**LIFE IN THE PILE FIELDS:**

**A VERTICAL COMMUNITY**

Hudson River Park’s pile fields are clusters of aging wooden fragments that remain from bygone piers. The Park’s pile fields are some of the most notable elements of Hudson River Park’s Estuarine Sanctuary because of the dynamic habitat that they create and the complex food web they support.

Small, insect-like griddles and elongated mollusks known as naval shipworms bore into wooden piles, creating nooks and crevices for red algae, sea lettuce and other aquatic vegetation to take hold.

Barnacles and mussels affix to the piles, which serve as strong, steady surfaces where they can filter and consume plankton from the water.

In addition, piles become a coveted habitat for numerous fish species that rely on them as both a feeding ground and a hiding place from predators.

Birds sit atop the piles, a perfect vantage point for finding a meal below the water’s surface.

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1. **Double-Crested Cormorant**, Phalacrocorax auritus, can often be found in the pile fields with their wings spread out to dry. Unlike other water birds, they lack waterproof oil on their feathers allowing them to dive to impressive depths.
2. **Mallard ducks**, Anas platyrhynchos, are dabblers — they swim forward in the water to graze on plants beneath the surface. Females are mottled brown, a physical quality that provides ideal camouflage for guarding a nest.
3. **Griddles**, Lumbrineris, are burrowers, a class of crustaceans (crayfish-like animals) with segmented bodies. Their stomachs contain a special enzyme that allows them to digest wood.
4. **Barnacles** (Amphibalanus improvisus), undergo a complete metamorphosis when they attach; by capturing cement-like substances in their bodies, they attach to the piles and grow shells. Their shell differs at low tide to avoid drying out, and instinctively remains at high tide, allowing them to feed with their feathery appendages.
5. **Algae**, such as sea lettuce (Ulva lactuca) and red algae, provide an essential food source for many marine animals that provide much-needed food and shelter.
6. **Atlantic silversides** (Menidia menidia), seek shelter in schools for protection from predators. They use an extra organ called a lateral line to coordinate and detect movement by feeling vibrations in the water.
7. **Blue mussels** (Mytilus edulis), use byssal threads (long thread-like anchor) to attach themselves onto a pile. These threads can detach to help mussel mobile feed and protect.
8. Double-Crested Cormorants, Phalacrocorax auritus, are weak swimmers due to their vertical orientation and small tail fin. For support against river currents, they use their curled tail to grasp onto piles.
9. **Comb jellies** (Mnemiopsis leidy), are translucent organisms with rows of comb-like organs which run up and down their bodies. These comb-like organs propel the jellyfish vertically as they float with tides and currents.
10. **Boring arrow worms** (Chaunatina rotunda), drill holes on top of millimeter shells to find shelter inside. This eventually fills the shell, and allows the springtails to expand their collar.
11. **Sea squirts** (Ciona intestinalis), are small invertebrates that resemble animals. Like larvae, they metamorphose into a peculiar (transmogrifying) adult. They have two tentacles that they use to filter water.
12. **Fungi** (Penicillium sp), have small translucent bodies that engulf their inner anatomy, normally consuming a female’s egg during spawning season. A powerful flow of their muscular tail allows them to move quickly.
13. **Oyster toadfish** (Opsanus tau), can survive in poor river conditions because of their tolerance to pollution. They cross bodies when agitated or trying to attract a mate.
14. **Blue crabs** (Callinectes sapidus), are crustaceans (crayfish-like animals) possessing an exoskeleton. Their scientific name translates to “beautiful swimmer” in recognition of their ability to glide with two back legs shaped as paddles.

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**THE HUDSON RIVER PARK ESTUARINE SANCTUARY**

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Hudson River Park

HUDSONRIVERPARK.ORG
Look inside to explore our dynamic underwater world!

Nearly half of the Hudson River's 250 miles are an estuary. An estuary is an environment where fresh and salt water mix, creating a unique habitat with high biodiversity. The estuary's deep, narrow channels provide essential habitat for more than 70 species of fish. These waters are a nursery for many juvenile populations, including striped bass and black crabs.

In 1998, State legislators designated estuaries of Hudson River Park's waters as an Estuarine Sanctuary. The sanctuary's diverse fish and wildlife habitat allows for support from visitors interested in every aspect of Park planning and operations. It includes communities like the Hudson River, which offers a view of the Park's treasured vistas.

This page provides a window into the Park’s treasured vistas.
Take a tour of the website and consider visiting Hudson River Park site.

Hudson River Park receives no government funds for its operations or maintenance. You can support the Park by becoming a FRIEND at hudsonriverpark.org/friends.

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