



HOME EDITION

**MARINE TANK
GUIDE**

About the Marine Tank



With almost 34,000 miles of coastline, Alaska's intertidal zones, the shore areas exposed and covered by ocean tides, are home to a variety of plants and animals. The Anchorage Museum's marine tank is home to Alaskan animals which live in the intertidal zone. The plants and animals in the Museum's marine tank are collected under an Alaska Department of Fish and Game Aquatic Resource Permit during low tide at various beaches in Southcentral and Southeast Alaska.

Visitors are asked not to touch the marine animals. Touching is stressful for the animals. A full-time animal care technician maintains the marine tank. Since the tank is not located next to the ocean, ocean water cannot be constantly pumped through it. This means special salt water is mixed at the Museum. The tank is also cleaned regularly. Equipment which keeps the water moving, clean, chilled to 43°F and constantly monitored. Contamination from human hands would impact the cleanliness of the water and potentially hurt the animals.

A second tank is home to the Museum's king crab, named King Louie, and black rockfish, named Sebastian. King crab and black rockfish of Alaska live in deeper waters than the intertidal zone creatures.

This guide shares information about some of the Museum's marine animals. When known, the Dena'ina word for an animal is included, recognizing the thousands of years of stewardship and knowledge of Indigenous people of the Anchorage area and their language.

The Dena'ina & Marine Species



The geographically diverse Dena'ina lands span both inland and coastal areas, including Anchorage. Much of Dena'ina knowledge of marine species comes from the southern part of Cook Inlet and Kachemak Bay regions and is influenced by Sugpiaq (Alutiiq) speakers from villages just south of the Dena'ina region including Nanwalek, Port Graham, and Kodiak Island. Most of the Museum's marine animals are not used by the Dena'ina for subsistence and many are not found in areas where Dena'ina traditionally live.

The Dena'ina Language

Dena'ina is one of eleven Dene languages spoken throughout Interior Alaska and the Cook Inlet region. It is the only Dene language in Alaska which occupies a coastal environment, with four regional dialects (Upper Inlet, Outer Inlet, Inland, and Iliamna). The language changed for thousands of years before being written down. The last speaker of a fifth dialect, Seldovia, died in the 1930s.

Since the 1970s, speakers and researchers have come together to help document and revitalize the language to help recover some of what was lost when Russian and American colonizers and other settlers arrived and introduced their languages.

Dena'ina Regional Dialects



Credit: National Park Service

Acorn Barnacle

Species: *Xiphister atropurpureus*

Tahggits'a

Inland and Upper Cook Inlet Dena'ina

Diet

Filter feed on plankton and edible detritus

Range and Habitat

Northern Alaska to northern Mexico; recently introduced to Argentina and Japan; intertidal to subtidal environments

Predators

Snails, nudibranchs, sea stars, limpets, birds and fish

Fun facts

Can extract oxygen from both air and water, allowing them to stay out of water during low tide for long periods of time; though acorn barnacles have no eyes as adults, they do possess an eyespot in the middle of their "forehead" which can detect light and shadow



Sculpin

Species: *Oligocottus maculosus*

Galaghaq

Outer Cook Inlet Dena'ina

Diet

Barnacles, polychaete worms, copepods, small fishes, amphipods, isopods, and other crustaceans and invertebrates

Range and Habitat

Bering Sea to southern California; upper to lower intertidal environments

Predators

Diving birds and predatory fish

Fun facts

These fish can remember the location of their 'home' tide pool and find their way back from as far away as 100m (328ft); sculpin can tolerate fluctuations in salinity and water temperatures up to 16°C (61°F), making them very hardy and adaptable



Leather Star

Species: *Dermasterias imbricata*

Tats'nałin

Seldovia Dena'ina

Diet

Large variety of items, most commonly sea anemones, sea urchins, and sea cucumbers

Range and Habitat

Cook Inlet, Alaska to Baja California, Mexico; intertidal depths up to 91m (299ft) on both rock and sand

Predators

Morning sun star

Fun facts

This sea star can be identified with your nose - they smell like garlic; the leather star is generally found in more protected waters since they cannot adhere to rocks as strongly as many other sea stars



Red King Crab

Species: *Paralithodes camtschaticus*

Ch'nał'in Ka'a

Outer Cook Inlet Dena'ina



Diet

Large variety of items such as clams, snails, barnacles, urchins, sea cucumbers, fish, and algae

Range and Habitat

Alaska, Japan, West Coast of North America; intertidal zone up to 1200 ft

Predators

Humans, halibut, pacific cod, octopus, sea otters

Fun facts

The red king crab can live 15-20 years; females can weigh up to 10.5lbs while males can reach 24lbs



Painted Anemone

Species: *Urticina crassicornis*

Tsani Nagha

Iliamna Dena'ina

Tsanagha

Outer Inlet, Upper Inlet, and Inland Dena'ina

Diet

gastropods, chitons, crabs, sea urchins and fish

Range and Habitat

North Pacific Ocean (along coasts of both Asia and North America), North Atlantic Ocean (North America and Europe) and Arctic Ocean (Asia, Europe and North America); upper intertidal up to 30m

Predators

Leather sea star and "sea slugs" (nudibranch)

Fun facts

This type of anemone can live 60-80 years; candy striped shrimp can live within it without being eaten



Plumose Anemone

Species: *Metridium farcimen*

Tsani Nagha

Iliamna Dena'ina

Tsanagha

Outer Inlet, Upper Inlet, and Inland Dena'ina

Diet

Filter feeders eating items like plankton, and copepods

Range and Habitat

Eastern Pacific Ocean from Alaska down to Catalina Island, California; intertidal to very deep environments

Predators

Nudibranches and leather sea stars

Fun facts

Can reproduce sexually and asexually; they have two types of tentacles: one is for feeding and the other is for defense; the defensive tentacles can extend and kill anemones not genetically identical



Green Sea Urchin

Species: *Strongylocentrotus droebachiensis*

Ch'eghesh

Outer Inlet, Upper Inlet, and Inland Dena'ina

Nini Ta'ilk'eghi

Iliamna Dena'ina

Uduq

Seldovia Dena'ina

Diet

Eat algae off hard substrate with their teeth, and also feed on kelp and other seaweeds

Range and Habitat

Pacific and Atlantic Oceans to a northerly latitude of 81 degrees and as far south as the Puget Sound (Washington State) and England; intertidal zones to about 1200m

Predators

Sea stars, crabs, large fish, birds, mammals, such as sea otters and humans

Fun facts

Sea urchins move with their tube feet; their spines are in ball and socket joints so each one can be moved individually



Black Rockfish

Species: *Sebastes melanops*



Diet

Smaller fish, crustaceans, mollusks, and planktonic crustaceans

Range and Habitat

West coast of North America; surface to about 1,200ft

Predators

Juveniles preyed on by sablefish, pacific halibut, and pigeon guillemots

Fun facts

This fish gives birth to live young; black rockfish spines are venomous; the lifespan of this fish is up to 30 years



Crescent Gunnel

Species: *Pholis laeta*



Diet

Isopods, algae, worms, and barnacles

Range and Habitat

Aleutian Islands, Alaska, Washington, North California;
intertidal zone

Predators

Birds, large fish, and mammals

Fun facts

This fish can breathe air; crescent gunnel can survive brackish water and can live up to 6 years in the wild



Crested Blenny

Species: *Parablennius laticlavus*



Diet

Barnacle, limpets, amphipods, snails, hermit crabs, algae, and echinoderms body parts

Range and Habitat

Aluetians to southern California; intertidal to 100ft

Predators

Diving ducks and shorebirds

Fun facts

Crested blenny can find their way back home if moved by as much as 300ft; they can breathe air



Red Sea Urchin

Species: *Mesocentrotus franciscanus*

Ch'eghesh

Outer Inlet, Upper Inlet, and Inland Dena'ina

Nini Ta'ilk'eghi

Iliamna Dena'ina

Uduq

Seldovia Dena'ina

Diet

Seaweed and invertebrates

Range and Habitat

From Northern Japan and Alaska to Baja California;
intertidal zone to a depth up to 90m

Predators

Sea stars and sea otters

Fun facts

Some research suggests that urchins can live over 100 years; urchins have fivefold symmetry as adults, but their pluteus larvae have bilateral (mirror) symmetry



California Sea Cucumber

Species: *Parastichopus californicus*



Diet

Organic marine detritus/debris

Range and Habitat

Bering Sea, Gulf of Alaska to Baja California; low intertidal zone to a depth of 250m (820ft)

Predators

Sea stars, otters, and humans

Fun facts

Sea cucumbers can force out their digestive tracks if threatened; they will regrow the expelled digestive track



Lined Chiton

Species: *Tonicella lineata*

Balushuk

Seldovia Dena'ina

Diet

Algae, diatoms, microalgae, crustaceans, and bryozoans

Range and Habitat

North Pacific to Monterey, California; low intertidal & subtidal 100-300ft

Predators

Sea birds, otters, fish, and sea stars

Fun facts

Lined chitons can make itself into a ball to protect itself; they have light sensitive cells just under their shells; they are able to return back to their home spot



Hairy Triton Snail

Species: *Fusitriton oregonensis*

Diet

Eats other mollusks, ascidians (“sea squirts”), and more rarely, sea urchins

Range and Habitat

Bering Sea to San Diego, California; intertidal zone to 300ft (90m)

Predators

Sea stars

Fun facts

Hairy triton snails have a proboscis gland that secretes an anesthetic that can immobilize prey; the snail produces sulfuric acid in its salivary glands, which may help in boring through shells; the snail has a pathogen in its salivary glands that can kill a human if eaten



Butterfly Crab

Species: *Cryptolithodes typicus*



Diet

Bryozoans and coralline algae

Range and Habitat

Anchitka Island, Alaska to Santa Rosa Island, California; rocky shores to 150ft

Predators

Unknown

Fun facts

They are difficult to tell apart from umbrella crabs; the butterfly crabs' claws are roughened, and the abdominal plates have raised edges; they are also known as turtle crabs



Pacific Blue Mussel

Species: *Mytilus trossulus*



Diet

Filter feeders: plankton and detritus

Range and Habitat

North American Pacific Coast; intertidal zones

Predators

Shorebirds, gulls and crow, sea stars, anemones, snails, crabs, fishes, and diving ducks

Fun facts

Mussels play a vital role in the ecosystem by removing bacteria and toxins; the Pacific Blue Mussel shell is made from calcium directly absorbed from sea water



Crumb of Bread Sponge

Species: *Hymeniacidon perlevis*

Diet

Filter feeders: plankton and other organic particles

Range and Habitat

Alaska, Bering Sea, Baja California, Mexico, and New England; mid - low intertidal zones

Predators

Mollusks and some speices of sea stars

Fun facts

Sponges need a constant flow of water to get oxygen, food, and to remove waste; common name refers to how it breaks easily like bread crumbs



Hermit Crabs

Species: Varies depending on each species



Diet

Omnivores: plants and animals

Range and Habitat

Range varies depending on the specific species; all of the museum's hermit crabs are marine (salt water) hermit crabs

Predators

Many marine animals will eat hermit crabs

Fun facts

Over a thousand different species of hermit crabs have been identified; hermit crabs can support one or more sea anemones on their shells which can scare away predators; the crabs may fight for shells if shells are scarce



Ochre Sea Star

Species: *Pisaster ochraceus*

Tats'nałin

Seldovia Dena'ina

Diet

Most common diet is bivalves such as mussels

Range and Habitat

Prince William Sound to Baja, California; low-tide zone to 90m

Predators

Sea otters and gulls

Fun facts

These sea stars can be orange (ochre) or purple; no good hypothesis explains this color polymorphism; sea stars are a keystone species



Glossary

Anemone

Tsanagha

Outer Inlet, Upper Inlet, and Inland Dena'ina

English translation: Rock eye

Tsani Nagha

Iliamna Dena'ina

English translation: Cliff eye

Barnacle

Tahggits'a

Inland and Upper Inlet Dena'ina

English translation: Underwater scales

Chiton

Balushuk

Seldovia Dena'ina

Limpet

Qanałggi

Upper Inlet Dena'ina

Niggitgga

Iliamna Dena'ina

Gganałggi

Outer Inlet Dena'ina

Red King Crab

Ch'nał'in Ka'a

Outer Inlet Dena'ina

English translation: ch'nał'in - object we keep;

ka'a - big

Sculpin

Galaghaq

Outer Inlet Dena'ina

English translation: Saltwater sculpins

Sea Star

Tats'nał'in

Seldovia Dena'ina

English translation: Object laying in the water

Sea Urchin

Ch'eghesh

Outer Inlet, Upper Inlet, and Inland Dena'ina

English translation: Thorny

Nini Ta'ilk'eghi

Iliamna Dena'ina

English translation: Porcupine angry in the water

Uduq

Seldovia Dena'ina



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Notes

The Dena'ina words **Galaghaq** (sculpin) and **Uduq** (sea urchin) are words from the Sugpiaq (Alutiiq) language. The Dena'ina adopted them from this neighboring culture which, in contrast to the Dena'ina, is found in entirely along coastal regions.

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