Importance of wrack and the shore

Article by Taylor Bennett

What is wrack?

Wrack is basically the material that washes ashore on beaches and bays due to waves, wind, and tide. It is often brown in color, contains stick like material, and depending on the level of decay it may have a slight odor. Wrack indicates where the high tide mark is on the beach because it leaves a nice line of debris which we aptly name the wrack line. Wrack is actually very important for the beach ecosystem. It is mostly made up of organic material such as sargassum weed, sea grass, and driftwood which eventually decays or breaks down over time. Wrack can also contain plastic, glass, shells, egg cases, and sea beans. The organic material provides food and shelter for a variety of species. Marine invertebrates that live near or on the shore use the wrack as habitat. Other animals such as birds rely on these invertebrates for food. Wrack also contains sand which is trapped within the debris and organic material so when it washes up the sand is deposited near the dunes. The organic material also provides an anchor as well as a fertilizer for dune plants.

How is it important to shorebirds?

Shorebirds rely heavily on wrack for food and shelter.

The shorebirds you typically see feeding on wrack are plovers, turnstones, sandpipers, sanderlings, godwits, and willets. The shorebirds Gulf Coast Bird Observatory mainly monitors are the plovers: Snowy, Piping, and Wilson's. Shorebirds rely heavily on wrack for food because they are often home to the marine invertebrates they feed on. Examples of marine invertebrates include beach flies, sea hoppers (amphipods), rolly polies (isopods), and beetles. Other birds such as flycatchers, horned larks, sparrows, and pipits also feed on the invertebrates found in wrack.

When the organic material dries and breaks down, leaving small debris, it makes the perfect habitat for wintering and migrating shorebirds to roost or rest. Snowy and Piping Plovers are often observed roosting in the wrack especially on Matagorda Beach soon after they are done feeding for the day. Their wintering plumage helps camouflage them from predators and people.

During the breeding season, the wrack also provides shelter for newly hatched chicks as well. People are often unaware that they are hiding here so they drive through it endangering the birds.

How is it important for dunes?

Wrack contains the perfect amount of organic material and sand. When the organic material breaks down it becomes the perfect fertilizer for the plants that typically live near or on the shore because it has just the right amount of nutrients that the plants need to survive. Wrack is also often washed up as a solid mass so when it is washed ashore it acts as an anchor for the roots of nearby plants thus helping stabilize the dunes. The sand within the wrack is also deposited onto the dunes which help increase the size of the dunes over time. Dunes are important for the beach ecosystem because they help prevent local flooding and help battle erosion, thus wrack plays a vital role in dune formation.

Although wrack may seem like an eyesore and a nuisance for beachgoers, to animals and plants living on or near the beach is a vital source of food and shelter. It is also vital for stabilizing and naturally growing the dune habitat along the beaches which helps protect us from localized flooding caused by storm surges and tides. The next time you are on the beach please take caution when driving and walking near the wrack. There may be shorebirds there trying to rest or feed.

IMG_9670: Piping Plover and Sanderlings feeding in the wrack at Matagorda Beach, TX
IMG_9889: Piping Plovers, Snowy Plovers, and Sanderlings roosting within the wrack at Follet's Island, TX