

Marine Plants – Rare Algae – Series 3

description

Algae are a vast group of predominantly aquatic unicellular and multicellular organisms inhabiting fresh, brackish, and marine waters without respect to size or degree of permanence of the habitat. They may be planktonic (free-floating or motile) or benthic (attached). Benthic marine algae are commonly called seaweeds. Seaweeds are a macroscopic, marine subset of algae (as opposed to the microscopic subset known as marine phytoplankton). Substrates include rocks (outcrops, boulders, cobbles, pebbles), plants (including other algae), animals, boat bottoms, piers, debris and, less frequently, sand and mud.

This map illustrates the locations of various forms of algae that are considered rare in BC, most at their northern or southern limit. The data was obtained from the University of British Columbia (UBC) Herbarium and the Conservation Data Centre (CDC). The CDC uses a standard methodology to buffer collection observations by an uncertainty value, depending on precision of location. BC Marine Conservation Analysis (BCMCA) followed the same methodology for points obtained from the UBC Herbarium to allow the datasets to be combined. The result is that point locations with greater uncertainty (i.e. less precise coordinates) are buffered by a larger area.

The image below is an example of the alga, *Postelsia palmaeformis*.



PHOTO: MICHAEL HAWKES

data sources

- British Columbia Conservation Data Centre – Algae element occurrences
- University of British Columbia Herbarium – Algae specimen records

data resolution

- Data points with lower precision (i.e. those defined to the nearest degree or minute) are buffered by a larger area. More precise coordinates generally have GPS coordinates defined to the decimal minute or second.

date collected

- *Laminaria farlowii* – 1915-1992
- *Laminaria longipes* – 1968-1979
- *Laminaria sinclairii* – 1953-199
- *Postelsia palmaeformis* – 1916-1987
- Rhodolith *spp.* – 1997

date compiled

- 2009

reviewers

- Robert DeWreede, University of British Columbia, Botany
- Sandra Lindstrom, University of British Columbia, Botany
- Michael Hawkes, University of British Columbia, Botany

reviewer comments

- *Laminaria farlowii* – A weedy kelp probably on the edge of its range in BC. It may come and go naturally. Large and unique seaweed – easy to identify.
- *Laminaria longipes* – Specimen identifications need to be verified as this species can be confused with others. Specimens in BC may be relics from glacial times. They should be examined for unique genotypes.
- *Laminaria sinclairii* – Effort should be made to identify additional populations.
- *Postelsia spp.* – This species has a very restricted ability to disperse.
- Rhodolith *spp.* – These beds tend to have unique species assemblages.

caveats of use

- Survey effort is not consistent across all planning units or across all areas of the coast and some species tend to be under-represented by some survey methods. Areas with no data may not have been surveyed and these data gaps are not necessarily indicative of an absence of these algae species. Some locations may still be important but currently lack associated data to confirm their value.
- This feature is a compilation of data collected by many people, for different purposes, using different survey techniques with different methodologies within each technique and, therefore, considerable care must be taken when using the data. Please refer to the original metadata document for data limitations and usage.
- 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

- Species description contains material from: McGraw-Hill *Concise Encyclopedia of Bioscience*. 2002. Accessed: 29 June 2010. www.encyclopedia2.thefreedictionary.com/algae
- For more information about Conservation Data Centre (CDC) methods please see: www.env.gov.bc.ca/cdc/methods.html
- Additional data sources found during feature review process:
 - Scagel RF, Gabrielson PW, Garbary DJ *et al.* *A Synopsis of the Benthic Marine Algae of British Columbia, Southeast Alaska, Washington and Oregon*. Department of Botany, The University of British Columbia, Vancouver. 1993
 - Hawkes, MW. Benthic Marine Algal Flora (Seaweeds) of British Columbia: Diversity and Conservation Status. Chap. 11 In: Biodiversity in British Columbia: Our Changing Environment, edited by E. McCullum & L. Harding. Environment Canada: Vancouver. 1994.

BCMCA Atlas
Marine Plants
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Legend

Species

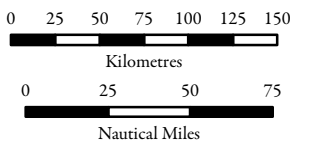
- Laminaria farlowii*
- Laminaria longipes*
- Laminaria sinclairii*
- Postelsia palmaeformis*
- Rhodolith spp.

Data Sources:
 British Columbia Conservation Data Center,
 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



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.

April 16, 2013

