

Marine Fish and Invertebrates – Groundfish Fishery Observer Data – Species Richness, January 2004 - February 2010

description

The commercial groundfish trawl fishery employs both midwater and bottom trawl gear. All biota caught in the nets are recorded by government certified observers. This atlas page illustrates the total number of different species observed for each planning unit where a minimum of three boats was recorded within the time period represented.

This map illustrates the relative richness (number of species observed) of biota across the region fished. Species in this case includes everything identified in the catch to any taxonomic level. Identification is not always to the species level. All biota, both fishes and invertebrates, from both midwater and bottom trawl gear, are included. Areas of high species richness may correspond to areas of ecological importance.

Data were provided by DFO as total number of species observed for BC Marine Conservation Analysis (BCMCA) planning units where a minimum of three boats was recorded within the time period represented. Data were provided for a total of 3,270 planning units and excluded for 4,196 planning units, where fewer than 3 boats fished, meaning that the data illustrated represents about 44% of the planning unit area with fishery effort and 80% of the total number of tows. Tows were omitted due to confidentiality requirements and filtering criteria (e.g. valid fishing dates and tow locations). Richness values are classified for illustration into 6 equal interval classes. The distribution of richness values among planning units (Figure 1) is slightly skewed. The total number of species observed over the entire observer dataset does vary from year to year (Table 1).

Year	Number of Species
2004	321
2005	315
2006	327
2007	281
2008	221
2009	242
2010	163

TABLE 1. TOTAL NUMBER OF SPECIES OBSERVED IN EACH YEAR.

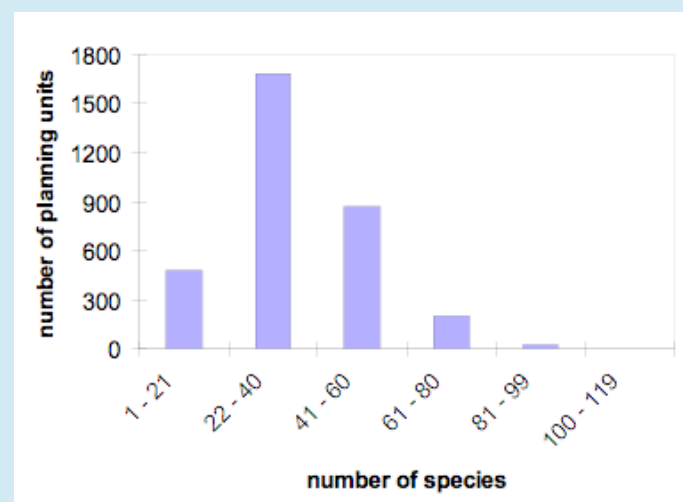


FIGURE 1. DISTRIBUTION OF SPECIES OBSERVED COUNTS ACROSS PLANNING UNITS ILLUSTRATED.

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

- January 2004 – February 2010

reviewers

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

reviewer comments

- None provided.

caveats of use

- Data illustrated do not represent the entire spatial extents of trawl fishery effort. Areas without data should not be interpreted as lack of fish and invertebrate biota, or as lack of fishery effort.
- Catch data represents a limited view of reality. Species caught and recorded are partly a function of the fishing gear used. Each type of fishing gear has limitations and therefore the size of individuals caught varies, as does the net efficiency. Tow duration is not standardized so catch recorded is standardized by effort.
- Catch data represents only the seasons when the fishery operated. Many species do migrate with season.
- Recommended date of expiry for use of these data in a marine planning context: None provided.
- Decrease in the total number of species observed from 2004 to 2010 should not be interpreted as fewer species in the marine environment.

map, feature data and metadata access

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

BCMCA Atlas
Marine Fish and Invertebrates
Groundfish Fishery Observer
Data - Species Richness
January 2004 - February 2010

Legend

Number of Species Observed

- 1 - 21
- 22 - 40
- 41 - 60
- 61 - 80
- 81 - 99
- 100 - 119

Depth (m)
 ~ 100 ~ 200

Notes:
 - "Species" includes everything identified in the catch to any taxonomic level.
 - Only planning units with 3 or more fishing vessels recorded were available for display, i.e. 44% of all planning units with fishing effort or 80% of all tows.
 - See facing page for the count of species observed in each year.

Data Sources:

Fisheries and Oceans Canada

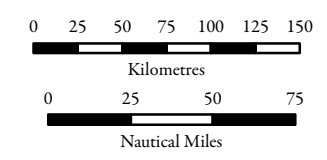
Base Data:

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 *

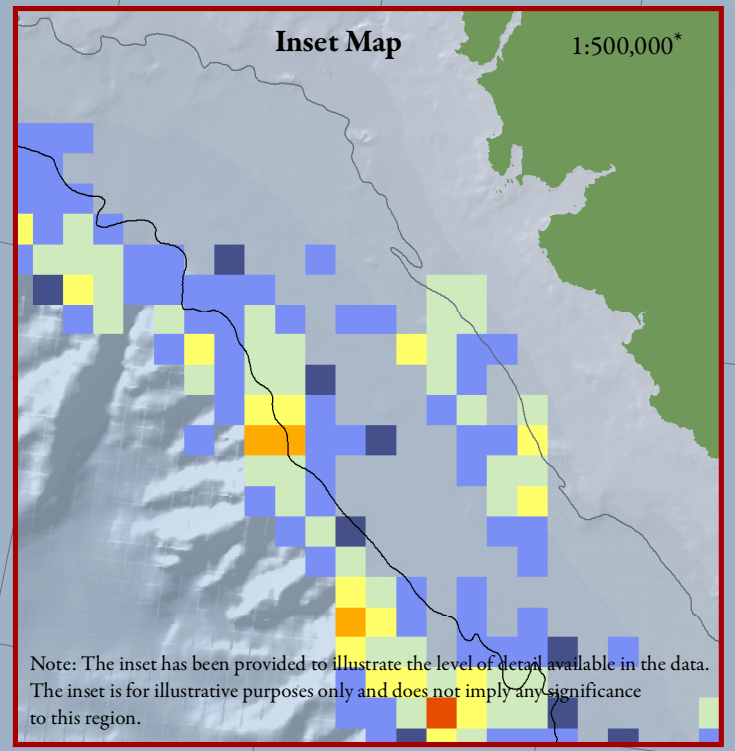
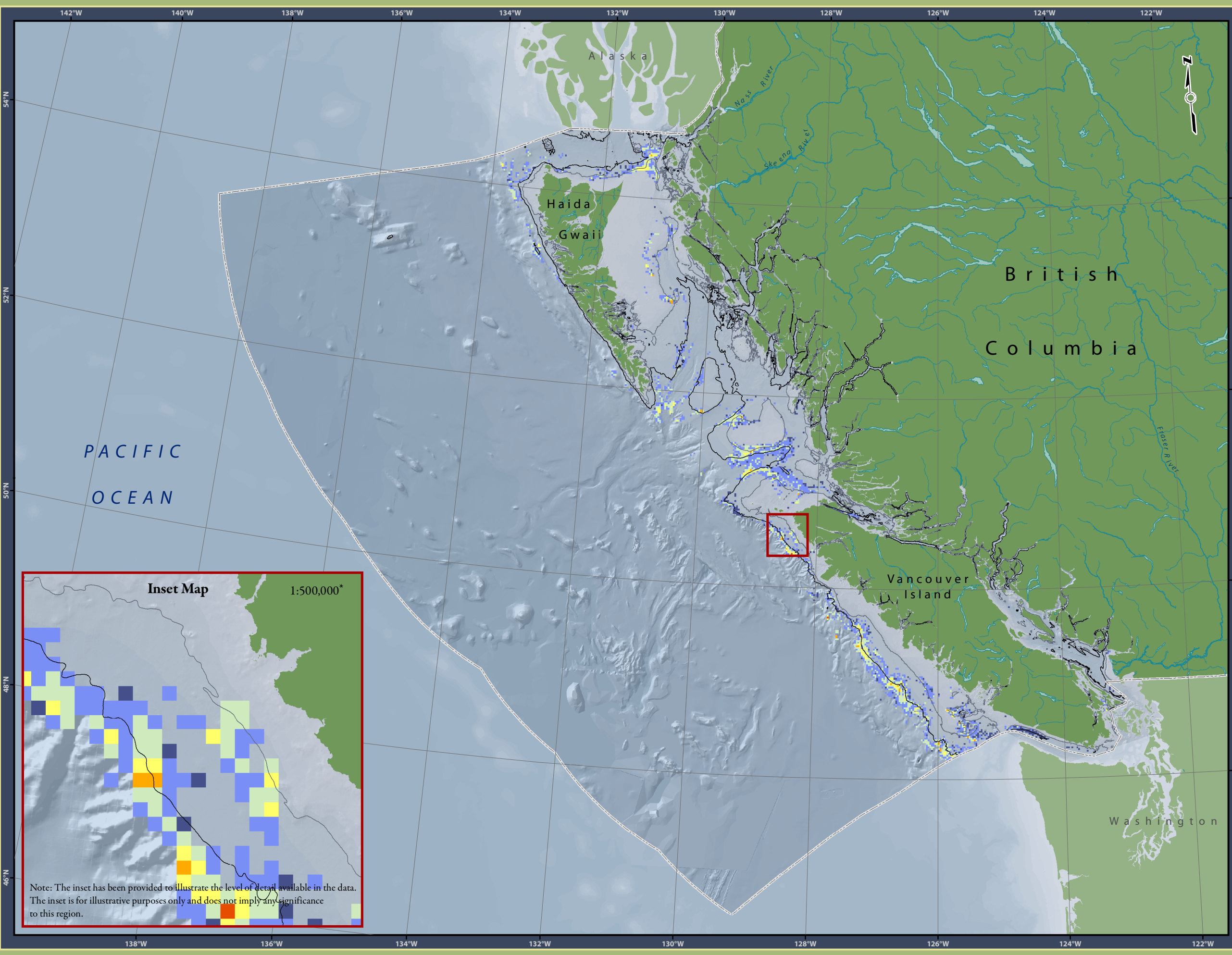
* Written scales are approximate and are based on a 11 x 17 inch paper size.

Prepared for:



Map template by Caslys Consulting Ltd.

June 14, 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.