Data for

***Three centuries of biogeochemical change in a temperate embayment as revealed by sediment core stable isotopes and historical ecology***

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This repository contains data for the manuscript “Three centuries of biogeochemical change in a temperate embayment as revealed by sediment cores stable isotopes and historical ecology”, by Sawyer J. Balint, Morgan Schwartz, Andrew Gray, Tim Cranston, Robinson W. Fulweiler, Melissa Hagy, Rick McKinney, and Autumn Oczkowski.

**File description for sediment\_core\_data.csv**

**location**: location classifier of the sediment core, either North, Middle, or South

**latitude.degrees**: latitude of the sediment core in decimal degrees

**longitude.degrees**: longitude of the sediment core in decimal degrees

**depth.cm**: starting depth of the sediment core subsection, in centimeters from the top of the core

**%N**: percent nitrogen by mass

**d15N.permil**: nitrogen isotopic composition relative to atmospheric air

**%C.total**: percent total carbon by mass

**d13C.total**: carbon isotopic composition of the total carbon, relative to VPDB, in units of permil

**%C.organic**: percent organic carbon by mass

**d13C.total**: carbon isotopic composition of organic carbon, relative to VPDB, in units of permil

**%P.inorg**: percent inorganic phosphorus by mass

**%P.total**: percent total phosphorus by mass

**%P.org**: percent organic phosphorus by mass

**%BSi**: percent biogenic silica by mass

**%water**: percent water by mass

**bulk.density.gcm3**: bulk density of sediment in units of g/cm3

**accretion.rate.gcmyr**: accretion rate of sediment in units of g cm-1 year-1

**median.grainsize.um**: median grainsize in units of micrometers

**clay.pct**: percentage clay

**pebbles.pct**: percentage pebbles

**sand.pct**: percentage sand

**silt.pct**: percentage silt

**skewness.um**: grainsize skewness in units of micrometers

**kurtosis.um**: grainsize kurtosis in units of micrometers

**mean.grainsize.phi**: mean grainsize in units of φ

**median.grainsize.phi**: median grainsize in units of φ

**sd.grainsize.phi**: standard deviation of grainsize (i.e., sorting) in units of φ

**year.min**: minimum estimated age of the sediment sample (95% confidence interval)

**year.max**: maximum estimated age of the sediment sample (95% confidence interval)

**year.median**: average estimated age of the sediment sample

**year.mean**: average estimated age of the sediment sample

**outlier**: Boolean of whether the sediment sample is classified as an extreme outlier; see methods.

**N.P.ratio**: ratio of %N to %Ptotal

**C.N.ratio**: ratio of %Corganic to %N

**C.P.ratio**: ratio of %Corganic to %Ptotal

**cluster**: cluster of sediment sample as defined by hierarchical clustering analysis; see methods.

**File description for timeline\_data.xlsx**

**Sheet 1: timeline**

**date**: year of event

**description**: description of event

**type**: origin of the event description; either primary literature, secondary literature, or newspaper

**reference**: reference for the data

**Sheet 2**: population

Data from the U.S. Census

**Year**: year of census

**Region**: geographic area of population. Either North Kingstown, Wickford, or Tract 503.02

**Population**: the total adult population for the region recorded in the census