

Alaska: Northern Passages & Glacier Bay Species List | June 29 – July 6, 2024 with Naturalist Journeys



Compiled by guide Stephen Grace. Our clients included Christy, Kaki, Tim, Sandra, Ann, Mike, Kathy, Trina, Henry, Maddy, and Rebecca.

Species diversity is low in Alaska relative to warmer latitudes, but the birds we encountered are among the most captivating on the planet. The family Alcidae is the avian highlight of an Alaska tour, and the Tufted Puffin stands out among the alcids. A perennial crowd-pleaser, this auk with golden plumes tufting from its head, a bold white facemask, and a comical parrot-like beak wowed even the nonbirders in our group. The Pigeon Guillemot, with its fire-engine-red legs and cute squeaky-toy voice, was another favorite. The Common Murre, wearing a black and white tuxedo and known affectionately as the “penguin of the north,” looked striking on the water and created a spectacle in its crowded breeding colonies atop sea cliffs. The Marbled Murrelet, dressed in drab camouflage to conceal it in forests, captured our imagination with its astonishing life story—this seabird nests up to 50 miles inland on the branches of old-growth trees. Another alcid highlight of our tour was Kittlitz’s Murrelet, a species that forages in the sea near tidewater glaciers and nests on the ground in remote mountain reaches where no predators tread. Seeing several of these elusive seabirds near our ship sent our hearts soaring.

Sea mammals competed with birds for our attention. Curious Harbor Seals were commonly encountered, and Steller’s Sea Lions gave us good looks at their bear-like heads and bulky bodies. A playful Dall’s Porpoise rode the bow wave of our ship. We watched sixteen Humpback Whales coordinate their efforts to create bubble nets, confusing and corralling the small schooling fish that are their prey. This extraordinary scene was enhanced by a pod of Orcas, which swam within sight of the Humpbacks. Though no carnage ensued, knowing we were in the presence of some of the most efficient predators this planet has ever produced was exhilarating.

BIRDS: 69 species were recorded, of which 2 were heard only, none were endemic, and 3 were introduced. Details are included below.

The eBird link below details the 69 species of birds our group observed during the tour. If you’re new to eBird, be sure to click “Show All Details” on the right side of the list to expand the report and reveal where and when each of the birds were seen and how many.

[Alaska: Northern Passages & Glacier Bay June 2024 Naturalist Journeys](#)

Following is a list of the birds, mammals, and other species we were fortunate to observe during our tour.

BIRDS (69):

DUCKS, GEESE, AND SWANS ANATIDAE — (8)

Canada Goose (C) *Branta canadensis* — (post-tour only) Seen at Mendenhall Wetlands. Southeast Alaska is home to a fascinating subspecies, the Vancouver Canada Goose (*Branta canadensis fulva*). Unique among Canada Geese, the

Vancouver subspecies nests not in parks near ponds but in tree snags in rainforests.

Northern Shoveler (R) *Anas clypeata* — A surprising sighting! A lone immature bird was spotted floating among the icebergs by Johns Hopkins Glacier.

Mallard (C) *Anas platyrhynchos* — (post-tour only) Seen at Mendenhall Wetlands.

Green-winged Teal (U) *Anas crecca* — (post-tour only) Seen at Mendenhall Wetlands.

Harlequin Duck (C) *Histrionicus histrionicus* — One of the world's most visually striking waterfowl, this small sea duck derives its name from the colorful costumes worn by characters in classic Italian comedies. A female and male were seen well in Kasnyku Bay near Hidden Falls Hatchery. Several of these gorgeous ducks were also seen and photographed at South Marble Island in Glacier Bay National Park.

Surf Scoter (C) *Melanitta perspicillata* — Two females without any males in Sukoi Inlet provided a fun identification challenge. Males with their "skunk heads" of black and white and their big orange bills were seen well in Kasnyku Bay.

White-winged Scoter (C) *Melanitta fusca* — Observed in flight in Glacier Bay National Park.

Common Merganser (C) *Mergus merganser* — Several were seen pre-tour at Sitka National Historical Park, and an adult with fuzzy ducklings in tow was spotted through a scope from our ship in Wachusett Cove.

PIGEONS AND DOVES COLUMBIDAE — (2)

Rock Pigeon (R) (Introduced) *Columba livia* — Seen pre-tour in Sitka and seen from the Safari Endeavor flying by Gastineau Channel after we docked in Juneau.

Eurasian Collared-Dove (U) (Introduced) *Streptopelia decaocto* — (post-tour only) Seen around Juneau.

HUMMINGBIRDS TROCHILIDAE — (1)

Rufous Hummingbird (C) *Selasphorus rufus* — Seen several times on land throughout our tour and once from our ship when one of these tiny hummers flew across the bow.

OYSTERCATCHERS HAEMATOPODIDAE — (1)

Black Oystercatcher (C) *Haematopus bachmani* — Heard well and seen well pre-tour at Saint Lazaria, during the tour in Glacier Bay National Park, and in Neka Bay. Immature birds have black tips on their bills, and the sex of a Black Oystercatcher can be determined by looking at the pattern of the iris in the eyes. Many dark flecks throughout the yellow iris indicate a female; if the iris has minimal flecks or no flecks, the bird is likely a male.

LAPWINGS AND PLOVERS CHARADRIIDAE — (1)

Killdeer (U) *Charadrius vociferus* — (post-tour only) One heard and seen at the airport runway next to Mendenhall Wetlands.

SANDPIPERS AND ALLIES SCOLOPACIDAE — (4)

Long-billed Dowitcher *Limnodromus scolopaceus* — (post-tour only) Several seen well in their beautiful rusty breeding plumage at Mendenhall Wetlands. Photos and consultation with an ornithologist confirmed the tricky identification of Long-billed Dowitcher, not Short-billed Dowitcher, given their front-heavy appearance and the consistent rusty coloration without any white on the breast and belly, and the barring at the sides of the breast instead of spots.

Spotted Sandpiper (C) *Actitis macularius* — (pre-tour only) One was observed bobbing its tail on a shore of Indian River at Sitka National Historical Park.

Greater Yellowlegs (C) *Tringa melanoleuca* — (post-tour only) Seen at Mendenhall Wetlands.

Lesser Yellowlegs (R) *Tringa flavipes* — (post-tour only) Seen at Mendenhall Wetlands.

ALCIDS (AUKS, MURRES AND PUFFINS) ALCIDAE — (8)

Common Murre (C) *Uria aalge* — Many hundreds were seen well at Saint Lazaria pre-tour. At South Marble Island in Glacier Bay National Park, these handsome seabirds were seen well on the water and were observed in their noisy, crowded breeding colonies. Their name is said to be derived from the sound they make in their breeding colonies. These

seabirds are extraordinary divers, reaching a recorded depth of nearly 600 feet.

Thick-billed Murre *Uria lomvia* — (pre-tour only) Seen on the water around Saint Lazaria among more numerous Common Murres. Identified by a whitish line on the upper mandible of the bill. This extraordinary alcid has been recorded diving to a depth of 690 feet, in the twilight zone of the ocean, where sunlight begins to diminish, and bioluminescence becomes a primary light source—the deepest dive of any flying bird.

Pigeon Guillemot (C) *Cepphus columba* — In Glacier Bay National Park, these charming seabirds came close to our ship at anchor, giving us great looks at their red legs and red mouth linings, and allowing us to listen closely to their calls. The second-most frequently encountered alcid on the tour, after Marbled Murrelet. Several times we saw Pigeon Guillemots carrying gunnels, an eel-shaped fish that lives in the shallows and is a favorite food of these birds.

Marbled Murrelet (C) *Brachyramphus marmoratus* — Other than our final morning in Juneau, we saw this bird every day of the tour. Most were in their camouflaged breeding plumage that hides them in the forests where they nest, but a few birds, probably immature, were wearing their black and white nonbreeding plumage.

Kittlitz's Murrelet (U) *Brachyramphus brevirostris* — A highlight of this tour. This elusive alcid species forages near tidewater glaciers and nests on the ground in rugged mountains where no predators hunt. Several were seen well on the water by Lamplugh Glacier in Glacier Bay National Park.

Ancient Murrelet (U) *Synthliboramphus antiquus* — (pre-tour only) Seen well in Sitka Bay near a little islet before we reached Saint Lazaria. White plumes above their eyes make them look like an ancient mariner.

Rhinoceros Auklet (U) *Cerorhinca monocerata* — (pre-tour only) This close relative of puffins was seen at Saint Lazaria. During breeding season, a vertical projection on this bird's beak is reminiscent of a rhinoceros horn. Like its puffin cousins, the Rhinoceros Auklet carries multiple fish in its beak and digs nesting burrows in soil above sea cliffs and on islands free of predators.

Tufted Puffin (U) *Fratercula cirrhata* — One of the most charming birds on the planet, this puffin species with golden plumes tufting from its head was abundant and easily viewed on the water and flying toward its nesting burrows pre-tour at Saint Lazaria and during the tour at South Marble Island in Glacier Bay National Park. The puffin breeding season begins in spring and lasts into late summer. After breeding, when their baby puffins (called “pufflings”) have fledged, puffins return to the open ocean, where they live for up to seven months without touching land. During this time, they feed on fish and other marine organisms, drink seawater, sleep while afloat on the waves, and endure winter storms. These birds are clownish and cute (a group of puffins is called a “circus of puffins”), but they are also remarkably well-adapted to survive some of the most ferocious ocean conditions on the planet.

GULLS AND TERNS: LARIDAE — (8)

Black-legged Kittiwake (U) *Rissa tridactyla* — Seen in tremendous numbers throughout Glacier Bay National Park. We observed their stubby black legs and black feet as they stood on their nesting ledges at South Marble Island.

Sabine's Gull (U) *Xema sabini* — One was heard and spotted by an astute birder in our group while kayaking in Ushk Bay.

Bonaparte's Gull (C) *Chroicocephalus philadelphia* — Seen in Gastineau Channel after we docked in Juneau and seen post-tour at Mendenhall Wetlands.

Short-billed Gull (C) *Larus canus* — Ubiquitous throughout our tour, this small gull with a gracile body, small beak, and subtle voice was a constant companion. This species was recently split from Mew Gull.

California Gull (R) *Larus californicus* — (pre-tour only) Two individuals were mixed with Short-billed and Glaucous-winged Gulls on the shore at Sitka National Historical Park, providing a fun ID challenge. Their yellow legs distinguished them from other large gulls with red spots on their bills (Glaucous-winged and Herring).

Glaucous-winged Gull (U) *Larus glaucescens* — Common throughout our tour and easily separated from other gull species by their large size and gray wingtips.

Caspian Tern (ACC) *Hydroprogne caspia* — Seen well pre-tour in Sitka and observed at a distance from our ship while we were underway in Glacier Bay National Park. The largest tern in the world, this species can be separated from Arctic Tern by its size and the shallow forking of its short tail.

Arctic Tern (C) *Sterna paradisaea* — The long, forked tail of this slender tern was apparent as one flew close to our ship after we docked in Juneau.

LOONS: GAVIIDAE — (1)

Pacific Loon (U) *Gavia pacifica* — Several loons in flight in Glacier Bay National Park were difficult to ID, but a lone loon on the water with a rounded gray head and vertical stripes on its neck indicated the Pacific Loon species.

CORMORANTS: PHALACROCORACIDAE — (1)

Pelagic Cormorant (U) *Phalacrocorax pelagicus* — Two birds flew near our ship in Glacier Bay National Park, giving us close looks at their white flank patches, slender snakelike necks, and thin bills. Colonies of breeding Pelagic Cormorants crowded the sea cliffs at South Marble Island in Glacier Bay National Park.

BITTERNS, HERONS, AND ALLIES: ARDEIDAE — (1)

Great Blue Heron (U) *Ardea herodias* — In Wachusett Bay, we observed several Great Blue Herons, creatures of elegant ferocity, standing perfectly still before spearing fish with blinding rapidity.

HAWKS, KITES, AND EAGLES: ACCIPITRIDAE — (1)

Bald Eagle (C) *Haliaeetus leucocephalus* — Encountered everywhere throughout our tour in all stages of maturity, from dark juveniles to mottled immature birds to adults in their iconic plumage of white heads and tails. One eagle was seen carrying a salmon out of the water, and we spotted a few nests, including one on a cliff in Glacier Bay National Park that allowed good looks at eaglets.

KINGFISHERS: ALCEDINIDAE — (1)

Belted Kingfisher (C) *Megaceryle alcyon* — One was glimpsed by a couple members of our group during the skiff tour at Hidden Falls Hatchery. Post-tour, these birds were seen well at Mendenhall Wetland—one kingfisher provided a memorable display of hovering before diving for fish.

WOODPECKERS AND ALLIES: PICIDAE — (1)

Red-breasted Sapsucker (U) *Sphyrapicus ruber* — (heard only) One was heard drumming but remained out of view in a forest behind a mother bear and three cubs on the shore of Ushk Bay.

TYRANT FLYCATCHERS: TYRANNIDAE — (2)

Western Flycatcher (C) *Empidonax difficilis* — We saw this Pacific-slope subspecies well pre-tour at Sitka National Historical Park, noting its teardrop-shaped eyering, whitish wingbars, and bicolored bill. We heard this species many times throughout the tour. In 2023, ornithologists lumped Pacific-slope and Cordilleran Flycatchers together as the Western Flycatcher after treating them as separate species for several decades.

Willow Flycatcher (U) *Empidonax trailli* — (post-tour only) One had been reported hanging out by a coffee shop in Juneau; a few of us found it singing on a powerline.

JAYS AND CROWS: CORVIDAE — (3)

Steller's Jay (C) *Cyanocitta stelleri* — (post-tour only) Heard and seen at Mendenhall Wetlands.

American Crow (C) *Corvus brachyrhynchos* — Ubiquitous throughout our tour. Until a few years ago, ornithologists considered the Northwestern subspecies, which evolved in isolation from the American Crow when the Ice Age created a barrier between populations, a separate species.

Common Raven (C) *Corvus corax* — They were everywhere in Sitka and Juneau but were infrequently heard and seen in the wilds of Alaska.

CHICKADEES AND TITMICE: PARIDAE — (1)

Chestnut-backed Chickadee (C) *Poecile rufescens* — This chickadee with a range restricted to the Pacific Northwest was seen well pre- and post-tour flitting in trees in mixed flocks with Ruby-crowned and Golden-crowned Kinglets. Heard a

few times in forests during the tour.

SWALLOWS: HIRUNDINIDAE — (3)

Tree Swallow (C) *Tachycineta bicolor* — (pre- and post-tour only) Seen in Sitka and Juneau.

Violet-green Swallow (U) *Tachycineta thalassina* — (post-tour only) Seen in Juneau and at Mendenhall Wetlands.

Barn Swallow (C) *Hirundo rustica* — Seen pre- and post-tour and spotted during the tour flying along a ridge above an eagle's nest we were observing near Lamplugh Glacier in Glacier Bay National Park.

KINGLETS: REGULIDAE — (2)

Golden-crowned Kinglet (U) *Regulus satrapa* — Heard in forest canopies during the tour and briefly glimpsed pre-tour at Sitka National Historical Park.

Ruby-crowned Kinglet (U) *Regulus calendula* — Heard in forest canopies during the tour and seen well pre-tour at Sitka National Historical Park and at Mendenhall Wetlands. Fledglings with orange gapes at the corners of their beaks were fed by busy adults. Caterpillars seemed the food of choice—several juicy caterpillars were placed in the hungry beaks of begging birds.

TREECREEPERS: CERTHIIDAE — (1)

Brown Creeper (U) *Certhia americana* — (post-tour only) An adult and a puffy, disheveled-looking fledgling were seen on a Sitka alder at Salmon Creek Trail in Juneau.

WRENS: TROGLODYTIDAE — (1)

Pacific Wren (C) *Troglodytes pacificus* — The beautiful music of this “Pavarotti of the forest,” as Peg Abbott calls this virtuoso songster, was a recurring concert throughout our tour. One was seen well pre-tour at Sitka National Historical Park perched atop an upturned root wad and opening its beak to deliver its song.

DIPPERS CINCLIDAE — (1)

American Dipper (C) *Cinclus mexicanus* — (pre-tour only) One was spotted flying near the Indian River at Sitka National Historical Park.

STARLINGS STURNIDAE — (1)

European Starling (U) (Introduced) *Sturnus vulgaris* — (pre- and post-tour only) Common in Sitka and Juneau.

THRUSHES TURDIDAE — (4)

Swainson's Thrush (C) *Catharus ustulatus* — This glorious songster was heard often in the wilderness and seen well a few times at Sitka National Historical Park.

Hermit Thrush (C) *Catharus guttatus* — Another fine singer, this species was heard throughout our tour. One revealed itself near a waterfall at Kasnyku Bay, giving us a close look from our skiff. The bird kept quiet but showed us its reddish tail, separating it from Swainson's and Gray-cheeked Thrush. We also saw a few Hermit Thrushes flying around a cliff when we went ashore at Wachusett Cove.

American Robin (C) *Turdus migratorius* — It was fun to see this backyard bird along a wild shore in Alaska, underscoring how adaptable and widespread this thrush species is.

Varied Thrush (C) *Ixoreus naevius* — Heard in the rainforest wilderness but not seen. At the Salmon Creek Trail in Juneau, several came out of the forest and were easy to see. Most of these appeared to be female or immature birds with muted color.

FINCHES AND ALLIES FRINGILLIDAE — (1)

Red Crossbill (C) *Loxia curvirostra* — (heard only) Their distinctive flight calls were heard: *jip jip jip*. We may have glimpsed them flitting around at the tops of tall Sitka spruce and western hemlock trees but didn't see them well. These

birds were probably the Western Hemlock (Type 3) population of Red Crossbill.

NEW WORLD SPARROWS PASSERELLIDAE — (5)

Dark-eyed Junco (C) *Junco hyemalis* — The Oregon race with its distinctive black hood was heard often and seen well in the wilderness.

Savannah Sparrow (C) *Passerculus sandwichensis* — (post-tour only) Several birds provided superb views and posed for photos at Mendenhall Wetlands.

Song Sparrow (C) *Melospiza melodia* — (pre- and post-tour only) Seen often at close range in Sitka. The subspecies in Southeast Alaska is darker than many people in our group were used to encountering on their home patch. Its song, too, differed from what group members were accustomed to hearing.

Lincoln's Sparrow (C) *Melospiza lincolni* — Several of these sparrows moved around in the open just above the high-tide line of Ushk Bay. They delivered their song that begins with bold bells and bubbly trills and then trails off, like the birds are moving away, even though they are sitting still.

Pine Siskin *Spinus pinus* — Seen in downtown Juneau when we disembarked our docked ship.

NEW WORLD WARBLERS PARULIDAE — (5)

Orange-crowned Warbler (C) *Oreothlypis celata* — (pre- and post-tour only) Heard and seen in Sitka and Juneau. We realized that the songs of these birds in Southeast Alaska don't change pitch at the end—these vocalizations demand close attention to separate them from the song of the Dark-eyed Junco.

Yellow Warbler (C) *Setophaga petechia* — (post-tour only) Heard and seen at Mendenhall Wetlands.

Yellow-rumped Warbler (C) *Setophaga coronata* — (post-tour only) Several of these Myrtle subspecies birds were seen foraging and feeding fledglings at Mendenhall Wetlands.

Townsend's Warbler (C) *Setophaga townsendi* — Heard several times in forest canopies in the wilderness and seen well at Sitka National Historical Park and at Mendenhall Wetlands.

Wilson's Warbler (C) *Cardellina pusilla* — (post-tour only) Seen sporting a black toupee at Salmon Creek Trail in Juneau.

MAMMALS — (11)

Brown Bear *Ursus arctos* — Observed from boats on shore several times, including two sightings of mothers with triplet cubs. The muscular humps and concave faces that distinguish the Brown Bear species from the Black Bear species were clearly seen. We noted that the Brown Bears we observed ranged in color from blonde to dark brown, almost black—color is not a reliable indicator of ursine species. Examination of bear scat revealed this omnivore's diet: blueberries, sedges, grasses, deer hair, and even a deer hoof.

Harbor Seal *Phoca vitulina* — These curious, confiding pinnipeds were seen several times, both from our ship and at close range by kayakers.

Steller's Sea Lion *Eumetopias jubatus* — These enormous creatures were seen swimming and hauled out on rocks and buoys. They put on a memorable display at South Marble Island roaring and battling and frolicking.

American Mink *Neovison vison* — (Not included in the mammal species count.) A dead one was found while exploring the shore at Wachusett Cove.

North American River Otter *Lontra Canadensis* — One of these slim and serpentine otters (compared to their more robust and rotund Sea Otter cousins, was seen scurrying along the shore and disappearing into a sea cave at Wachusett Cove.

Sea Otter *Enhydra lutris* — Observed many times throughout the tour. One of the most endearing mammals on Earth, this charismatic species appeared to be playing and grooming often and occasionally diving for food.

Sitka Deer *Odocoileus hemionus* — A subspecies of Mule Deer. Seen twice during the tour through a spotting scope, these mammals that are closely associated with the old-growth Tongass temperate rainforest proved more difficult to find than bears.

Humpback Whale *Megaptera novaeangliae* — Flukes and blows were sighted throughout the tour. A tour highlight was watching sixteen of these leviathans bubble-net feeding, diving in unison and then reappearing at the surface with perfect coordination as they corralled and confused their prey of small schooling fish with nets made of bubbles they

blew—one of the most remarkable wildlife spectacles on the planet. The return of the Humpback Whale to waters where this intelligent and highly social mammal that sings complex songs was hunted to the edge of extinction is a heartening conservation success story.

Killer Whale *Orcinus orca* — While watching Humpbacks bubble-net feeding in Chatham Strait, a pod of Orcas appeared and were visible for a couple of hours. The six-foot dorsal fin of a male rose above the water, and a calf swam close to its mother. Spy-hopping, peduncle throws, and tail-slapping behaviors were observed.

Harbor Porpoise *Phocoena phocoena* — This shy, introverted cousin of the extroverted Dall's Porpoise was briefly glimpsed a few times.

Dall's Porpoise *Phocoenoides dalli* — One of these playful cetaceans rode the bow wave of our ship for fifteen minutes or so at sunset one evening to the cheers of an ecstatic crowd onboard.

Red Squirrel *Tamiasciurus hudsonicus* — Seen often at close range in Sitka. Heard regularly in wilderness forests making a racket, these creatures were occasionally glimpsed in the forest shadows. We observed their massive cone middens on the forest floor.

OTHER SPECIES (Some species that intrigued our group—not a comprehensive list.)

FISH

Salmon *Oncorhynchus spp.* — We watched a Bald Eagle carry a salmon out of the sea and saw countless salmon schooling around the Hidden Falls Hatchery. This iconic Alaskan fish not only provides food for eagles, bears, and humans. The carcasses of salmon that die after returning to their natal streams to spawn fertilize the temperate rainforest, nourishing the trees with vital nutrients that these fish accumulate in their bodies while feeding in the ocean. The five species of Pacific salmon—Pink (Humpy), Coho (Silver), King (Chinook), Sockeye (Red), and Chum (Dog)—link forest and sea, knitting together the terrestrial and marine ecosystems of Southeast Alaska.

Tidepool Sculpin *Oligocottus maculosus* — This chameleon-like fish can change color to match its surroundings. It crawls out of oxygen-poor pools at low tide and breathes air through its skin.

Penpoint Gunnel *Apodichthys flavidus* — A favorite food of Pigeon Guillemots, these long, eel-like fish are not true eels. We found them hiding under rocks in tidepools and saw Pigeon Guillemots carrying them to their chicks.

MOLLUSKS

Banana Slug *Ariolimax sp.* — Some brave members of our group kissed this creature coated with protective slime that numbs the mouths of predators. This slime has captivated the attention of scientists and material engineers, who are studying the liquid crystal structure of this substance that exists in a state somewhere between liquid and solid—the slime has dual properties, acting as both an adhesive, allowing the slug to stick to vertical surfaces as it climbs, and a lubricant, allowing the creature to glide across horizontal surfaces on its muscular foot. This slug plays an integral role in the forest ecosystem by consuming nitrogen-rich lichen and fertilizing the soil with its droppings. The banana slug's intriguing reproductive strategy includes hermaphroditism, elaborate courtship rituals, simultaneous fertilization, and parental care for the eggs until they hatch.

Shaggy Mouse Nudibranch *Aeolidia papillosa* — The enemy of the anemone! This sea slug feeds on sea anemones and other cnidarians. These nudibranchs use their cerata, which are finger-like projections on their bodies, to store the stinging cells (nematocysts) from the anemones they consume—the shaggy mouse nudibranch uses these stolen weapons for its own defense.

Oregon Triton Snail *Fusitriton oregonensis* — While exploring the shore, we found empty shells of this enormous whelk, a predatory snail that feeds on creatures like bivalves and barnacles.

Limpets *Lottia spp.* — Snail relatives protected by a conical shell that helps them withstand wave energy in the intertidal zone.

Black Katy Chiton *Katharina tunicata* — Chitons are mollusks with a shell made of eight overlapping plates—this flexible shell can bend to conform to irregular rock surfaces. This species has a black, leathery tunic covering the armor plates that protect it from predators.

Lined Chiton *Tonicella lineata* — One of the prettiest creatures in the intertidal zone—its pink plates are as exquisite as painted and polished jewelry.

Mussels *Mytilus spp.* — These bivalves are favorite prey of Black Oystercatchers, Surf Scoters, and sea stars.

CRUSTACEANS

Rockweed Isopod *Pentidotea wosnesenskii* – Looks like an insect but is a crustacean. This creature with a rigid, segmented exoskeleton is closely related to the roly-poly (pill bug) on land that most people are familiar with, but this isopod at the ocean's edge is much larger.

Purple Shore Crab *Hemigrapsus nudus* – We saw live crabs and molted carapaces of this little intertidal crab with cute polka-dot-covered claws.

Dungeness Crab *Metacarcinus magister* – Carapaces of this large crab were seen on shore. Many of these crustaceans were consumed aboard the ship during a Fourth of July feast.

Acorn Barnacles *Balanus spp.* – When the trap doors of barnacle shells opened underwater, we watched the crustaceans inside feed by filtering seawater with a feathery foot. Charles Darwin was fascinated with the sex life of this hermaphroditic creature that has the largest penis relative to body size (nearly eight times the total body length) in the animal kingdom. This adaptation allows these animals anchored in place to reach and fertilize nearby barnacles.

Thatched Barnacle *Semibalanus cariosus* – A larger cousin of the acorn barnacle, this crustacean makes a shell that resembles a thatched roof.

ECHINODERMS

Mottled Sea Star *Evasterias troschelii* – The “tiger of the tidepools.” This large, predatory sea star (scientists prefer the term “sea star” to “starfish,” as this is not a fish) has a profound effect on the ecology of the intertidal zone by consuming vast numbers of mussels, freeing up space on rocky substrate for other organisms to make a living. At Chimney Rock Island, we came across an entire rainbow of sea star color morphs, from tan to pink, from purple to teal.

Six-ray Sea Star *Leptasterias hexactis* – This small sea star has six arms instead of the typical pentaradial (five-arm) symmetry of most sea star species.

Sea Urchin *Strongylocentrotus spp.* – These echinoderms are a favorite food of sea otters. In the tests (shells of spherical marine creatures) of dead urchins we saw Aristotle's lantern, the feeding structure of this creature that consumes kelp. The live urchins we found in the tidepools moved their spines and tube feet.

Orange Sea Cucumber *Cucumaria miniate* – We saw the bright orange feeding tentacles of these pretty echinoderms that had tucked themselves under rocks in the tidepools.

CNIDARIANS

Moonglow Anemone *Anthopleura artemisia* – While exploring the intertidal zone, some of us touched the sticky tentacles of this predatory animal that looks like a pretty flower.

Lion's Mane Jelly *Cyanea ferruginea* – The largest jelly in the world. Although its bell can grow to eight feet in diameter and its tentacles can exceed 100 feet, this organism is considered plankton, along with all other jellies, because they cannot outswim ocean currents—plankton are ocean drifters at the mercy of currents, whether microscopic phytoplankton or gigantic jellies. Scientists prefer the term “jelly” to “jellyfish,” as this is not a fish. A group of jellies is known as a “smack.” We saw smacks of these stinging creatures pulsing their bells. Their mesmerizing movement competed for our attention when we were scanning the shore for birds and bears. Fortunately, no jellies were present in the water of Glacier Bay for the polar plunge.

PHYTOPLANKTON

Although we didn't look at phytoplankton under a microscope to see individual diatoms and dinoflagellates, we saw these organisms in aggregate. The emerald color of Alaskan seas is due to phytoplankton. (Glacial silt also contributes to the murkiness of the sea near tidewater glaciers.) When phytoplankton near the surface of the sea have sunlight in the long Alaskan days for photosynthesis, and they have nutrients carried toward the surface on cold, upwelled currents, they bloom in uncountable numbers, feeding zooplankton (microscopic animals) that graze on floating pastures of phytoplankton. Larger zooplankton predators eat the smaller zooplankton grazers. Small schooling forage fish like herring and hooligan eat the zooplankton. Puffins and Humpback Whales eat the herring. The murky green seas of Alaska are among the most productive marine environments of the planet because of phytoplankton. Phytoplankton also produces more than half the oxygen we breathe.

SEAWEED AND KELP

Rockweed *Fucus distichus* – We popped the bladders to feel the moisturizing gel that contains a natural sunscreen.

Bull Kelp *Nereocystis luetkeana* – Can grow 10 inches a day! Forms vast undersea forests that are home to thousands of species of marine organisms and sequester vast amounts of carbon, like forests on land.

PLANTS

Sitka Spruce *Picea sitchensis* – Along with Western Hemlock, one of the common tree species in the temperate rainforest of Southeast Alaska. Can live more than 700 years and grow to a diameter exceeding 18 feet. The wood of this tree boasts an extraordinary strength-to-weight ratio and was critical to the development of aviation.

Western Hemlock *Tsuga heterophylla* – Can live more than 1,000 years and grow more than 240 feet tall. The dominant tree in old-growth forests that have not experienced disturbances that reset ecological succession.

Sitka Alder *Alnus viridis* – A pioneer species that quickly occupies disturbed sites. This tree has evolved root nodules that host bacteria capable of fixing atmospheric nitrogen, rendering this essential nutrient usable for plants. A man with Tlingit heritage whom we met at Sitka National Historical Park explained that alder was the tree of choice for making bowls and eating utensils because the wood has no odor and imparts no flavor to food.

Deer Fern *Blechnum spicant* – This evergreen plant provides food for deer and other wildlife in winter. The fronds at the fern's center are fertile and stand upright to disperse spores into the wind; fronds low to the ground produce no spores and grow horizontally to capture maximum sunlight for photosynthesis.

Cow Parsnip *Heracleum maximum* – Beware of this plant while bushwacking! The sap contains a phytophototoxin—a toxin that when activated by sunlight can cause skin rashes and blistering. Nevertheless, this is an important food source for many wild animals.

Devil's Club *Oplopanax horridus* – We avoided its enormous thorny leaves and its nightmarishly thorny stems while bushwacking—horrid, as its scientific name suggests. But the berries are food for bears, and this is an important medicinal plant for Indigenous people.

Western Skunk Cabbage *Lysichiton americanus* – Produces leaves so large, the plant looks primordial, like something from a lost world. Generates heat, allowing it to melt through snow and bloom early in spring.

Coralroot Orchid *Corallorhiza sp.* – a mycoheterotroph that does not photosynthesize to produce its own food—this plant without chlorophyll taps into the mycorrhizal network in the soil to gain nutrients

Alaska Blueberry (Early Blueberry) *Vaccinium ovalifolium* – Many of us munched on these delicious berries throughout the tour.

Salmonberry *Rubus spectabilis* – We sampled some of these moist berries that ripen early in summer. Not the most flavorful berry in Alaska, but not bad. The high water content of these berries makes them useful—when no freshwater source is present, the bushes can serve as “hydration stations.”

Gooseberry *Ribes sp.* – This shrub has five-lobed leaves reminiscent of maple trees. We spotted gooseberry bushes with red leaves growing on ledges above the sea cave at Wachusett Cove, but we couldn't reach them to sample the berries that serve as food for wildlife and humans.

Pickleweed (Beach Asparagus) *Salicornia spp.* – Tasty! An edible plant on the shore that some of us sampled.

Goose Tongue *Plantago maritima* – Another edible plant on the shore that some of us ate.

Beach Greens *Honckenya peploides* – Yet another tasty edible plant on the shore that some of us sampled. Great swaths of this plant cover sandy soil at the edge of the sea.

Beach Pea *Lathyrus sp.* – The reddish-purple blooms of this trailing vine festooned the beaches where we wandered. Its busy tendrils entwined driftwood and climbed shrubs.

Beach Ryegrass (Beach Wildrye) *Leymus mollis* – A tall, stout grass common on coastal beaches. An important material for Indigenous people, who weave it into everything from mats to mittens.

Paintbrush *Castilleja spp.* – Yellow and red species were observed. The colorful “brush” is not the flower but leafy bracts that surround the greenish flowers of this partially parasitic plant in the Figwort family. Paintbrush produces some of its own food through photosynthesis but also attaches itself to other plants' roots to steal their resources.

Chocolate Lily *Fritillaria affinis* – We sniffed this pretty but stinky plant. Its scent evolved to attract pollinating flies.

Shooting Star *Dodecatheon pulchellum* – This plant has evolved sonication; only a certain frequency of the buzzing wings

of a pollinator will open its blooms.

Wild Flag Iris *Iris setosa* – We saw the big, beautiful purple blooms of this plant in coastal meadows.

Dwarf Dogwood (Bunchberry) *Cornus canadensis* – Like a miniature version of flowering dogwood, this woodland groundcover carpets the forest floor. We saw the four-petalled white blooms. Bunches of berries form in fall.

Fireweed *Chamaenerion angustifolium* (formerly *Epilobium angustifolium*) – Known as Rosebay Willowherb in Great Britain and Calendar Plant in Alaska. This plant in the willowherb or evening primrose family thrives in disturbed areas, such as land scorched by wildfire. It blooms from the bottom up—the flowers nearest the ground open first. As summer progresses, the blooms travel up the stalk, reaching the top by late summer. In Alaska, when the blooms of the Calendar Plant turn to cotton, “summer is forgotten.”

Dwarf Fireweed (River Beauty) *Chamaenerion latifolium* (formerly *Epilobium latifolium*) – We saw the vibrant magenta-pink blooms of this plant that is pioneering rocky soil recently exposed by the melting Lamplugh Glacier, providing a vivid illustration of primary ecological succession.