

# BIRDS OF JUNEAU

## COASTAL AND TERRESTRIAL HABITATS

prepared by Richard Carstensen for Discovery Southeast

original 1990, updated 2007

### Note to Discovery naturalists and teachers

This slideshow presents selected common birds of the Juneau area in the context of Southeast's terrestrial and coastal natural communities. It makes a good combination with the Natural Communities program. When I projected the original 35mm slides to Harborview classes, I would often insert the appropriate habitat shot from the NC show. Students had already seen these slides in fall programs, and I didn't linger on them; they were only "memory-jogger" images that placed each bird species in a familiar context.

You may prefer to use some of these images as "posters" or paper handouts, to be investigated at greater length than one normally spends in a slide presentation. Vocabulary words are in *italics*.

Most of the good bird images in this show were graciously contributed to Discovery and the Juneau School District by Bob Armstrong.

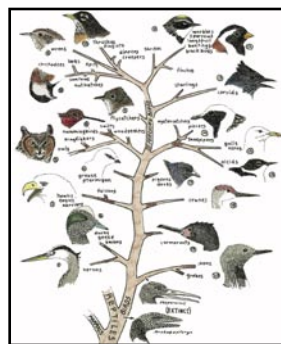
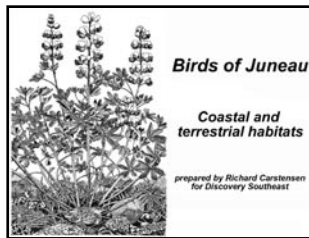
### 1) title slide

How often have you seen a seagull flying through the dense rainforest understory? Never, right? Birds are not exactly predictable, but we can confidently describe the favorite habitats of many Southeast Alaskan species.

For example, here's a spotted sandpiper on his nest (the *male* incubates!) under a Nootka lupine, drawn from a slide which taken on the cobble-strewn *outwash* flats near the Mendenhall Visitor Center. Like most sandpipers, spotted sandpipers lay their eggs right on the ground in fairly open terrain, but they often chose a lupine for a bit of cover.

### 2) family tree for Southeast birds

Here's a family tree for Southeast birds. Beginning birders should study the characteristics of bird *families*. It's easy, for example, to tell sparrows (bird 12) from warblers (bird 11) by bill shape, or to tell waterfowl (bird 2) from *alcids* (bird 16), by bill shape and also by



flight behavior. If you're already familiar with the basic bird groups, you might quiz yourself by seeing how many actual *species* you can name on this family tree:

1) great blue heron 2) American wigeon 3) bald eagle 4) rock ptarmigan 5) great homed owl 6) rufous hummingbird 7) western flycatcher 8) chestnut-backed chickadee 9) winter wren 10) American robin 11) yellow-rumped warbler 12) lapland longspur 13) Steller's jay 14) black-bellied plover 15) glaucous-winged gull 16) marbled murrelet 17) rock dove (pigeon) 18) sandhill crane 19) pelagic cormorant 20) Pacific loon.

### 3) habitat outline

While a few birds like ravens are *generalists*, and use nearly every habitat in Southeast Alaska, most are easier to "pigeon-hole" into specific habitats. They might feed and nest in different places, but their choices are usually obvious.

One way to divide our local bird habitats is to separate "*marine*" habitats from "*terrestrial*" ones. We can then subdivide the marine habitats into deep, open water, *rocky intertidal* and *salt marshes*. And when we get to the inland or terrestrial habitats, we'll examine them in a *successional sequence*, from thickets to *old growth*, and from young *freshwater wetlands* to ancient *peat bogs*.



#### Bird habitats of Southeast

##### I Coastal (beaches and saltwater)

1. deep, open water
2. rocky intertidal
  - a. water-feeding
  - b. land-feeding
3. salt marshes and fringes
  - a. mudflats and sloughs
  - b. sedge or goosetongue flats
  - c. uplift meadows

##### II Terrestrial (forests, thickets and freshwater wetlands)

1. well-drained
  - a. alder or willow thickets

- b. mixed *conifer/deciduous*
- c. young, even-aged conifer
- d. old-growth forest

2. wetland

- a. freshwater marsh or wet meadow
- b. bog

**4) pigeon guillemot**

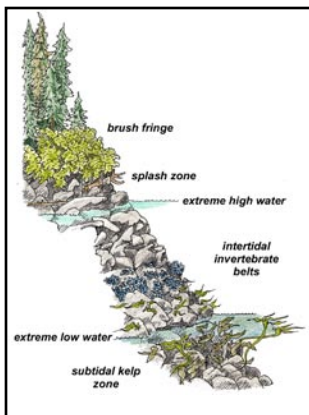
The birds least dependent on the land for their food may be seen from a boat, or by using binoculars from shore. Feeding over deep water, out beyond the tidal shallows, sea ducks like oldsquaws and white-winged scoters dive to the bottom for invertebrates. Meanwhile gulls and terns snatch fish from near the surface, and loons, cormorants and alcids chase them in the depths.



The pigeon guillemot is an alcid, a group including puffins, murres and murrelets. Awkward on land, most alcids roost and nest in colonies on sea cliffs and rock islands free of predatory mammals.

**5) rocky intertidal bird habitats**

“When the tide is out the table is set.” This often-heard expression applies to people and mink and land-feeding birds like crows and sandpipers. But for a sea duck or kingfisher, the table is set when the tide is *in*!



In other words, the rocky beach feeds birds “in shifts”, depending on their foraging technique. For most birds, the main course is invertebrates: mussels, tiny clams, periwinkles, limpets, pile worms, chitons, sand fleas, shorebugs and shoreflies.

Besides serving up food, rocky beaches just above the tideline provide nesting habitat, especially on remote islands. Some sea bird *rookeries* draw alcids, cormorants and gulls from hundreds of miles away. These bird rocks are good places to feel the heartbeat of the Southeast Alaskan marine *ecosystem*.

(Optional - insert slide 2 of rocky intertidal from Natural Communities show. Use for first half of following text, to •.)

**6) harlequin ducks/ submerged shores**

When intertidal rocks are submerged, the invertebrate residents are innocently feeding. Bivalves and barnacles open up, and *crustaceans* emerge from hiding, more easily captured by shallow-diving ducks •



. . . like this harlequin pair. Most sea ducks use our marine waters in fall, winter and spring, and leave Southeast in summer to nest by interior lakes. But many harlequins stay, to nest along our mountain streams.

Small fish also move into the intertidal with the tides. These attract water-feeding birds like mergansers, kingfishers, gulls and terns.

**7) spotted sandpiper**

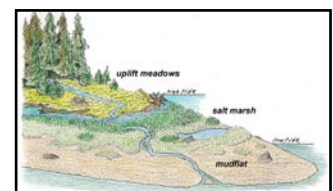
When exposed to air, most intertidal invertebrates either clamp down their shells or else hide beneath the rocks.



Bird predators then include crows, gulls and shorebirds. Most shorebirds only pass through Southeast Alaska during spring and fall migration, but the spotted sandpiper remains, and is our most commonly- seen summer shorebird on rocky beaches and river margins.

**8) salt marsh bird habitats**

In spring, summer and fall, the salt marsh is a “give-away” system, offering succulent sprouts for grazers, mudflats teeming with invertebrates, and sloughs full of sculpins and sticklebacks. Where the land is rising from glacial rebound, coastal meadows recently removed from the tide, make rich hunting grounds for seed and insect eaters. Lets climb up through this salt marsh transect, looking for birds. We’ll first visit mudflat, then seedge habitat, and finally an uplift meadow.



(Optional - insert slide 4 of mudflat from Natural Communities show. Use for first half of following text, to •.)

## 9) western sandpiper/mudflat

Intertidal flats support gulls and crows throughout the year. During spring and fall migration, they're critical refuelling stops for shore birds •



... The western sandpiper belongs to a genus of small tightly-flocking shorebirds which birders call "peeps." Like most shorebirds it only visits Southeast in migration, and nests farther north in arctic tundra. Here's one in May, hunting shoreflies in the sloughside mud, among the first sprouts of goosetongue.

(Optional - insert slide 5 of salt marsh from Natural Communities show. Use for first half of following text, to •.)

## 10) canada geese

The salt marsh sedge flats are mostly a fair weather habitat, which shuts down to birds in winter •

... One exception is the Vancouver Canada goose, a non-migratory subspecies which never leaves Southeast Alaska. Even in March, when no green sprouts protrude, and the hordes of migrant waterfowl and shorebirds have yet to arrive, honkers manage to survive on the spearlike overwintered sedge tips, and below-ground roots and runners, leaving miniature "feeding craters" in the marsh.

(Optional - insert slide 6 of uplift meadow from Natural Communities show. Use for first half of following text, to •.)



## 11) savannah sparrow/uplift meadow

Uplift meadows are great insect producers, and since nearly all songbirds feed insects to their nestlings, a wide variety of birds forage in the meadows. Few choose to nest there however •



... The most successful breeder in Southeast's beach meadows is the savannah sparrow. The yellow stripe above its eye helps distinguish the savannah from the Lincoln's sparrow, which also nests on the ground in

beach meadows. (Optional - insert slide 7 of uplift spruces from Natural Communities show. Use for following text.)

Scattered groves of young spruce trees colonizing the uplift meadows are the favorite nest sites of northwestern crows. In the dense prickly foliage they can more easily defend their nestlings from eagles and ravens.)

## 12) birds of beaches and salt water

Here are the most often-seen birds of Juneau's beach fringe and salt water habitats. See if you can draw circles around these groups:

corvids (*raven, northwestern crow*)  
 raptors (*kestrel, merlin, northern harrier, bald eagle*)  
 shorebirds (*semipalmated plover, dunlin, greater yellowlegs*)



*passerines* or songbirds (*water pipit, Lapland Ion gspur, Lincoln's and savannah sparrows*)

gulls and terns (*Bonaparte, mew and glaucous-winged gulls, arctic tern*)

waterfowl (*bufflehead, Barrow's goldeneye, Canada goose, surf scoter, red-breasted merganser, green-winged teal*)  
 alcids (*pigeon guillemot, common murre, marbled murrelet*).

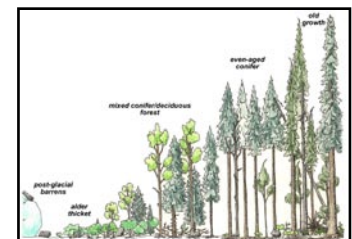
The remaining 3 birds at the bottom -- common loon, homed grebe and cormorant -- each belong to their own family.

Let's move now into terrestrial habitats. We'll first consider the birds of well-drained habitats that eventually support forest. In the Juneau area a great example of forest succession can be found near receding glaciers. The following four birds illustrate a successional sequence, or gradual change over time, from brushy thicket, to mixed conifer/deciduous, to even-aged conifer forest, and ending with old growth.

## 13) post-glacial succession

As a glacier recedes, uncovering raw land, it leaves a successional series of progressively older communities. Let's look at how birds use these

(Optional - insert slide 11 of alder thicket from Natural Communities show.)



Use for first half of following text, to •.)

### 14) orange-crowned warbler

If you hike toward a receding glacier in June when birds are singing, you pass from conifers to mixed conifer/deciduous forest to alder thicket. At first the songs of many species intermingle, but as habitats become younger and simpler, songbirds drop out of the chorus one-by-one. •



. . . The last bird heard singing is usually the orange-crowned warbler. Here's one that was captured in alder thickets near the Mendenhall Visitor Center.

(Optional - insert slide 12 of mixed spruce/cottonwood from Natural Communities show. Use for first half of following text, to •.)

### 15) hermit thrush

Farther from the ice, in older habitats, the alders are overtopped by spruce and cottonwood trees. This is the richest part of the successional sequence for nesting songbirds, because it combines insect-producing deciduous trees and shrubs, berry-producing understory plants, and the evergreen cover of conifers. •



The hermit thrush is one bird that thrives in this stage. Other species include yellow-rumped warblers and ruby-crowned kinglets.

(Optional - insert slide 14 of old-growth forest from Natural Communities show. Use for first half of following text, to •.)

### 16) pacific-slope flycatcher

In old growth, we have a complex under-layer of smaller trees and bushes, plus standing and down dead wood. This understory structure provides habit for a variety of birds. Woodpeckers carve nest holes, later used by *secondary cavity nesters* like chestnut-backed chickadees. Many birds seem to prefer



old growth to other kinds of forests. These include Townsend's warblers, golden-crowned kinglets and brown creepers. •

. . . The bird shown here is the pacific-slope flycatcher, whose thin tsseeewip song is heard mostly from the crowns of ancient hemlocks.

(Optional - insert slide 15 of freshwater wetlands from Natural Communities show. Use for first half of following text, to •.)

### 17) mallard hen with fuzzies

Although the rocky beaches and salt marshes of Southeast Alaska get the most attention, our inland freshwater habitats are equally important. Dabbling ducks that stay to nest in Southeast obviously can't place their eggs within reach of the tides, and more typically use marshes, and the shallow margins of lakes and ponds. •

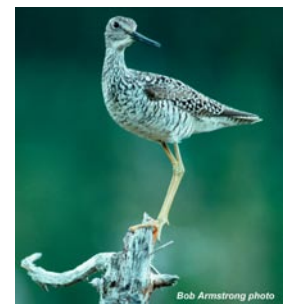


. . . This mallard and her ducklings feed on succulent underwater pondweeds, and the many insects which breed in fresh water.

(Optional - insert slide 16 of sphagnum bog from Natural Communities show. Use for first half of following text, to •.)

### 18) greater yellowlegs

The wetland equivalent of old-growth forest is sphagnum bog. Except for berries, the plants of the bog are usually toxic, well defended from grazing waterfowl. •



One of the few birds that nests almost exclusively in our sphagnum bogs is the greater yellowlegs. This one is perched on a bog snag, keeping guard over its nearby nest. If yellowlegs become agitated, calling constantly and diving at your head, you're probably close to the nest!

### 19) terrestrial birds

Here are the commonest terrestrial birds of the Juneau area. Can you name the habitats where they nest and forage?

raven, jay and robin - *everywhere!*

hermit and varied thrush - *old growth and mixed conifer-deciduous*

golden-crowned  
kinglet and winter wren  
- *old growth*

fox sparrow - *alder  
thicket*

ruby crowned kinglet  
& chestnut-backed  
chickadee - *everything from  
brush to old growth*

red-breasted sapsucker  
- *old growth or beaver pond  
margins with lots of snags*  
dipper - *fast moving  
streams*

pacific-slope flycatcher and Townsend s warbler - *old  
growth*

orange-crowned, yellow-rumped and Wilsons  
warblers - *thickets*

mallard, kingfisher, heron and snipe -*freshwater  
wetlands*

barn swallow - *air above all terrestrial habitats, cavity  
nester*

white-winged crossbill -*forests, young and old*

pine siskin -*forests and alder thickets*

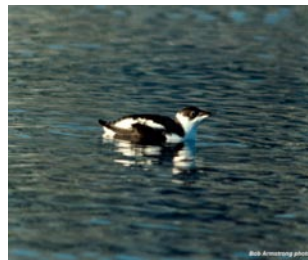
redpoll - *thickets*

blue grouse - *old growth in winter, broods reared in  
meadows and thickets*



## 20) marbled murrelet

This little seabird is a  
true boundary crosser!  
It's usually easy deciding  
whether to call a bird  
marine or terrestrial, but  
how can we "pigeonhole"  
a species like the marbled  
murrelet?! This alcid has  
recently joined the spotted



owl as a symbol of the controversy over logging of old-  
growth forests. Although they forage on the ocean,  
diving to great depths for fish, marbled murrelets also  
nest on the large mossy branches of ancient conifers.

Because they choose the biggest trees, in stands that  
are also most frequently chosen to be logged, murrelets  
are declining throughout the Pacific Northwest. We  
often hear that everything in nature is interconnected.  
Nothing illustrates this better than the birds which nest  
and forage in different communities.