Marine Plants – Feature Count

description

One of the goals of BC Marine Conservation Analysis (BCMCA) is to collaboratively identify marine areas of high conservation value and areas important to human use in Canada's Pacific Ocean, and to make these products available for use in marine planning. In order to identify areas of high conservation value the BCMCA ran Marxan analyses using a wide range of ecological data, recommended by subject matter experts, as conservation features. These and other data are illustrated in the BCMCA Atlas.

Marine plants are an integral part of the marine ecosystem, providing food and habitat for a large number of other organisms, including birds, invertebrates, and juvenile and adult fish. Marine plants are an important source of biodiversity and play a critical role in nearshore ecosystem function. They are fundamental in maintaining ecosystem integrity and are commonly used as indicators for the health and condition of the nearshore marine environment. In the BCMCA, some marine plants are also important focal species whose presence indicates other species, or can be used to characterize a particular habitat or community.

This map was generated by overlaying all of the marine plant data that the BCMCA collated to go into the Marxan analysis. This map illustrates the number of different plant features that inform each 2 kilometre by 2 kilometre planning unit. There were a total of 40 different plant features used in the Marxan analysis and, as this map shows, up to 15 of them overlapped in some of the planning units. Feature count values were classified for illustration using quantiles. (A quantile is established by dividing the frequency distribution of a variable into equal groups: that is, each quantile contains the same fraction of the total number of values being measured.)

Forty plant features were included in this tally:

- Bull Kelp Beds
- Bull Kelp Bioband
- Ditch Grass
- Dune Vegetation
- Eelgrass Bioband
- Eelgrass Polygons
- Estuaries
- Feather Boa Kelp
- General Kelp
- Giant Kelp Beds
- Giant Kelp Bioband
- Giant Perennial Kelp
- Important Algae Habitat 1 - Boulder/Cobble floor
- Important Algae Habitat 2 - Rocky Intertidal Substrate, Protected or Very Protected Exposure Classes
- Important Algae Habitat 3 - Rocky Intertidal Substrate, Semi-Exposed or Semi-Protected Exposure Classes
- Important Algae Habitat 4 - Rocky Intertidal Substrate, Exposed or Very Exposed Exposure Classes
- Important Algae Habitat 5 - Mudflats and Estuarine Shorelines
- Priority Eelgrass Habitat
- Salt Marsh Bioband
- Surfgrass Bioband
- Rare Algae - *Codium ritteri*
- Rare Algae - *Desmarestia tortuosa*
- Rare Algae - *Dictyoneurum*
- Rare Algae - *Laminaria farlowii*
- Rare Algae - *Laminaria longpipes*
- Rare Algae - *Laminaria sincalirii*
- Rare Algae - *Antithamnion kylinii*
- Rare Algae - *Arthrocardia silvae*
- Rare Algae - *Hollenbergia nigricans*
- Rare Algae - *Phycodrys rigii*
- Rare Algae - *Tayloriella abyssalis*
- Rare Algae - *Tayloriella divaricata*
- Rare Algae - *Thuretellopsis peggiana*
- Rare Algae - *Tokidaea chilkatensis*
- Rare Algae - *Whidbeyella cartilaginea*
- Rare Algae - *Rhodolith* bed
- Rare Algae - *Lithothrix* (red algae)
- Rare Algae - *Cystoseira*
- Rare Algae - *Eisenia arborea*

data sources

- British Columbia Conservation Data Centre
- Capital Regional District
- Community Mapping Network
- Cynthia Durance
- Environment Canada (Canadian Wildlife Service)
- Fisheries and Oceans Canada
- Living Oceans Society
- Louis Druehl
- Michael Coon
- Pacific Estuary Conservation Program
- Parks Canada
- Province of British Columbia
- University of British Columbia Herbarium

(Note: Please see individual feature atlas pages and/or metadata for feature specific data sources.)

data resolution

- Features were tallied by their presence in 2 kilometre by 2 kilometre planning units.

date compiled

- 2010

reviewers

- Not reviewed.

reviewer comments

- None provided.

caveats of use

- Survey effort for marine plants has not been equally distributed across the Canadian Pacific and this map is not standardized for effort. Areas with no data may not have been surveyed and these data gaps are not necessarily indicative of an absence of marine plants. Some locations may still be important to marine plants but currently lack associated data to confirm their value.
- Much of the data used for this group of features is fairly dated (eg, kelp surveys from the 1970s and 1980s). Please see individual feature atlas pages and metadata for feature or species specific caveats.
- 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.

BCMCA Atlas

Marine Plants

Feature Count

Legend

Feature Count
(by planning unit)

- 1
- 2
- 3
- 4
- 5 - 6
- 7 - 15

Note:
- Classification based on 6 quantiles.

Data Sources:
British Columbia Conservation Data Centre,
Capital Regional District,
Community Mapping Network,
Cynthia Durance,
Environment Canada
(Canadian Wildlife Service),
Fisheries and Oceans Canada,
Living Oceans Society,
Louis Druehl,
Michael Coon,
Pacific Estuary Conservation Program,
Parks Canada,
Province of British Columbia,
University of British Columbia Herbarium

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

0 25 50 75 100 125 150
Kilometres
0 25 50 75
Nautical Miles

1:4,250,000 *

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

Prepared for:

BC Marine Conservation Analysis

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Alaska
Haida Gwaii
British Columbia
Vancouver Island
Washington
PACIFIC OCEAN
Nass River
Skeena River
Fraser River

142°W 140°W 138°W 136°W 134°W 132°W 130°W 128°W 126°W 124°W 122°W
54°N 52°N 50°N 48°N 46°N
N-55 N-50 N-45

Inset Map 1:500,000*

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.