Data Set Citation

When using this data, please cite the data package

Chow-Fraser P and Montocchio D.
Coastal Wetland Macrophyte Species Data (consolidated by wetland site), Great Lakes, ON, Canada, 1996-2019
dani_montocchio.3.3

General Information

Title:	**Coastal Wetland Macrophyte Species Data (consolidated by wetland site), Great Lakes, ON, Canada, 1996-2019**
Identifier:	dani_montocchio.3.3
Abstract:	This is a consolidated data set based on the larger dataset synthesized by the Pat Chow-Fraser Wetland Ecology lab. This data was collected in order to calculate the Wetland Macrophyte Index (WMI) for selected coastal wetland sites in the Laurentian Great Lakes region between the years of 1996-2019. See Croft and Chow-Fraser (2007) for more details.
Keywords:	○ coastal wetland ○ macrophyte ○ WMI ○ ecological indicator ○ species ○ Great Lakes ○ Georgian Bay

Data Table, Image, and Other Data Details:

Metadata download	Ecological Metadata Language (EML) File

Data Table:

Name:	**WMI_DataOverviewbyWetland.csv**
Description:	Conslidated macrophyte species data by wetland sites

Physical Structure Description:

Object Name:	WMI_DataOverviewbyWetland.csv
Size:	54135 byte
Text Format:	Number of Header Lines: 1 Record Delimiter: #x0A Attribute Orientation: column Simple Delimited: Field Delimeter: ,

Number Of Records:	703

Online Distribution Info:

ecogrid://knb/dani_montocchio.5.1

Attribute(s) Info:

Name	Column Label	Definition	Type of Value	Measurement Type	Measurement Domain	Missing Value Code	Accuracy Report	Accuracy Assessment	Coverage	Method

Code	Wetland Code	Code allocated to standardize site name and location.	character	nominal	**Def** Codes range in 2-4 characters lengths with capital letters and numbers.					
Name	Wetland Site Name	Site Name as defined by the researchers	character	nominal	**Def** Site names					
Year		Year that the data was collected in.		dateTime						
Date		Date a given site was sampled on.		dateTime						
Lat	Latitude	Latitude of site location.	number	ratio	**Unit** Latitude **Precision** 0.0000001 **Type** real					
Long	Longitude	Longitude of site location.	number	ratio	**Unit** Longitude **Precision** 0.0000001 **Type** natural					
Water Level	Lake Huron water level	Level of Lake Huron on the day of sampling. Values taken from the Collingwood sampling station.	number	interval	**Unit** meter **Precision** 0.001 **Type** real					
Abun	Species Abundance	# of species sampled in a given site	integer	ratio	**Unit** number **Type** natural					
Emer	Total # of emergent	Total number of macrophyte species identified that can be classified as a part of the emergent wetland zone	integer	ratio	**Unit** number **Type** natural					
Float	Total # of floating	Total number of macrophyte species identified that can be classified as a part of the floating wetland zone	integer	ratio	**Unit** number **Type** natural					
Sub	Total # of submergent	Total number of macrophyte species identified that can be classified as a part of the submergent wetland zone	integer	ratio	**Unit** number **Type** natural					
Terr	Total # of terrestrial	Total number of plant species that are actually terrestrial, but were found in the inundated zone of the wetland	integer	ratio	**Unit** number **Type** natural					
Native	Total # of native	Total number of macrophyte species identified as native to a given region	integer	ratio	**Unit** number **Type** natural					
Exotic	Total # of exotic	Total number of macrophyte species identified as exotic to a given region	integer	ratio	**Unit** number **Type** natural					

Data Table:

Name:	**taxa_coverage.txt**

Physical Structure Description:

Object Name:	taxa_coverage.txt
Size:	2200 byte
Text Format:	Number of Header Lines: 0 Record Delimiter: #x0A Attribute Orientation: column Simple Delimited: Field Delimeter: #x09
Number Of Records:	111

Online Distribution Info:

ecogrid://knb/dani_montocchio.6.1

Attribute(s) Info:

Name	Column Label	Definition	Type of Value	Measurement Type	Measurement Domain	Missing Value Code	Accuracy Report	Accuracy Assessment	Coverage	Method
Taxa	Scientific name of taxa	Taxanomic coverage of dataset	character	nominal	Def genus species					

Involved Parties

Data Set Creators

Individual:	**Dr. Patricia Chow-Fraser**
Organization:	**McMaster University**
Position:	Professor

Individual:	**Ms. Danielle Montocchio**
Organization:	**McMaster University**
Position:	PhD Candidate
Address:	1280 Main St W, Hamilton, Ontario L8S 4L8 Canada
Email Address:	montocds@mcmaster.ca

Data Set Contacts

Individual:	**Ms. Danielle Montocchio**
Organization:	**McMaster University**
Position:	PhD Candidate
Address:	1280 Main St W, Hamilton, Ontario L8S 4L8 Canada
Email Address:	montocds@mcmaster.ca

Associated Parties

Individual:	**Ms. Danielle Montocchio**
Organization:	**McMaster University**
Position:	PhD Candidate
Address:	1280 Main St W, Hamilton, Ontario L8S 4L8 Canada
Email Address:	montocds@mcmaster.ca

Data Set Characteristics

Geographic Region:

Geographic Description:	Laurentian Great Lakes region
Bounding Coordinates:	West: -92.0 degrees East: -75.25 degrees North: 49.25 degrees South: 40.625 degrees

Time Period:

Begin:	1996
End:	2021

Sampling, Processing and Quality Control Methods

Step by Step Procedures

Step 1:	
Description:	**Quadrat Placement** Quadrat is randomly placed in one of the wetland's vegetation zone (low-marsh, high-marsh, deep water).
Instrument(s):	1m^2 quadrat
Step 2:	
Description:	**Species Collection** A rake is used to sweep to the bottom of the wetland in a sweeping-fashion within the quadrat to collect macrophyte species samples.
Instrument(s):	Rake
Step 3:	
Description:	**Species Identification**

	Macrophyte samples are identified to species, or genus when species cannot be verified.
Instrument(s):	Macrophyte Identification Key
Sampling Area And Frequency:	All plant species (macrophyte or terrestrial) are identified if they are found in the inundated zone of the wetland.
Sampling Description:	Plant surveys were conducted in late July to early and mid-August when growth of macrophyte species is at its maximum. We used a stratified random sampling method (Croft and Chow-Fraser, 2009), in which 8 to 12 quadrats (1m2) were sampled that represented all aquatic zones within the wetland. This same protocol was used in both Periods 1 and 2, although in Period 2, the meadow zone was inundated. As well, during the period of high-water levels, we could not sample the water's edge in some cases because the shoreline was abutting trees and rocks. All plant species within or touching the quadrat were identified to the species level, whenever possible, but at least to genus, except for freshwater sponge. This identification process was repeated until no new species were found in two consecutive quadrats.

Data Set Usage Rights

Access Control:		
Auth System:	knb	
Order:	allowFirst	
Allow:	[read]	public

Additional Metadata

```
additionalMetadata
        |___element 'metadata'
        |     |___element 'unitList'
        |     |     |___element 'unitType'
        |     |     |     |  \___attribute 'id' = 'mappingCoordinate'
        |     |     |     |  \___attribute 'name' = 'mappingCoordinate'
        |     |     |     |___element 'dimension'
        |     |     |     |        \___attribute 'name' = 'Dimensionless'
        |     |     |     |___text '\n '
        |     |     |___text '\n '
        |     |     |___element 'unit'
        |     |     |     |  \___attribute 'id' = 'Latitude'
        |     |     |     |  \___attribute 'multiplierToSI' = ' '
        |     |     |     |  \___attribute 'name' = 'Latitude'
        |     |     |     |  \___attribute 'parentSI' = 'ampere'
        |     |     |     |  \___attribute 'unitType' = 'mappingCoordinate'
        |     |     |     |___element 'description'
        |     |     |     |     |___text 'decimal degrees'
        |     |     |     |___text '\n '
        |     |     |___text '\n '
        |     |___text '\n '
        |___text '\n '
```