

Glossary

- **Brackish:** the mixture of fresh water from rivers and salty ocean water in estuaries
- **Camouflage:** capability that allows an animal to hide from predators or ambush prey by blending into its surroundings.
- **Dead zones:** an area in which few organisms can live due to lack of oxygen
- **Ecosystem:** a biological community of interacting organisms and their physical environment
- **Estuary:** a body of water formed where freshwater from rivers and streams mixes with salt water
- **Habitat:** the natural home or environment of an animal, plant, or other organism
- **Invasive Species:** an organism (plant, animal, fungus, or bacterium) that is not native and has a negative impact on the environment.
- **Keystone species:** a species on which other species in an ecosystem largely depend, such that if it were removed the ecosystem would change drastically
- **Predator:** a species that lives by eating other species
- **Prey:** a species that is hunted and killed by others for food
- **Submerged Aquatic Vegetation (SAV):** plants that live at or below the water's surface
- **Salinity:** saltiness or dissolved salt content of a body of water
- **Tributary:** a river or stream flowing into a larger body of water

IV. ADAPTATIONS

Camouflage is a common defense mechanism for animals looking to avoid becoming **prey**, or a way for **predators** to ambush their prey. Can you find the oyster toadfish in the CAMOUFLAGE exhibit? Which **habitat** do you think it lives in?

Look at the SCHOOLING exhibit; the silversides swimming around the piling typically live in the **tidal tributaries**. How does swimming in a "school" or group protect these small fish?

Check out the octopus in the INTELLECT exhibit! The octopus is one of the smartest creatures in the sea and often uses its intellect to avoid **predators** and capture **prey** of its own. What else does the octopus do to survive? (If you can't find the octopus, check out the video to the upper left of the exhibit tank.)

V. ECO-INVADERS

Explore the Zebra Mussel exhibit on the right. Not your typical bay oyster reef, it is comprised of **invasive** zebra mussels. Many species living in the bay are originally from other parts of the world – often introduced into local waters by human activity. Some of these species co-exist without causing harm. But other species are considered **invasive** and can cause major problems to the bay **ecosystem** by altering **habitats** and outcompeting native species.

Explore the exhibit to discover the different ways these common **invasive species** were introduced to the Chesapeake Bay.

River to Bay

Reflections & Connections

Calvert Marine Museum



Explore the exhibit's habitats: Deep Open Waters, Sheltering Shallows, and Tidal Tributaries. Learn about animal adaptations in the Strategies to Survive exhibit and invasive species in Eco-Invaders. Words in **bold** are defined in the glossary.

I. DEEP OPEN WATERS

Fish congregate around artificial structures in the open waters of the bay, such as the bridge pilings seen in the exhibit tank. The pilings create a unique **habitat** for barnacles and oysters, and also attract large finfish. Many of these fish, such as the black drum, are only found in the deep open waters, as they are too large for shallower **tributaries**. These man-made structures are replacing oyster reefs as a popular gathering spot for both fish and sports fishermen.



Can you spot the black drum?
Hint: He has great facial hair.

II. SHELTERING SHALLOWS

HIPPOCAMPUS HAVEN

Seahorses live in one of the most important habitats, **submerged aquatic vegetation (SAV)**. These underwater plant beds filter nutrients, oxygenate the water, and reduce **dead zones**. An important indicator of water quality, seahorses are considered a **keystone species** in **estuaries**. **SAV** is a great habitat for hiding from **predators**, and provide a safe place to raise young.



Can you find the pipefish hiding in the **SAV**?
Hint: They look like long pieces of grass.

REEF REFUGE

Oysters thrive in **brackish** water. In the bay our current oyster population is less than 1% of what it used to be. Reefs serve as a habitat for many fish, like the oyster toadfish and the feather blenny. Not only can fish protect themselves and their eggs by hiding in the reefs, one oyster can filter 50 gallons a day and improve water quality, making them a crucial species to the bay **ecosystem**! Oysters are a **keystone species**.

Do you see the **tongs** the fisherman is using to harvest the oysters?



III. TIDAL TRIBUTARIES

There's so much life along our banks! Can you find any hidden fish in the minnows tank?

Branches and roots hang down to provide shelter in shallow, freshwater **tributaries**, as seen in the minnows tank. These waters are home to many small and juvenile fish, as well as mature fish, like the striped bass, that swim into these freshwater habitats to spawn.



Larger fish can also live in these tidal rivers (see the exhibit tank on your right). The fish you see in this tank, such as the yellow perch, bullhead catfish and pike, are often caught for sport or for dinner.

Have you ever eaten any of the fish in this tank?