

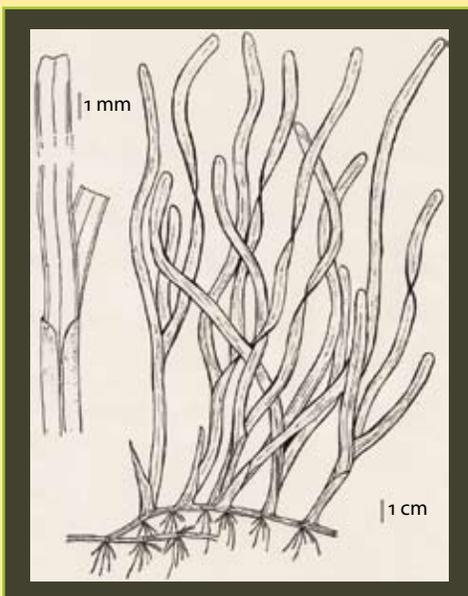
Eelgrass is a grass-like aquatic plant that forms lush meadows in shallow, sheltered bays and estuaries. These meadows cushion our shoreline from wave energy, delay floodwaters, break down pollutants and support diverse wildlife. They also produce vast amounts of oxygen, which we all need to breathe.

There are two species of eelgrass in California. Pacific eelgrass, *Zostera marina*, is native to our coast and beneficial to the ecosystem.

Dwarf eelgrass, *Zostera japonica*, is native to Asia and threatens to upset the natural balance of California's wetlands.

The recent introduction of dwarf eelgrass, which can be distinguished from Pacific eelgrass by its very narrow blades, is a serious concern to resource managers. Dwarf eelgrass invades mudflats, which are home to many creatures and vital feeding grounds for shorebirds.

Pristine coastal wetlands are rare in California and worldwide, and the invasion of dwarf eelgrass further imperils the little habitat remaining.



DFG/K. Ramey

Dwarf eelgrass, *Zostera japonica*

Native Seagrasses vs. Dwarf Eelgrass

- **Pacific Eelgrass** (*Zostera marina*)
Blade width 2-15 mm
 - **Dwarf Eelgrass** (*Zostera japonica*)
Blade width 1.5 mm
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- **Widgeon Grass** (*Ruppia maritima*)
Has stems with many branches, and flowers emerge where leaves join the stem
 - **Dwarf Eelgrass**
Has un-branched stems, and flowers are enclosed on separate shoots
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- **Surfgrass** (*Phyllospadix* spp.)
Grows in wave-swept rocky areas
 - **Dwarf Eelgrass**
Grows on mud or sand in sheltered bays and estuaries



Report suspected sightings of dwarf eelgrass to:

California Department of Fish and Game
619 Second Street
Eureka, CA 95501
(707) 445-5365
kramey@dfg.ca.gov

California Sea Grant Extension
2 Commercial Street, Suite 4
Eureka, CA 95501
(707) 443-8369
scschlosser@ucdavis.edu

For more information, visit
www.dfg.ca.gov/invasives

Alternate communication formats of this document are available upon request. If reasonable accommodation is needed, call the DFG at (916) 322-8911. The California Relay Service for the deaf or hearing-impaired can be utilized from TDD phones at (800) 735-2929.

Cover photos (left to right, top to bottom): Dwarf eelgrass - UC ANR/A. Eicher;
Heart cockle - FoSBS, Boundary Bay, BC/C. Day;
Red rock crab - DFG/A. Frimodig; Curlew - DFG/J. Mello



HDPE

**STOP THE
SPREAD
OF**

**DWARF
Eelgrass**



Stop the Spread of Dwarf Eelgrass!

- **Rinse** mud and debris from boats, kayaks, and canoes before moving to a new site.
- **Rinse** mud and debris from boots and other gear before moving to a new site.
- **Rinse** where runoff will not lead to storm drains or straight back to coastal waters.
- **Report** sightings of dwarf eelgrass to the contacts in this brochure.

Dwarf eelgrass covers thousands of acres of rare coastal wetlands in the Pacific Northwest. It is, though, a relative newcomer to California, first discovered in 2002 in Humboldt Bay. Eradication projects are underway to find and rid our coast of new infestations.

The danger, however, is that people will unintentionally introduce dwarf eelgrass to new locations by dispersing its seeds, which can easily mix with mud and stick to boat hulls, boots and gear.



DFG / J. Mello

Godwits foraging on intertidal mudflat.



UC ANR / A. Eichler

Blades of dwarf eelgrass are much narrower than Pacific eelgrass.

Problems with Dwarf Eelgrass

Scientists studying the effects of dwarf eelgrass have learned:

- It colonizes open tidal mudflats, prime foraging grounds for birds.
- It slows water currents and traps fine sediments.
- Its dense root system binds soil particles, transforming soft mud into a firm bottom layer.

These changes destroy essential habitat for ghost shrimp and other small mud-dwelling and burrowing animals, many of which are staple prey items for shorebirds.



DFG / R. Barthing

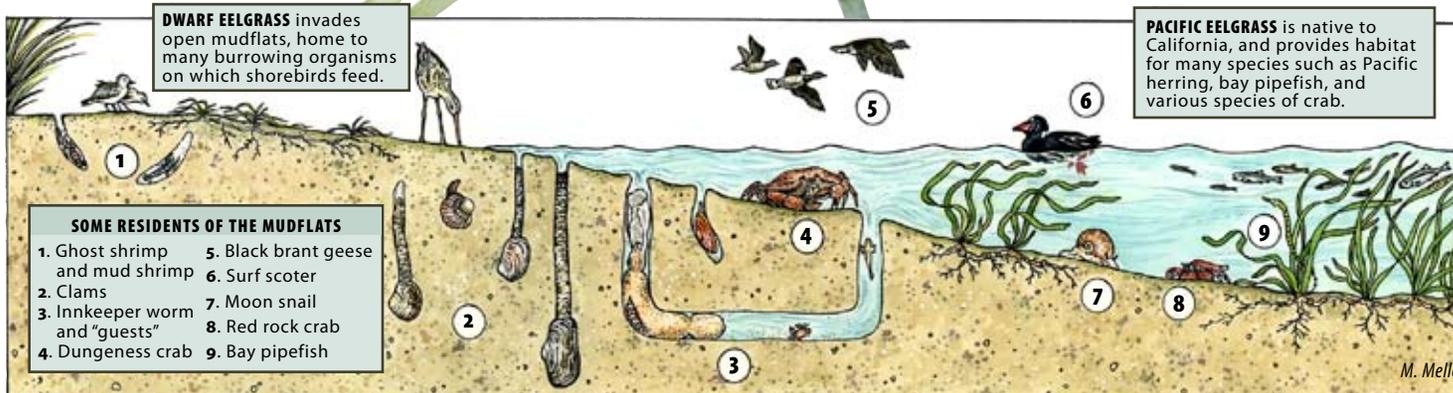
Pacific herring eggs on native eelgrass blades

The Value of Pacific Eelgrass

Pacific eelgrass meadows are as productive as our most fertile farmlands, forming the base of a food chain that you may enjoy as shellfish and finfish on your dinner plate!

Pacific herring lay their eggs on eelgrass blades. Juvenile salmon, lingcod, rockfish and Dungeness crab use eelgrass meadows to hide from predators, while the bay pipefish — a relative of the seahorse — seeks protection by camouflaging itself as a swaying eelgrass blade. The migratory brant goose would starve if it were not for eelgrass.

To preserve our coastal habitats, we must protect our native eelgrass and take measures to control the spread of dwarf eelgrass. The key to success is early detection of new infestations.



UC ANR / S. Schlosser

Moon snail in Pacific eelgrass meadow