Cape Cod Tidal Flats

Brewster, Massachusetts

Coordinates: N41° 46.632 W070° 05.593
Geocaching.com code: GC1E67W
Type of Cache: Earthcache*

Please use caution and pay attention to the tides! The ideal time to search for this cache is the 2 hour period beginning 1-hour before low tide and ending 1-hour after the low tide. However, the creeks may still require wading even at low tide.
Predicted tide times and heights:
http://tidesandcurrents.noaa.gov/noaatidepredictions/viewDailyPredictions.jsp?Stationid=8447241

Cape Cod is the southern end of the Gulf of Maine. The tidal flats of Cape Cod Bay are a unique environment. It is said that the Brewster Flats are the widest expanse of tidal flats in North America, with only a location in Brazil almost on par. The presence of tidal flats in the coastal environment is very important to shorebirds and wading birds. The invertebrates of the flats provide an abundant food source for shorebirds. Adjacent upland and transitional habitats provide areas for nesting and roosting. Tidal flats are also a source of nitrogen to the ecosystem since the blue-green algae that comprise the algal mat convert atmospheric nitrogen into nitrogen that can be used by other plants.

Tidal flats are made up of three zones: subtidal, intertidal, and supratidal. **The intertidal zone,** also known as the seashore, is the area that is above water at low tide and under water at high tide (in other words, the area between tide marks). Due to the natural cycles sand channels appear across the flat. Organisms that live in this area are used to various extremes harsh sun when dry in the summer, freezing in the winter, flooded for half the day and wave action moves them around. **The supratidal zone** is the area above the high tide. It is sometimes splashed, but not submerged by ocean water. It is only flooded during spring or storm tides. This zone is divided into vegetated and non-vegetated intertidal mud flats and sand. The non-vegetated part may have algae. The life here must survive fresh water floods from land and salt splashing from the ocean. The organisms are also prey to land animals.


Weigle

Learn more about this area:
www.cctrails.org/lng%20brewbeach.htm

Thank you to: Prassede Vella (MA Office of Coastal Zone Management)

Passport Question:
- Identify at least one type of marine life occupying the tidal flats and submit a photo
- Bonus: Identify the intertidal and supratidal areas using the above info and submit a photo of both

***Please note:** To log this Earthcache, please visit Geocaching.com for additional tasks or questions to be completed.

The Gulf of Maine Council on the Marine Environment's (GOMC) 2012-2017 Action Plan identifies goals for three broad issues that benefit significantly from regional collaboration:
1. Restore and conserve habitat
2. Environmental and human health
3. Sustainable communities
More information on the GOMC, its partners and its activities can be found at www.gulfofmaine.org

Did You Know: In 1999, **Maria Burks**, Superintendent of the Cape Cod National Seashore, received a Gulf of Maine Council award for her recognition of the delicate balance between the social, political and environmental aspects of responsible stewardship. In 2013, the Council also presented an award to **Jeremy M. Bell** for his exceptional leadership on some of the most complex coastal restoration projects in New England, including the NOAA stimulus-funded Stony Brook Restoration Project in Brewster, MA and the NRCS Cape Cod Water Resources Restoration Project. In 2006 and 2007, the **Association to Preserve Cape Cod** received grants from the Council's Habitat Restoration Program for salt marsh and creek restoration and monitoring activities.