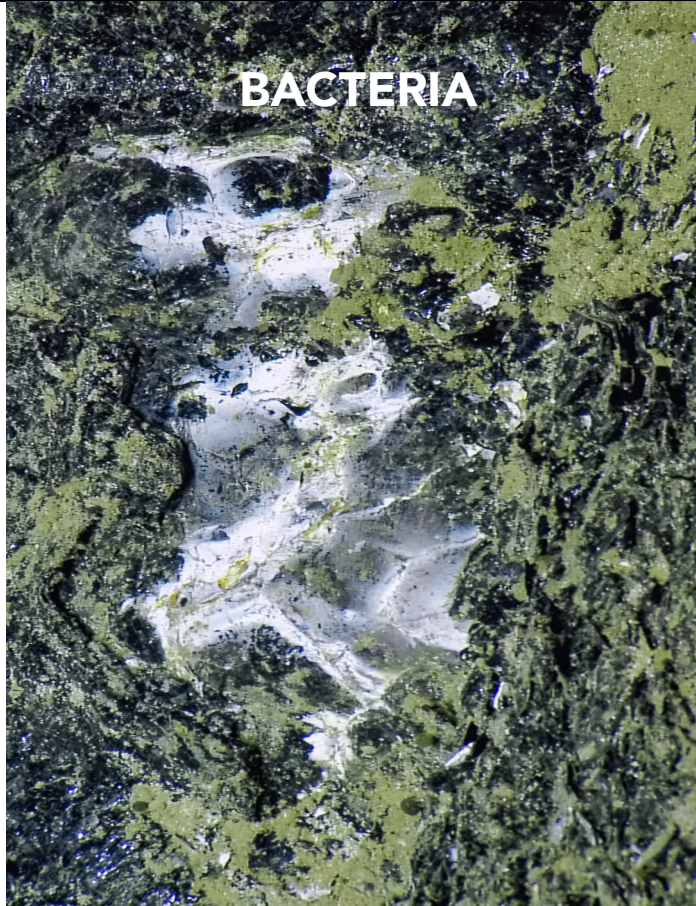


BACTERIA



Bacteria

What am I? I am a primary producer who can form mats living on the hydrothermal vent or live inside other organisms. There are many different kinds/species of me.

What do I eat? Uses chemosynthesis to make its own food from the gases and minerals produced by the hydrothermal vent.

Who eats me? Lives inside the tube worm plumes, mussels and clams to help them produce their own food. Some shrimp and crabs may feed on the bacteria.

Habitat: Usually first to colonize vent community. Requires darkness and nutrient rich, water. I like temperatures ranging from 2° to 125°C.

VENT CLAMS



Hydrothermal Vent Clam

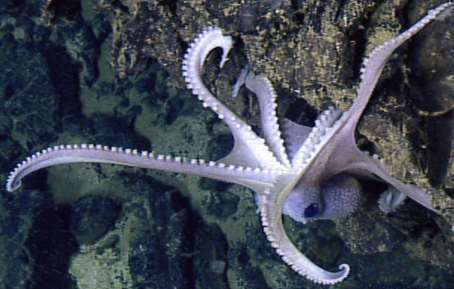
What am I? A bivalve that uses a large muscular foot to wedge into cracks on the ocean floor near vents. Can be moderately mobile.

What do I eat? Has symbiotic chemosynthetic bacteria that live in its gills which produce sugars from the sulfur for it to eat.

Who eats me? Has thick shells for protection, but some crabs, octopuses or a sea star may eat them.

Habitat: Usually colonizes after mussels. Requires active vents with nutrient rich, moderately heated water (up to 10°C) for it to wedge into and obtain food.

VENT OCTOPUS



Deep Sea Vent Octopus

What am I? A cephalopod that is less than a meter long and is pale in color.

What do I eat? Top predator; eat crabs, clams, mussels, shrimp, and occasionally fish.

Who eats me? No one but some males have been found to have parasitic copepods.

Habitat: Need to be in area with abundant prey, deep and cooler waters (2°C) but can tolerate moderately heated ones. Like to live in and under clumps of mussels or clams.

DANDELION



Deep Sea Dandelion

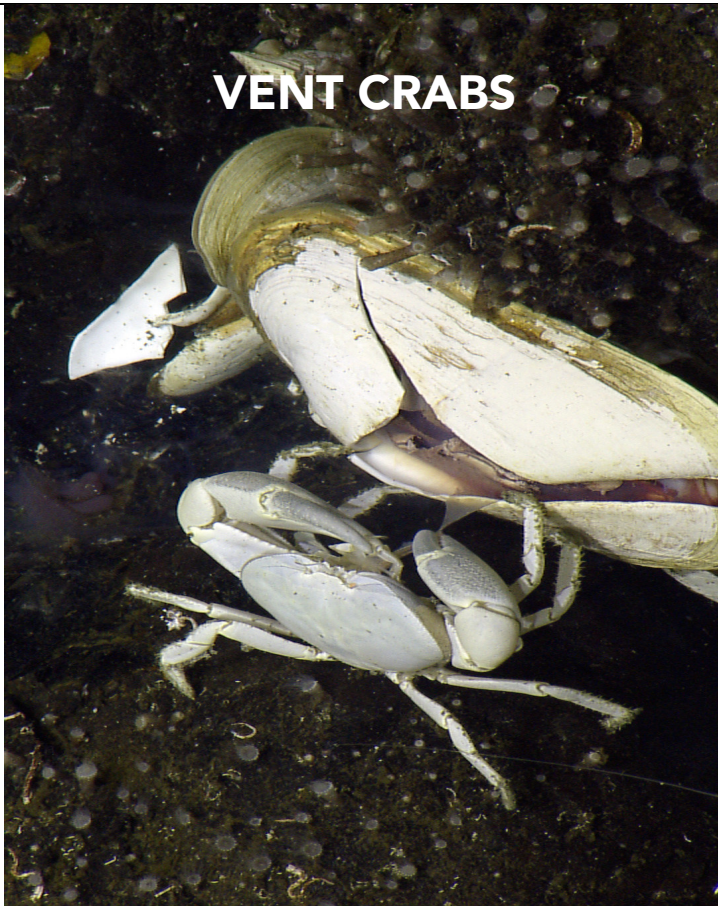
What am I? A colony of numerous individual animals held together called a siphonophore. They are related to jellyfish and use thin tentacles to attach themselves to rocks, where they remain unless disturbed.

What do I eat? Mostly scavengers and eat decaying clams, mussels, or tube worms. May have symbionts living internally.

Who eats me? Unknown

Habitat: Usually arrives last to a vent when it is no longer active and vent species are dying off.

VENT CRABS



Vent Crabs

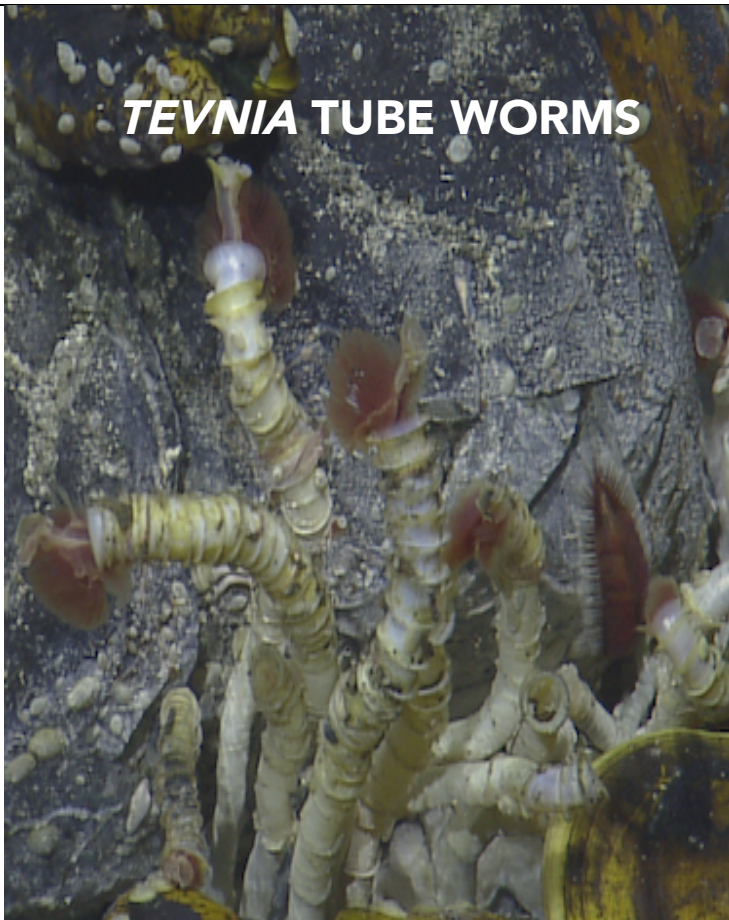
What am I? A white crustacean with a maximum width of about 12.5 cm.

What do I eat? They have a good sense of smell and scavenge for a variety of food including tube worms, clams, mussels, and bacterial mats.

Who eats me? In the absence of an octopus it is top predator. If there is an octopus, it would definitely snack on crabs.

Habitat: Uses sense of smell to detect bacterial mats and colonize the vent early on. Requires habitat that has its prey species, active vents and mussel beds. Likes higher diffuse flow temperatures (up to 40°C)

TEVNIA TUBE WORMS



Tevnia Tube Worm

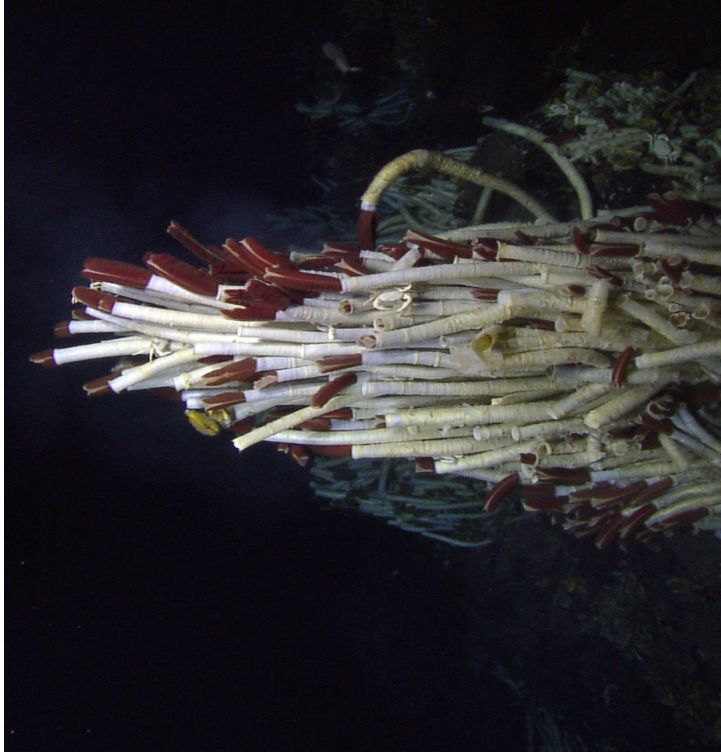
What am I? A species of tube worm which lives along active hydrothermal vents and can grow up to half a meter tall.

What do I eat? Doesn't have a mouth or stomach. Instead contain billions of bacteria in its gut, which use the energy in sulfur compounds to make sugars from carbon dioxide.

Who eats me? Vent crabs eat tube worms and after they die they can be scavenged by other organisms.

Habitat: Likes higher temperatures of water compared to *Riftia*, can be quick to settle and grow but tends to be outcompeted later on by the larger *Riftia*. Chemosynthetic bacteria colonize its gut.

RIFTIA TUBE WORMS



Riftia Tube Worm

What am I? A species of giant tube worm which lives along rifts and grows faster and taller (tubes can be up to 4 meters) than its cousin the *Tevnia* tube worm.

What do I eat? Doesn't have a mouth or stomach. Instead contain billions of bacteria in its gut which use the energy in sulfur compounds to make sugars from carbon dioxide.

Who eats me? Vent crabs eat tube worms and after they die they can be scavenged by other organisms.

Habitat: Requires an active vent with nutrient rich, heated water and chemosynthetic bacteria to colonize its gut. Can outcompete *Tevnia* for vent gases to use as food.

SQUIDWORM



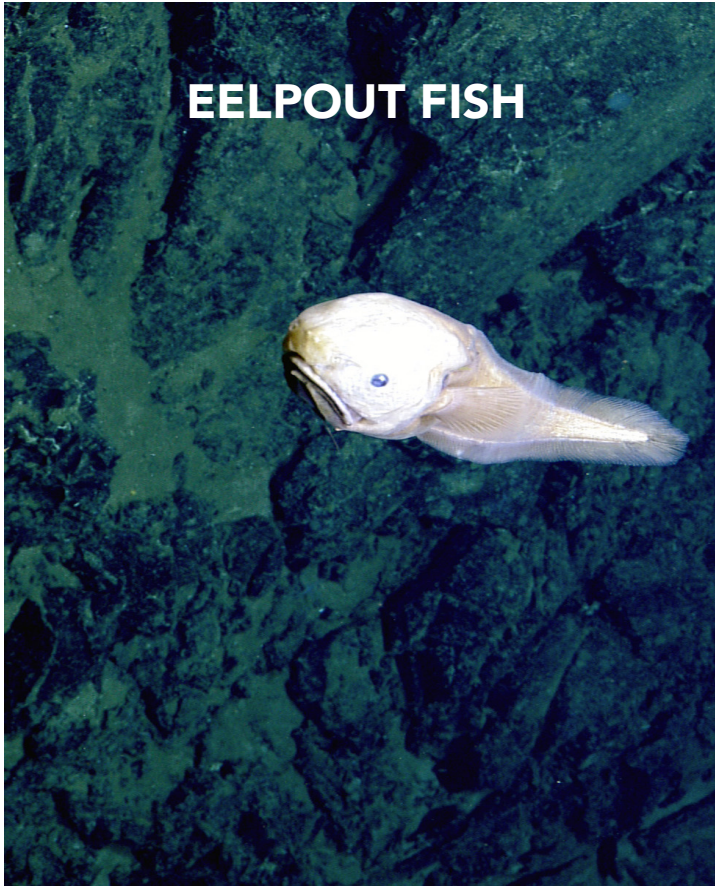
Flamboyant Squidworm

What am I? A polychaete worm with paddle-like appendages for swimming and tentacles on head for detecting and catching prey. Discovered in 2007.

What do I eat? Decaying fish matter falling through the water column, crinoids, or corals.

Who eats me? Unknown

Habitat: Little known; has been found in deep Eastern Pacific waters near vent communities but doesn't seem to require active vents for survival. Most likely found in vent regions due to the amount of food in those areas.



EELPOUT FISH

Eelpout Fish

What am I? A white fish with a long slender body and a dorsal fin that extends along its entire body.

What do I eat? A top predator at many vents. Preys on tube worms, crabs, shrimp, and many other crustaceans along the periphery of the vent. Can also graze on smaller organisms including bacteria.

Who eats me? In most vent communities it is a top predator.

Habitat: Have been seen living amongst the mussel beds close to the vent openings and farther away where there is less flow of hydrothermal waters. Usually found slowly swimming wherever their food source is located.



VENT SHRIMP

Vent Shrimp

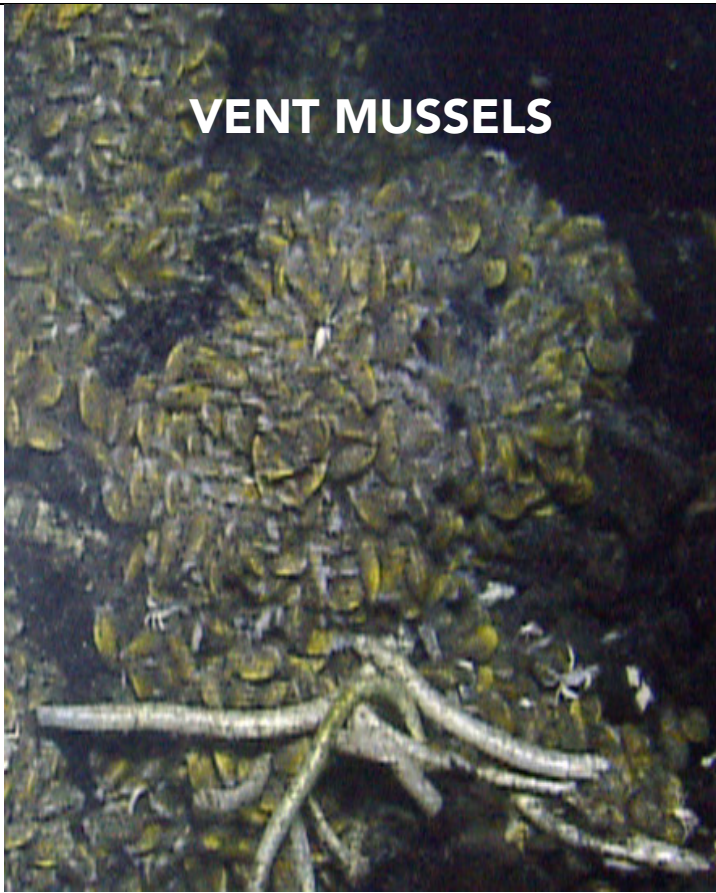
What am I? A tiny crustacean that can detect black body radiation to find heat from active vents.

What do I eat? Graze on bacterial mats and tiny animals.

Who eats me? Predators such as fish, octopus, or crabs.

Habitat: Swarm around the opening of vents where nutrient rich, heated water (40° C, can tolerate cooler) and bacterial mats are present.

VENT MUSSELS



Vent Mussels

What am I? Bivalves (average 6" in length) living in clumps along the cracks of active vents along with tubeworms and clams. Slightly mobile and can crawl slowly.

What do I eat? Chemosynthetic bacteria in their gills make sugars from the sulfur being emitted from the vent, which is used as a food source. If the vent stops flowing they can still filter feed with their gills.

Who eats me? Predators include sea stars, fish, octopus, and crabs.

Habitat: Often the first shellfish to colonize a vent. They form clumps along the cracks of active vents where there is nutrient rich, heated water, but can tolerate cooler waters.

SEA STAR



Sea Star

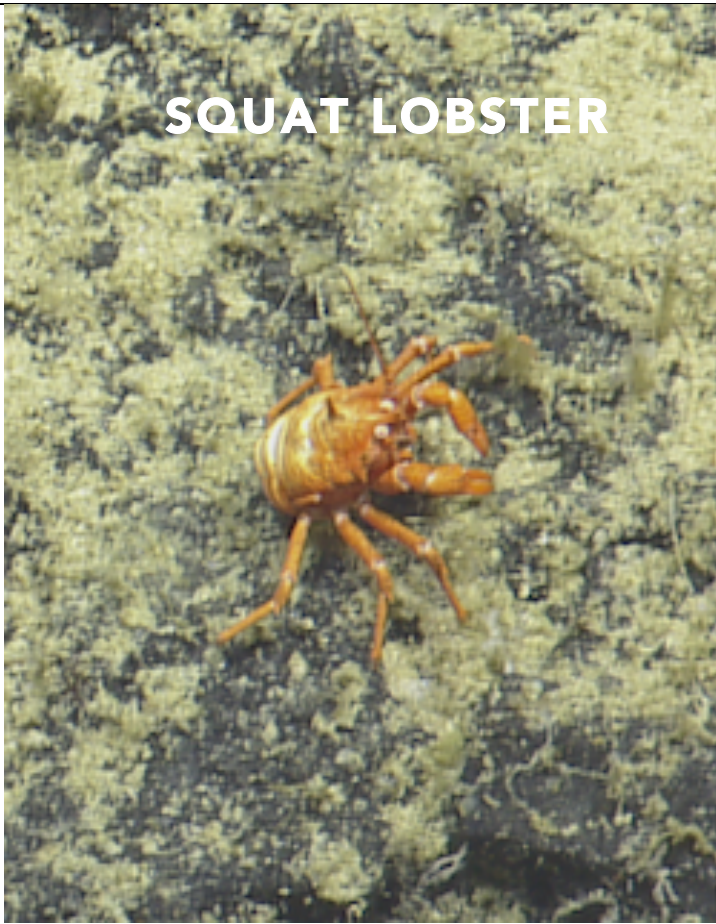
What am I? These radially symmetric echinoderms come in a variety of colors and are a type of predatory sea star.

What do I eat? Meal of choice is bivalves and have been observed eating clams, mussels and barnacles around vent sites.

Who eats me? A crab or octopus might prey upon a sea star.

Habitat: Rare at active vents. Usually show up at dying vents and eat clams and mussels when vent flow is gone. It was once thought that the hydrothermal waters would be toxic to a sea star, but a new species was recently discovered that can survive near a vent.

SQUAT LOBSTER



Squat Lobster

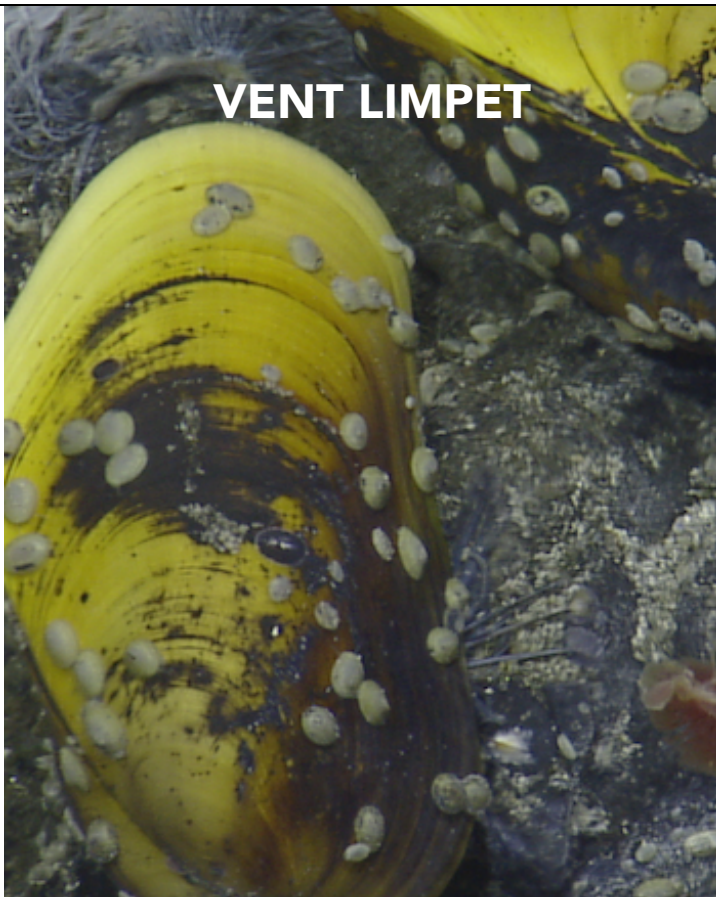
What am I? Another type of vent crab which has a flattened shape and tends to be on the small size, 3.5 inches in length or less.

What do I eat? Grazes on bacteria and tiny animals; also scavenges for edible pieces of debris that have settled on the seafloor.

Who eats me? Can be eaten by octopuses and other vent crabs.

Habitat: Prefers cooler waters but can tolerate warmer. Like to hide in crevices and under rocks with their claws exposed to scare away predators and pick up food.

VENT LIMPET



Vent Limpet

What am I? A type of snail, typically very small in size, less than the width of a dime.

What do I eat? Grazes on bacteria living on the substrate surface.

Who eats me? Supposed predators include octopuses, crabs and fish.

Habitat: Can tolerate a range of temperatures. Can lock down very well if they don't want to come off the surface of the animals they inhabit. Have been found to stay alive on a ROV days after being collected!