Nature Notes

…from Sharon

Mangroves

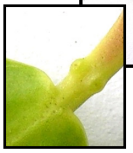
The next time you walk along the estuary trail from parking area #3 to Wiggin's Pass, take time to appreciate these guardians of our shores. The Mangroves quietly and modestly provide for the orderly flow of life between land and sea. Being such an integral part of both our marine and terrestrial environments, they not only are protectors of our shores from storms, but they also cradle the nursery of our seas.

Today's notes are a little different, so that you can look at all three trees in our Preserve. Although one might tend to think that mangroves are from the same family, they are not. What makes them a "mangrove" is the fact that they produce living offspring—not just fruit and seeds. You may tell the trees apart by looking for differences in leaves, bark, flowers, fruit, and sometimes location. At times you may only have one or two of these. Below are photos of leaves and propagules of mangroves in our area. A propagule develops from a seed that germinates while still attached to the parent tree. The parent supplies the seedling with nutrients and water until it becomes heavy and drops off. It may float and be viable for up to a year. Mangroves thrive in salty environments because they are able to obtain freshwater from saltwater. Some excrete salt through their leaves; others exclude salt at their roots. Look at the photos below. Make a mental note of what is visually different about each of them. The top leaf is the upper side of the leaf and the bottom leaf is the underside. As you can see from the photos below, the fruit of each tree is very different from one another. Look for these on the beach.

The Red Mangrove (*Rhizophora mangle)* leaf has a very smooth, shiny upper side that is bright green, with dull underside of a paler green. There are no nodules at leaf base. Red Mangroves are usually closest to and in the water. They have prop roots and drop roots that provide oxygen to the plant. Prop roots grow from the trunk of the tree, while drop roots grow from branches to the ground. These prop/drop roots are why this tree is often referred to as the "walking" tree. They exclude salt when absorbing water. Its propagule is pencil shaped.

Black Mangrove (*Avicennia germinans*) leaf has a smooth upper side that is medium green, with veins that create slight ridges. Underside is a silvery-green and fuzzy. They excrete salt from the water through their leaves. There are no nodules at leaf base. The Black Mangrove has an unusual root system. It has pneumatophores that are aerial roots that extend above high tide to get oxygen. Black Mangroves are usually upland from Red Mangroves. The propagule looks like a lima bean. When the root starts sprouting, the propagule bursts open and you can see where its leaves have formed.

White Mangrove (*Laguncularia racemosa*) is the most versatile of the three. They are usually upland of the Black Mangroves. Its ovate leaf has a smooth, leathery upper side with lighter mid-vein. The under-side is a lighter green with a more prominent vein. At the base of the leaf on the front are two nodules. These nodules secrete nectar. The fruit is almond-shaped, with ridges running the length of the fruit. This mangrove can excrete or exclude salt.



Now…go for a walk and take a closer look at these magnificent trees!

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