Forest Web Fast Facts

PREY:	Eyes on sides of head, eaten by others
PREDATOR:	Eyes facing forward, eat other animals
HERBIVORE:	Clipping teeth in front, grinding teeth in back for eating plants
CARNIVORE:	Sharp teeth for holding & tearing for catching and eating animals
OMNIVORE:	Mix of all teeth; eats plants and animals

Fungus, Snags & Logs

Varied Thrush

Ground Beetles

Northwestern Salamander

Trees - Snags & Logs (producer in life) *photo*

- Trees are habitat to many plants and animals in life and death. Stumps, logs and standing dead trees provide important nutrients and access to LAWS.

Fungus (decomposer) *specimen*

- Mycelia (nutrient absorbing filaments) help to break down poop & plant and animal material into soil.
- Mushroom & conks are reproductive structures. The fungus is usually many times larger than what you can see.

Varied Thrush (predator, omnivore, generalist) *study skin*

- Slender bill good at gleaning soft foods like insects, pill bugs, snails, worms, fruits and some seeds from ground.
- Hops and pauses to look for food. Flips leaves and debris with bill.

Ground Beetles (predator, carnivore/generalist) *live animal, photo*

- Ground beetles have walking legs and sharp, biting jaws.
- Eats snails, slugs, maggots and worms.
- Generally nocturnal - large eyes and antennae. Hides under bark and in logs during day.

Northwestern Salamander (predator, omnivore/generalist) *live animal*

- Big eyes – sees well in dark places.
- Lives in forests - mostly underground, also in soft/decaying logs, in bark or wood mounds around the bases of snags
- Eats worms, beetles, slugs – anything it can catch and swallow
- One of the largest northwest salamanders
- Excretes large amounts of white poison when threatened, although it is not very toxic to humans

Banana Slug

Northwestern Deer Mouse

Salmon Berry

Townsend's Chipmunk

Big Brown Bat

Banana Slug (prey, herbivore/decomposer) *live animal*

- Secretes slime to help it move along
- Must have moist environment – active on humid days or at night
- Eats a variety of fungi and plants with a toothed tongue

Northwestern Deer Mouse (prey, omnivore/specialist) *skull*

- Mostly arboreal (tree dwelling) – has long tail to help balance it while climbing
- Eats berries, shrubs, seeds (especially spruce and hemlock seeds) and some invertebrates.

Salmon Berry (producer) *photo*

Townsend's Chipmunk (Prey, omnivore/generalist) *study skin, skull*

- Eats roots, bulbs, grasses, seeds, berries, fungi, large insects, eggs, baby birds and carrion.
- Runs fast, excellent climber
- May travel more than ½ mile in search of food.
- Can hold and transport more than 100 oats at one time in its cheek pouches.

Big Brown Bat (Predator, carnivore/specialist) *specimen/photo*

- Nocturnal – uses echolocation to locate night-flying insects
- Roosts by feet in tree cavities, in deep bark crevices, logs or under bark (and buildings)
- Eight species use the refuge – little brown myotis, big brown bat, Yuma myotis, long-eared myotis, long-legged myotis, California myotis, silver-haired bat, and hoary bat.

Dunes/Grasslands Web Fast Facts

PREY:	Eyes on sides of head to see danger, eaten by others
PREDATOR:	Eyes facing forward for binocular vision; capture & eat other animals
HERBIVORE:	Clipping teeth in front, grinding teeth in back for eating plants
CARNIVORE:	Sharp teeth for holding and tearing for catching and eating animals
OMNIVORE:	Mix of all teeth; eats plants and animals

Shore Pine

Shore Pine (producer, specialist) *specimen*

- Has needles in bunches of two and cones with a sharp tip
- Can tolerate salt spray and low-nutrient conditions such as sand

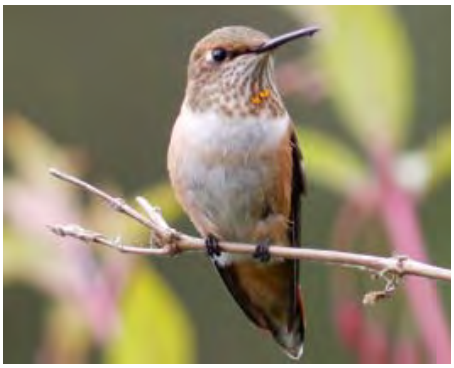
Grasses & Forbes (producers, generalists) *photo*

- Often first plants to colonize, especially those with rhizomes that can search for water/nutrients and stabilize soils.

Spiders

Spiders – Orb weavers (predator/prey, carnivore) *photo*

- Creates web of sticky and non-sticky elastic silk to capture flying insects, rarely small birds.
- May create a new web each day, sometimes eating the old one



Rufous Hummingbird

Rufous Hummingbird (predator/ prey, omnivore/specialist) *study skin*

- Long slender bill and tongue designed to extract plant nectar. Also eats insects, spiders and tree sap.

Porcupine

Porcupine (prey, herbivore/specialist) *skull, claw, quills, footprint*

- Strict vegetarian – eats leaves, buds, twigs, young bark and cambium
- Mostly nocturnal
- Gnaws antlers and bones for calcium
- Sharp, curved claws, bumpy soles and quills on the underside of tail help it climb.

Roosevelt Elk

Snowshoe Hare

Coyote

Pacific Tree Frog

Barn Owl

Roosevelt Elk (prey, herbivore/generalist) *antler, tooth, scat*

- Grasses and forbs, twigs and woody veg.
- Diurnal and crepuscular, sometimes nocturnal
- Elk are some of the most adaptable grazers – sedges and grasses can make up 80-90% of diet in spring & summer, woody plants and fallen leaves in winter.

Snowshoe Hare (prey, herbivore/scavenger/generalist) *photo/skull*

- Eats grasses, forbs and brush, and alder and willow buds, twigs and bark. Will occasionally eat carrion.
- Runs fast.

Coyote (predator, carnivore/omnivore/scavenger/generalist) *skull*

- Sharp eyes, good nose and fast runner (25-30 mph)
- Prefers small animals such as mice, voles, birds and rabbits, but will also eat eggs, amphibians, reptiles, fruits and berries, and carrion.
- Will take larger hooved mammals like deer and fawns.

Pacific Tree Frog (predator/prey, omnivore/generalist) *live animal*

- Secretes waxy substance that keeps its skin moist allowing it to wander far from water in grasses, shrubs and sometimes trees.
- The sticky pads on the toes help this frog to be a strong climber.
- Eats anything it can catch and swallow.

Barn Owl (predator, carnivore/specialist) *study skin*

- Nocturnal – active at night, rests during the day. Barred and mottled plumage helps owls hide during day.
- Strong feet and sharp talons to catch and kill prey. Can rotate third toe to side making a web of talons to catch and hold prey.
- Swallows small mammals (voles), sometimes amphibians, reptiles and insects whole.

Mudflats and Saltmarsh Web Fast Facts

PREY:	Eyes on sides of head to see danger, eaten by others
PREDATOR:	Eyes facing forward for binocular vision; capture & eat other animals
HERBIVORE:	Clipping teeth in front, grinding teeth in back for eating plants
CARNIVORE:	Sharp teeth for holding and tearing for catching and eating animals
OMNIVORE:	Mix of all teeth; eats plants and animals

Pickleweed

Sedge

Newcomb's Littorine Snail

Garter Snake

Pickleweed (producer, specialist) *live plant*

- Has fleshy stems eaten raw or preserved as 'sea asparagus'
- Salt tolerant, doesn't grow in places with high wave action

Lyngby's Sedge (producer) *photo*

- Most common shoreline sedge – pioneer colonizer of mudflats.
- Prime forage for geese, swans and bears – high protein when young (25% crude)

Newcomb's littorine snail (prey, herbivore/specialist) *photo*

- Not much is known about this snail.
- Lives on the stems of pickleweed, and possibly other marsh plants. It also lives on substrate such as woody debris and rocks beneath vegetation, where it remains moist and protected from the sun and wind.
- It feeds on microscopic and macroscopic algae and the vascular plants on and under which it lives. It presumably eats by rasping the surfaces with its radula (toothed tongue) to remove small particles for digestion.

Garter Snake (predator/prey, omnivore/generalist) *shed skin/photo*

- Eats slugs and earthworms, will also eat snails, frogs, fish, salamanders, and small birds and mammals.
- Often hunt near freshwater and shorelines.
- Seek out open spaces and rocks to sunbathe
- Can eat rough-skinned newts (tolerant of toxins)

Townsend's Vole

Great Blue Heron

Long-tailed Weasel

Amphipod

Marine worm

Townsend's vole (prey, herbivore/generalist) *skull/photo*

- Digging claws
- Eats tender marsh and grassland vegetation, bark of shrubs, stems and root of conifers

Great Blue Heron (predator/prey, carnivore/generalist) *skull/photo*

- Long neck and bill help it catch and eat fish, amphibians, small mammals and nestlings. "S" curve of neck and other designs allow for lightning quick speed. Stalk and spear.
- Nests high in trees with other herons (colony nester) to protect from predators like raccoons. Makes a nest out of woven sticks.

Long-tailed Weasel (predator, carnivore/generalist) *study skin/photo*

- Fast moving with sharp teeth – catches its prey by pounce, bite and wrapping long body around to slow prey's forward movement.
- Eats voles, mice, snakes. Will take squirrels, rabbits and shrews as well.

Amphipods (predators/prey, omnivore/scavenger/generalist) *specimen/pho*

- Come in a variety of sizes, mostly smaller than a few centimeters in length. Flattened side-to-side.
- Shrimp-like crustaceans that are free-swimmers or bottom dwellers
- Eat plankton and detritus

Marine Worms (predators/prey, omnivore/scavenger/generalist) *photo*

- Segmented, marine versions of earthworms. Some live in tubes, some crawl/swim, some in burrows.
- Eat plankton, small crustaceans, other worms, detritus and algae

Short-billed Dowitcher (predator/prey, omnivore/specialist) *photo*

- Long, straight bill used to probe rapidly up and down in wet mud like a sewing machine (called "stitching").
- Eats amphipods, worms and mollusks

Freshwater Streams, Wetlands and Ponds Web Fast Facts

PREY:	Eyes on sides of head to see danger, eaten by others
PREDATOR:	Eyes facing forward for binocular vision; capture & eat other animals
HERBIVORE:	Clipping teeth in front, grinding teeth in back for eating plants
CARNIVORE:	Sharp teeth for holding and tearing for catching and eating animals
OMNIVORE:	Mix of all teeth; eats plants and animals

Skunk Cabbage

Flies & Bees

Copepods

Western Pearlshell Mussel

Tree Swallow

Skunk Cabbage (producer, specialist) *plant/photo*

- Flowers release different odors at different temperature to attract pollinators. Sweet for bees, rotten for beetles.
- Grows in wet soils.

Flies & bees (prey, herbivore/carnivore/parasite/specialists) *specimens*

- Pollinators – 75% of all flowering plant species need the help of animals to move their heavy pollen grains from plant to plant for fertilization. Most of the pollinators are insects, such as bees, wasps, beetles, ants, butterflies, moths and flies.
- The larvae of some species of flies and beetles live and feed on carrion and feces. Some wasps lay eggs in a paralyzed host.

Copepods (prey, herbivore/scavenger/generalist) *photo*

- Crustacean, considered zooplankton, 1-2 mm long.
- Eats phytoplankton, detritus and bacteria

Western Pearlshell Mussel (predator/prey, omnivore/specialist) *shell*

- Live only in cold, clear streams
- Use gills to filter algae, zooplankton and bacteria out of water.

Swallows (predator, carnivore/specialist) *photo*

- Short, wide mouth and long pointed wings helps catch insects while flying at high speeds (needs open areas). Will eat berries and seeds, if insects are unavailable.

Rough-skinned Newt

Raccoon

Black Bear

Waterstriders

Belted Kingfisher

Rough-skinned Newt (predator, omnivore/generalist) *live animal*

- Lives in forests, ponds or wetlands, with some adults living in ponds year round.
- Eats worms, beetles – anything it can catch and swallow, including salamander eggs
- Frequently seen foraging on forest floor on damp days.
- Toxic – uses bright coloring to warn potential predators

Raccoon (predator, omnivore/generalist) *skull/photo*

- Highly sensitive paws allow it to probe and feel for food.
- Eats fruits, nuts, berries and insects, clams, frogs, fish, eggs, young birds and rodents.

Black Bear (predator, omnivore/scavenger, generalist) *skull/photo*

- Eats almost anything – 95% of diet is plant material, including leaves, buds, flowers, berries, fruits and roots. Will also eat fish, insects (including bees), mammals and carrion.
- Great sense of smell.
- Teeth like ours – flat front for clipping, pointing canines for holding, flat molars for grinding.

Waterstriders (predator/prey, carnivore/generalist) *photo*

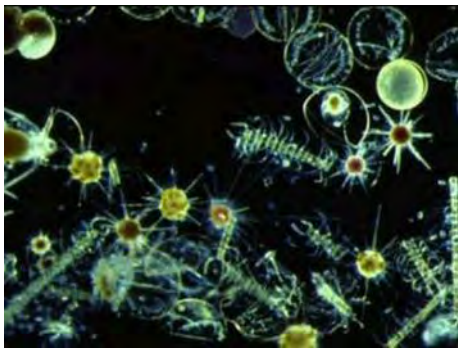
- Skates on the water's surface, uses sensitive foot hairs to sense prey.
- Pounce, catch, pierce and suck from insects, crustaceans that fall into the water or float to surface.

Belted Kingfisher (predator, carnivore/specialist) *photo*

- Dives after prey (mostly fish) head first.
- Perch or hover, dive, perch, kill & eat

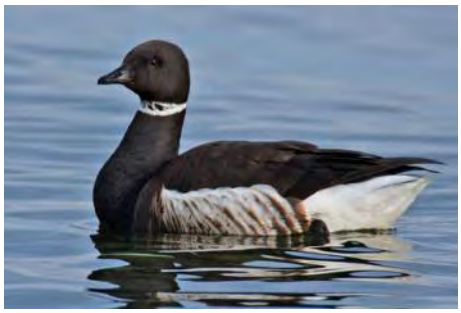
Bay Web Fast Facts

PREY:	Eyes on sides of head to see danger, eaten by others
PREDATOR:	Eyes facing forward for binocular vision; capture & eat other animals
HERBIVORE:	Clipping teeth in front, grinding teeth in back for eating plants
CARNIVORE:	Sharp teeth for holding and tearing for catching and eating animals
OMNIVORE:	Mix of all teeth; eats plants and animals



Plankton & Diatoms

Eelgrass



Brant

Littleneck Clam

Plankton & Diatoms (producer, generalist) *photo*

- Microscopic, often one-celled plants, very diverse
- Hundreds of thousands of plankton can fit in a 1 centimeter cube

Eelgrass (producer, specialist) *photo*

- Rhizomes keep it anchored and create habitat in the open waters of the bay (compare to beach grass, then trees)
- Support a variety of microscopic diatoms, bacteria, algae and detritus on their leaves. Animals, too!
- Slows currents, traps sediments
- Needs light to grow (doesn't grow beneath 22 ft below water surface – average 9-10 ft below)

Brant (prey, herbivore/specialist) *photo*

- Dabbler or grazer – long legs and webbed feet placed mid-body for ease of walking and swimming.
- Flattish bill to eat vegetation – primarily eelgrass in winter. Will eat some aquatic invertebrates, like isopods.

Littleneck Clam (prey, omnivore/detritivore/specialist) *shell/photo*

- Filter feeder – draws water through siphon and gills to filter out phytoplankton and detritus from water.
- Uses foot to dig into sand or gravelly substrate.
- As larvae they swim and considered zooplankton

Oyster (prey, omnivore/detritivore/specialist) *shell*

- Filter feeder – draws water through siphon and gills to filter out phytoplankton and detritus from water.
- As larvae they swim and considered zooplankton.
- Attach to other oyster shells or rocks

Dungeness Crab

Chum Salmon Fry

Harbor Porpoise

Harbor Seal

Eelgrass Isopod

Dungeness Crab (predator/prey, carnivore/detritivore/generalist) *shell/photo*

- Uses pincers to open and eat clams, small fish and marine worms. Will scavenge dead animals.
- Uses eelgrass beds as nurseries and hunting grounds.

Chum Salmon Fry (predator/prey, omnivore/detritivore/generalist) *photo*

- Feeds in shallow estuaries until large enough to escape predators – stripes and spots help it blend in with underwater vegetation.
- Eats nearly anything it can fit into mouth, including: detritus, copepods, amphipods, larval fish, shrimp and crabs.

Harbor Porpoise (predator/prey, carnivore/specialist) *skull/photo*

- Also called "Herring Hog", primarily eats small fish, but will take crustaceans off or near seafloor.
- Lives in shallow areas – near shores and bays
- Streamlined body = fast swimmer
- Spatulate, spade-shaped teeth

Harbor Seal (predator/prey, carnivore/generalist) *skull/photo*

- Streamlined design for fast swimming
- Primarily eats fish with pointed teeth, such as herring, rockfish, flounder & salmon. Will also eat squid, octopus, clams, crab & shrimp.
- Haul out on sandbars to rest and warm.

Eelgrass Isopod (prey, herbivore/specialist) *photo*

- Crustaceans that are flattened-like a pancake (pillpugs are isopods)
- Eat plants, algae, eelgrass (some isopods are parasitic on animals)
- Often match the color of the plant they live on
- Use claws to hold onto plant.
- Major food source of fish