
ECOLOGICAL SYSTEM: NORTHERN ATLANTIC COASTAL PLAIN SEAGRASS BED

Summary: This ecological system represents submerged aquatic vegetation found in marine environments from Chesapeake Bay northward to the Maine coast. In contrast to Atlantic Coastal Plain Embayed Region Seagrass Bed (CES203.243) to the south, which can be generally characterized as *Zostera - Halodule*, this system is more typically characterized as *Zostera - Ruppia* (Thayer et al. 1984). A host of marine algae is also an important component of this system.

Range: The southern boundary may need clarification. The conceptual boundary occurs where *Halodule* beds become important; it is presumed that this transition occurs at or around Cape Hatteras, North Carolina. United States: CT, DE, MA, MD, ME, NH, NJ, NY, RI, VA

Delaware Estuary Associations:

- Northern Atlantic Coast Beaked Ditch-grass Bed

CLASSIFIERS FOR NORTHERN ATLANTIC COASTAL PLAIN SEAGRASS BED

Primary Division: 203

Land Cover Class: Herbaceous Wetland

Spatial Scale & Pattern: Large patch

Required Classifiers: Natural/Semi-natural; Vegetated (>10% vasc.); Wetland

Diagnostic Classifiers: Tidal / Estuarine; Aquatic Herb; Saltwater (Polyhaline)

Non-diagnostic Classifiers: Herbaceous

NORTHERN ATLANTIC COAST BEAKED DITCH-GRASS BED

Ruppia maritima Acadian/Virginian Zone Temperate Herbaceous Vegetation

Range: This association occurs along the mid- and north Atlantic coast from Maine to North Carolina. It occurs in the New Jersey portion of the Delaware Estuary and possibly in Delaware.

Environmental Description: This association occurs in habitats that are continuously flooded by brackish water; it occurs in subtidal situations, deepwater pools and pannes, tidal creeks, and flats within salt marshes, or along tidal rivers. It also occurs in coastal salt ponds with polyhaline to mesohaline salinity levels. Except in pannes or pools, which are more irregularly flooded, water levels fluctuate with diurnal tides and are generally less than 2 m deep at low tide, although certain areas may be exposed at extremely low tides. Substrate varies from sand to mud.

Vegetation Description: *Ruppia maritima* (beaked ditch-grass) is strongly dominant in this association. It has a wide range of salinity tolerance and overlaps with other species, although generally not in the same locations. Common associates include *Zannichellia palustris* (horned pondweed), *Stuckenia pectinata* (sago pondweed), and *Potamogeton perfoliatus* (clasping-leaf pondweed) in brackish to fresh areas and *Zostera marina* (eel-grass) as waters get deeper and more saline. There can also be a diverse array of macroalgae. This association grades into eelgrass beds as salinity increases.

Characteristic Species: *Ruppia maritima* (beaked ditch-grass)

Dynamics/Successional Trajectory: In several habitats, this association occurs where water levels and salinity can fluctuate with daily tides.

Management Concerns: As salinity decreases, *Ruppia maritima* (beaked ditch-grass) becomes less prominent, and the community grades into fresh/brackish subtidal associations.

Reference Sites: Reed's Beach, NJ

Global and State Conservation Ranks and Reasons: GNR (1-Dec-1997). DE: S4?, NJ: S3S4.

VegBank Link for Plot Data: http://vegbank.org/natureserve/element_global.2.688727

References: Bartgis 1986, Bowman 2000, Breden 1989, Breden et al. 2001, Cowardin et al. 1979, Eastern Ecology Working Group n.d., Edinger et al. 2002, Enser 1999, Fleming 2001, Fleming et al. 2001, Gawler 2002, Harrison 2004, Metzler and Barrett 2001, Metzler and Barrett 2004, Moore et al. 2000, Orth and Moore 1988, Rawinski 1984, Reschke 1990, Schafale and Weakley 1990, Sperduto 2000a, Sperduto 2000b, Swain and Kearsley 2001, Thayer et al. 1984

MOST ABUNDANT SPECIES		
STRATUM	LIFEFORM	SPECIES
Submerged aquatic	Aquatic herb	<i>Ruppia maritima</i> (beaked ditch-grass)