filter feed on material as it passes by in the bottom current. Corals are composed of tiny polyps joined into colonies and select cold-water coral species can form large, tree-like structures. Corals found in the Canadian Pacific are called cold-water corals, and there are over 80 species in our study area (Fisheries and Oceans Canada, 2009). Some species inhabit shallow waters and others live in great depths. Corals in this region can exist as solitary individuals, but they often form communities called groves, forests, or reefs. In any of these forms, corals can provide habitat for a wide range of other organisms, and are referred to as a foundation species for this reason. Their role as rich and protective habitats for other organisms makes them hotspots of biodiversity and, therefore, ecologically important. Few data are available to map the full extents of their habitat.

Coral presence and absence are illustrated here representing cumulative observations from groundfish bottom trawl surveys from 2004 to 2009, which are jointly conducted and funded by the Canadian Groundfish Research and Conservation Society (CGRCS) and Fisheries and Oceans Canada (DFO). Each planning unit identified as either presence or absence was surveyed at least once during those five years. Although all biota from each survey trawl is recorded, corals are generally not identified to species level and thus all corals are lumped together here for illustration. The extents of the synoptic survey areas are also illustrated. Please see the atlas page titled, “Groundfish Trawl Survey Areas and Untrawlable Areas” for added information on the surveys.

Data were provided by DFO as tallied observations for BC Marine Conservation Analysis (BCMCA) planning units with successful survey tows. Note that the maximum possible number of tows in any one planning unit ranges from three to five and the retrieval of coral in any one of those tows would indicate presence on the adjacent map.



PHOTO: LIVING OCEANS SOCIETY

data sources

- Fisheries and Oceans Canada, Pacific Region, Science Branch, Groundfish Section

data resolution

- Source data is collected by tow and GPS locations are recorded. DFO summarized the data illustrated here into 2 kilometre by 2 kilometre planning units.

date collected

- 2004 - 2009

reviewers

- Reviewed for accuracy and presentation by data providers and industry representative.

reviewer comments

- None provided.

caveats of use

- Survey design allows the skipper to choose the tow location within an area. Therefore, coral may not have been observed in some planning units because the entire planning unit was not surveyed.
- Spatial extents of trawl surveys are limited. Lack of data outside these areas should not be interpreted as lack of fish and invertebrate biota. The Strait of Georgia, Strait of Juan de Fuca, Queen Charlotte Strait, Johnstone Strait and offshore areas have not been surveyed.
- All surveys are a limited view of reality. Species caught and recorded are partly a function of the fishing gear used. Each survey has unique gear limitations and therefore the size of individuals caught varies and the net efficiency varies. However, groundfish trawl surveys do use standardized gear and tow duration.
- Recommended date of expiry for use of these data in a marine planning context: None provided.

map, feature data and metadata access

- Visit www.bcmca.ca/data for more information.

references

- Fisheries and Oceans Canada (DFO). Seamounts, Cold-water Corals, Hydrothermal Vents and Sponges. 2009. 11 May 2010. www.dfo-mpo.gc.ca/international/media/bk_20090720-01-eng.htm
- Reports on Trawl Surveys are available for download here: www.dfo-mpo.gc.ca/libraries-bibliotheques/manu-eng.htm

BCMCA Atlas
Marine Invertebrates
Coral Occurrences I

Legend

Groundfish Trawl Surveys
 2004-2009

- Coral Presence
- Coral Absence

Synoptic Survey Areas

Data Sources:

Fisheries and Oceans Canada

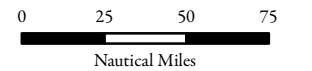
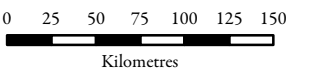
Base Data:

ESRI Base Data, GeoBase, GeoBC, NOAA, Natural Resources Canada, USGS, Washington State Government

Thematic Data:

For more information on data sources and methods please refer to the facing page to this map

Projection: BC Albers NAD83



1:4,250,000 *

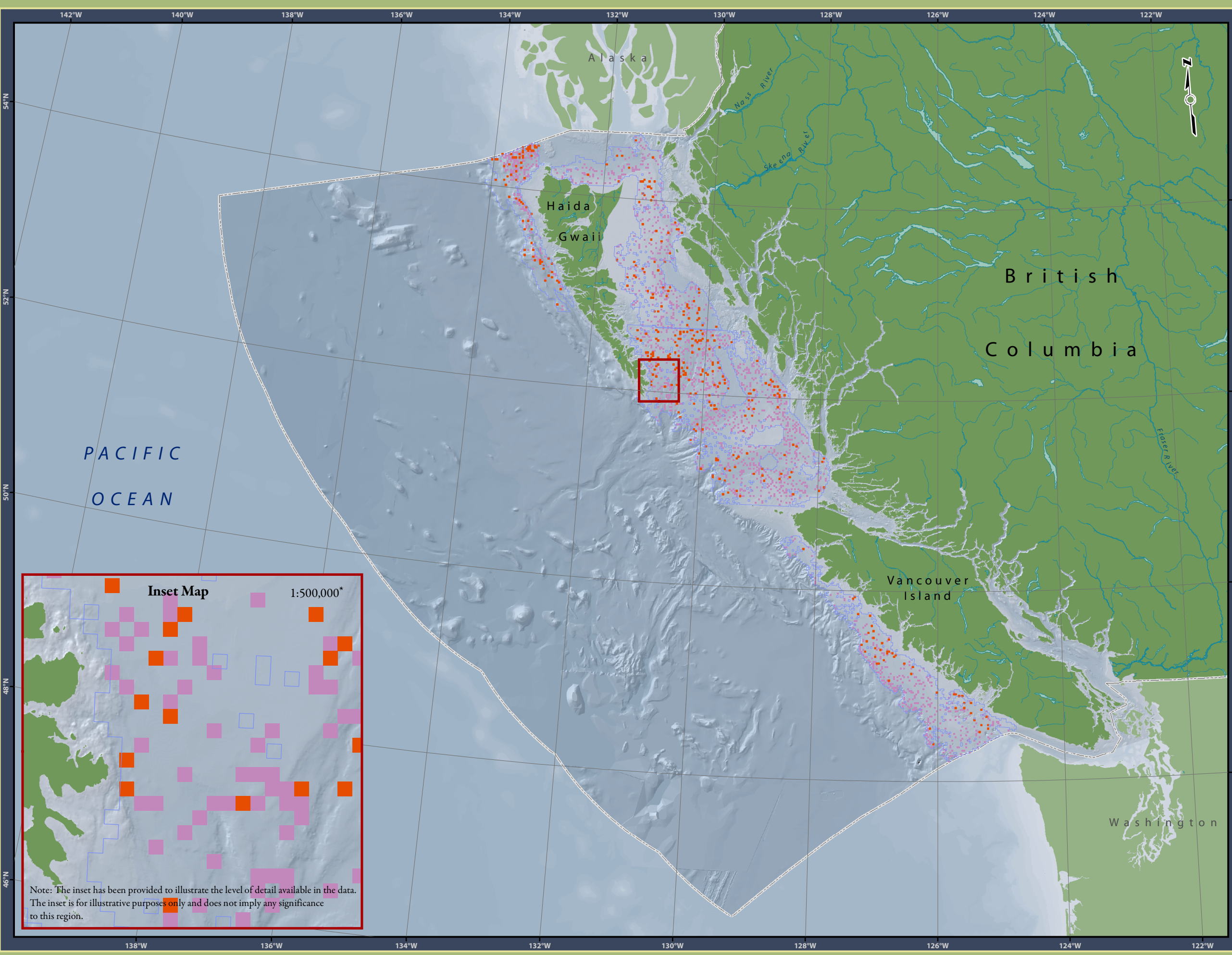
* Written scales are approximate and are based on a 11 x 17 inch paper size.

Prepared for:



Map template by Caslys Consulting Ltd.

June 17, 2010



Note: The inset has been provided to illustrate the level of detail available in the data. The inset is for illustrative purposes only and does not imply any significance to this region.