Caulerpa taxifolia

This bright green seaweed has multiple feathery blades. It is spread primarily through fragments and can move to new locations with water currents. Herbivores reject it because it produces distasteful chemicals and it outcompetes native vegetation. *Caulerpa* is native to tropical and subtropical waters of the Caribbean, Indonesia, Southeast Asia and northern Australia. A particularly tolerant clone bred for aquariums is tied to all infestations along the U.S. West Coast. It impacts marine ecosystems, tourism, and local economies. *Caulerpa* is classified as one of the 100 worst invasive species on our planet. (ISSG)

photo: http://cisr.ucr.edu/caulerpa_taxifolia.html

Eelgrass
Zostera marina

This seagrass, a perennial flowering plant, can grow to three feet tall and provides valuable habitat in nearshore coastal zones and estuaries. Eelgrass beds are a haven for crabs, scallops and numerous other species of marine life because they provide critical nursery grounds, protection from predators, and food. Eelgrass improves water quality by filtering polluted runoff, and absorbing extra nutrients before they reach the open ocean. It also helps in preventing shoreline erosion. It can tolerate occasional exposure at low tide.

photo: http://newenglandoceanodyssey.org/

European Green Crab
Cacinus maenas

The European green crab has dispersed globally, including along the Western U.S. coastline, affecting protected and semi-protected wetlands and rocky shores. These crabs are highly tolerant of changes in salinity (from 4 – 52 ppt), and temperature (from 0 – 30 degrees Celsius). They can spread with the movement of fishing gear, seaweed used for packing materials, aquaculture and ballast water discharge. They also disperse very effectively during their larval stage with ocean currents. They have a tremendous impact on the food web through predation on small oysters, clams, and other crabs, as well as outcompeting native crabs for habitat and food resources.

photo: USGS, ©2005 Hans Hillewaert

Ghost Shrimp
Neotrypaea californiensis

Ghost shrimp grow to 10 – 12 cm in length and live for up to 16 years. These small invertebrates are native to the West Coast of North America from Alaska to Baja California. They are found in mudflats, bays and estuaries. They feed on organic material in the sediments. They constantly build and maintain extensive branching burrows to almost a meter in depth. They bring oxygenated water into low oxygen environments and provide food for many fishes and birds. Each year California imports about 2 million ghost shrimp from the Pacific Northwest for the bait industry.

photo: Dave Cowles, 2007

Longjaw Mudsucker
Gillichthys mirabilis

Longjaw-mudsuckers can grow to 21 cm and primarily live in shallow sloughs and tidal mudflats, occasionally in the burrows of other animals. They are able to tolerate wide ranges of salinity and temperature. Their diet can change depending upon the availability of prey and includes pile worms, algae, isopods, and small fish. The female can lay several thousand eggs, which the male guards until they hatch 10 – 12 days later. They have been introduced to the Salton Sea and Arizona, and are used as a baitfish. They are preyed upon by California Flounder, other fishes, and birds.

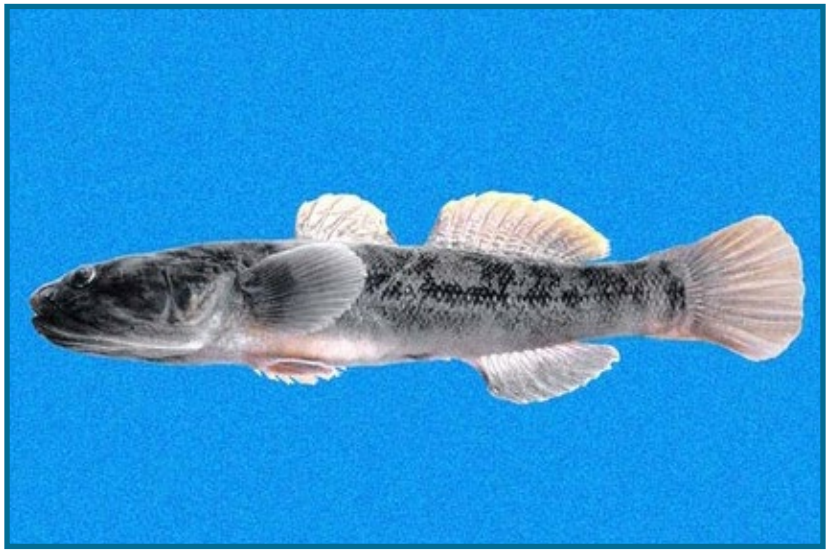

photo: Milton Love

Pacific Staghorn Sculpin
Leptocottus armatus

The Pacific staghorn sculpin are five to eight inches in length and greenish brown in color. They are abundantly found lurking on soft sandy and muddy bottoms along the coastline following tidal cycles. They spend most of their lives in salt and brackish waters, with adult fish found furthest upstream. The estuary provides a nursery for the larvae before they spread out onto a soft and sandy substrate. Pacific staghorn sculpin feed mostly on crabs, shrimps and amphipods, but also on larval, juvenile and adult fishes, as well as polychaete worms, mollusks and other invertebrates. They provide food for birds and larger fish.

photo: Jonathan S. Klenk, ©2015 Regents of the University of California

Pickleweed
Scalicornia virginica

Pickleweed is a perennial plant and is endemic to the Americas. It is found in all of the coastal North American states in saltmarshes, mangroves and beach dunes. This low growing succulent is part of the halophyte (salt tolerant) community and is found in bays and estuaries protected from wave action. Pickleweed stabilizes banks, is the preferred nesting site for Belding's Savannah Sparrows, and the preferred habitat for the saltmarsh harvest mouse. As salt accumulates in the leaves they turn red and eventually fall off.

Purple Loosestrife
Lythrum scalicaria

Purple loosestrife is a native to Eurasia but is found across the continental United States and is scattered through the west. In California, Oregon and Washington it is classified as a weed or noxious weed. This freshwater wetland perennial can rapidly degrade wetlands, diminishing their value for wildlife habitat by limiting water flow and replacing wild plants that provide food. They spread by roots, and through seed and stem fragments. One plant can produce over two million seeds a year.

photo: http://www.kingcounty.gov/

Red Lionfish
Pterois volitans

The distinctive stripes of alternating dark and white, along with extended spiny fins combined with fleshy tentacles above its eyes and mouth help to identify the lionfish. They are native to tropical waters of the Western Pacific, Indian Ocean and Red Sea, normally inhabiting coral reefs. They are one of the most popular saltwater aquarium hobby fish. The invasion found along the southeast coast of the United States, extending into the Gulf of Mexico, Caribbean and Central America, likely started from a home aquarium release. Lionfish eat many species of fishes, shrimp and crabs, affecting ecosystem balance, fisheries and tourism.

photo: U.S. Geological Services

Red Swamp Crayfish
Procambarus clarkii

Red swamp crayfish are able to tolerate brackish water (a mixture of salt and fresh water) found in estuary ecosystems. They are native to the coastal gulf plain from Florida into Mexico but have spread up the southern Mississippi River drainage into Illinois. Fishermen have introduced them into the west when releasing unused bait, and classrooms have released them following crayfish studies. They impact the environment by outcompeting and replacing native crayfish, causing declines in fish and frog populations through competition, predation or habitat modification.

photo: http://dnr.wi.gov/topic/Invasives/fact/RedSwampCF2012.html