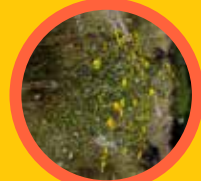


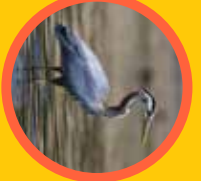
FIND THESE MARSH TREASURES!
(See inside map)



Marsh gumplant
(*Grindelia stricta* var. *angustifolia*)
As suggested by its name, Gumplant exudes a sticky, aromatic resin, which the Coast Miwok used to treat rashes. While cordgrass thrives under daily inundation and pickleweed favors perennially wet soil, gumplant likes its root zone better drained. It is found on higher ground within saltwater wetlands, like the natural levees that form alongside tidal channels.



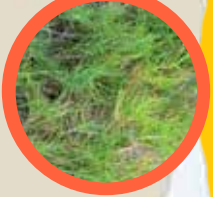
Pickleweed
(*Sarcocornia pacifica*)
Pickleweed is a low-growing ground cover that tends to blanket the shoreline. This is a succulent plant, which means that it holds water in its leaves and stems. Stems are typically green, but can also be red in late summer and then turn brown in winter. In some communities, its tender green tips are harvested and used to garnish salads, cooked like green beans or pickled.



Great blue heron
(*Ardea herodias*)
Like the Snowy egret, herons eat primarily fish but will also eat animals some reptiles, amphibians, and small mammals (such as snakes, frogs, and voles).



Snowy egret
(*Egretta thula*)
As the egrets come into mating condition, the color of the featherless parts of their bodies changes. The lores (skin by the eye) turn from yellow to lime green, and the bill becomes dark along the top. The lores change back to yellow after the egrets lay their eggs, but the bills retain some of the dark color for most of the breeding season.



Salt grass
(*Distichlis spicata*)
Salt grass spreads out to form thick, low-growing mats of spiky-looking grass. The leaf blades are short, pointed, and close together along the stems, which makes this grass look spiky.



Salt pan
A water retaining depression located within salt marshes. They form when a mat of organic (once alive) debris is deposited upon existing vegetation, killing it, or when undrained water becomes hypersaline (really salty).



Pacific cordgrass
(*Spartina foliosa*)
Cordgrass is a salt excretor. Its roots take in seawater and saltwater is pumped out through special pores in the leaves. The sun evaporates the water and the salt crystals left behind become visible on the grass blades. The plants need the daily tides to flush away the crystals.



Black-necked stilt
(*Himantopus mexicanus*)
The long bills and legs of these stilts are adapted for foraging in water. They have the largest leg to body length ratio of any living bird. This enables them to wade up to their belly in deep water to pick at insects near the water's surface. Their beaks are also adapted for foraging in mud and sand.

High Marsh

The upper areas of a marsh that are rarely under water except for an extremely high tide or storm surge.

Middle Marsh

The middle marsh is often called the marsh plain. This zone is conspicuous because of the dominance of the short, stiff salt grass.

Low Marsh

The low areas of the marsh that flood daily. Good habitat for cordgrass, insects, herons and egrets.

Mud Flat

Subtidal



Bothin Marsh Scavenger Hunt
Adventures in Marshland!

Love the marsh?
Find out more at:

www.onetam.org/bothinmarsh



Good Luck!

Discover the magic of Bothin Marsh as you find as many of the plant, animal, and habitat treasures listed on the map as you can! Start at the Mill Valley Community Center and walk East toward the bike/pedestrian path where the adventure begins! Make your way South along the path and look out for the special plants and animals along the way!

Welcome to your scavenger hunt adventure!

START



Mill Valley Community Center



Pickleweed
(Sarcocornia pacifica)



Tidal channel



Marsh gumplant
(Grindelia stricta var. angustifolia)



Salt grass
(Distichlis spicata)



Pacific cordgrass
(Spartina foliosa)



Mud flat
Tamalpais High



Salt pan



Low marsh



High marsh



Sea Level Rise Exhibit

Hwy 101



Search Path

Find a treasure?
Put a checkmark ✓ on its photo and see if you can find them all!

Keep an eye out for these shorebirds!



Black-necked stilt
(Himantopus mexicanus)



Great blue heron
(Ardea herodias)



Snowy egret
(Egretta thula)



American avocet
(Recurvirostra americana)



Western sandpiper
(Calidris mauri)

BONUS!

Ridgway's rail
Rallus obsoletus

Ridgway's rail is a handsome gray-and-rusty bird that lives most of its life concealed in dense vegetation. They have special salt glands that enable them to drink seawater. Chicks less than two weeks old are carried on the adults' backs during periods of high water or when the birds move across open water. Ridgway's rail needs high marsh to escape when the tide gets high, and hide in gumplant and pickleweed from predators such as hawks and falcons.