

## Coastal Wetlands

Tidal Salt Marshes

Tidal freshwater marshes

Mangroves

### A. Tidal Salt Marshes

- a. Globally - temperate coastlines (mid-lattitudes)
  - i. Found in - N Europe - Korea - tip of S. America - SW Australia
- b. Typical species
  - i. NW US - *Salicornia*
  - ii. W US - *Spartina foliosa*
  - iii. E US - *Spartina alterniflora* (cordgrass)
  - iv. Arctic - *Puccinellia* (grass); *Salicornia*, *Suaeda* (succulents)
  - v. N Europe - *Puccinellia*, *S. towseudii*, *S. anglica*
  - vi. Mediterranean - succulents, *Salicornia*; shrubs, *Atriplex*; *Limonium*, *Juncus*
  - vii. Case study: *S. alterniflora* from England/France in 1860-1870, crossed with *S. maritima*, produced *S. townsendii* (sterile, found throughout Europe, China and New Zealand) DNA doubled (ampliploid) and formed *S. anglica*
- c. Types
  - i. Marine - points, bogs, barrier islands, bars
    1. e.g. Chesapeake - Georgia-Carolina - *S. alterniflora*, *Salicornia*, *Distichilis*, *Juncus*
  - ii. Deltaic - at river mouth, Gulf of California
- d. Hydrology - Tide vs. freshwater (See Figure 9-4)
- e. Geomorphology
  - i. Marsh stability - most are young (climax), increasing sediment, submergence
    1. N Atlantic - more or less stable
    2. Gulf - sinking 0.5 cm/yr
    3. Subarctic - rising 1 cm/yr
  - ii. For diagrams of plant communities and geomorphology, see Fig 9-11 and 9-12