

Lower-Elevation Coniferous Habitats around Evergreen

Chuck Aid. March 28, 2020 :



Rocky Mountain Juniper (c) James Reveal



Bushtit (c) Bill Schmoker

So, here we are at the end of March, right at the onset of the birds' breeding season, and our early montane flowers are starting to emerge (Spring Beauty and Wild Candytuft), and we're stuck having to do our outdoor activities on a more restricted stage. But, lucky us, for the most part we all live in the Evergreen area, where in our own yards there's a lot to explore.



Ponderosa Pine (c) Chuck Aid

To begin with our quarantine birding, it helps for us to know our local habitats and what birds might choose to hang out there. All birds, because of their adaptations for utilizing specific aspects of their environment, are most abundant in, or may be totally restricted to, specific habitats. If we can do a better job of paying attention to the habitats where we are observing birds, then we will be getting a leg up as to the birds that we

are most likely to encounter. And, the first step in getting to know our local habitats is to make sure we can readily identify our local trees and in conjunction with that come to know the altitudinal distribution of the various plant communities or life zones “from grassland to glacier.” – this is actually the title of a highly recommended book on Colorado’s natural history by Cornelia Mutel and John Emerick.



Plumbeous Vireo (c) Bill Schmoker

I love this aspect of ecology, and I struggle to restrain myself and not throw too much at you at once, so we’re just going to start with four of our lower-elevation coniferous trees and the birds that tend to be found there.



Douglas-fir (c) Chuck Aid

We have only one tree-like juniper in this part of the state, the **Rocky Mountain Juniper**. Because of its capacity for drought tolerance it can be found on our lowest foothills up to about 8000 ft on south-facing slopes. Female trees (junipers are dioecious) can provide berries for Wild Turkeys, American Robins, Townsend's Solitaires, and Evening Grosbeaks. A good number of trees together can create a juniper woodland, providing nesting and roosting habitat for Woodhouse's Scrub Jay, Black-billed Magpie, Bushtit, Blue-gray Gnatcatcher, Mountain Bluebird, Townsend's Solitaire, American Robin, and Chipping Sparrow.



Hermit Thrush (c) Bill Schmoker

All the other conifers, other than the junipers, have needles. If the needles are in bunches (fascicles) then the tree is a pine. If the needles are single then the tree is a spruce, fir, or Douglas-fir. **Ponderosa Pines** are the pines with the long needles (4-7 in), usually in fascicles of three, their cones are more than three inches in length, and they have a nice warm, cinnamon-colored bark. Found roughly at 6000-9000 feet on sunny, dry slopes, these pines create two rather distinct habitats: Ponderosa woodlands have an open canopy and park-like feeling, and Ponderosa forests have a closed canopy. These two Ponderosa habitats have the highest diversity of bird species and number of individuals of any coniferous forest, with a peak in summer. In winter, most birds range widely and are somewhat nomadic, and populations vary widely from year to year according to the cone crop. Birds occurring in the Ponderosa woodland include Western Wood-Pewee, Plumbeous Vireo, Violet-green Swallow, Mountain Chickadee, White-breasted Nuthatch, Pygmy Nuthatch, Western Bluebird, Mountain Bluebird, and Chipping Sparrow. Birds of the Ponderosa forest include Williamson's Sapsucker, Steller's Jay, Yellow-rumped Warbler, Dark-eyed Junco, Western Tanager, Cassin's Finch, Red Crossbill, and Evening Grosbeak.



Lodgepole Pine (c) Perry Van Munster

Douglas-firs have a single flat needle only about an inch long, just like subalpine firs up higher. The needle being flat is what allows it to gently bend and thereby feel soft to the touch (flat, friendly fir). The cones are familiar to us having three exerted bracts from under each cone scale, making what some people see as the rear two legs and tail of a mouse. Douglas-fir forests are found from 6000 to 9000 feet, and at lower elevations are restricted to north-facing slopes. A Douglas-fir forest compared to a Ponderosa forest has a relatively low diversity of bird species and numbers of individuals. Among the more common birds are Broad-tailed Hummingbird, Ruby-crowned Kinglet, Hermit Thrush, Dark-eyed Junco, and Red Crossbill.



Lodgepole Pine cones, which are only about two inches across, are persistent for years on a tree and its two-inch long needles tend to be in fascicles of two. These trees, found at 7500-10,500 feet, tend to look more yellow-green, and at lower elevations are restricted to north-facing slopes. A lodgepole pine forest can be exceptionally low in species diversity and numbers of individuals, even lower than any other coniferous forest habitat. The most common species are Hairy Woodpecker, Steller's Jay, Mountain Chickadee, Brown Creeper, Ruby-crowned Kinglet, Yellow-rumped Warbler, and Dark-eyed Junco.

Key for Identifying Colorado Conifers

Two choices are written for each number below, eg. 1a and 1b, choose the description that fits the plant you are looking at and then go to the next pair of choices you are directed to.

- 1a. Leaves in the adult state overlapping, minute, scale-like, or if not scale-like, then the cone is berry-like and juicy.....go to **2**
- 1b. Adult leaves elongate and needle-like, cones dry at maturity with overlapping woody scales.....go to **4**
- 2a. Shrub, usually less than 1 meter tall, branches prostrate, spreading awl-shaped needles, 5-15 mm long, not thickened or overlapping like shingles; upper surface exposed to view and whitened.....***Juniperus communis*– Common Juniper.**
- 2b. Shrub or small tree 2-10m high; scales of terminal twigs 1-3mm long, thickened.....go to **3**
- 3a. Plants usually gray-green; scales entire, paired; berry with 1-3 seeds.
.....***Sabina (Juniperus) scopulorum*– Rocky Mountain Juniper.**
- 3b. Plant usually dark-green; scales minute, finely toothed (denticulate); berry with 1-2 seeds.....***Sabina monosperma*– One-seed Juniper.**
- 4a. Needles sheathed at the base, in clusters of 2 or more; cones thick & woody with swollen tips.....go to **5**
- 4b. Needles not sheathed at the base, nor in clusters; cone-scales not thick and woody.....go to **9**
- 5a. Needle clusters containing 5 needles.....go to **6**
- 5b. Needle clusters containing 2 or 3 needles.....go to **7**

- 6a. Needles commonly less than 5cm, curved, sticky; cone scales bristle-tipped.....***Pinus aristata*– Bristlecone Pine.**
- 6b. Needles usually more than 5cm, straight, not sticky; cones lack bristles.***Pinus flexilis* – Limber Pine.**
- 7a. Needles 10–18cm long, leaf clusters in 3’s or 2’s; cones 7-12cm long; leaf bundles crowded at branch ends.....***Pinus ponderosa* – Ponderosa Pine.**
- 7b. Needles 3-7cm, usually in pairs; cones 5cm long or less; leaves scattered.go to **8**
- 8a. Tall slender tree; cone-scales bristle-tipped; cones persistent for several years.....***Pinus contorta*– Lodgepole Pine.**
- 8b. Low bushy tree; cone-scales not bristle-tipped; cones fall at maturity.....***Pinus edulis*– Pinyon Pine.**
- 9a. Older twigs smooth.....go to **10**
- 9b. Older twigs studded with persistent “stumps” of fallen needles.....go to **11**
- 10a. Young branches pubescent; needles not rigid; cones about 5cm long; cone scales rounded***Picea engelmanni*– Englemann Spruce.**
- 10b. Young branches glabrous (completely smooth); needles rigid, almost spine-tipped; cones about 8cm.....***Picea pungens*– Colorado Blue Spruce.**
- 11a. Needle scars elliptical; needles stalked; cones hang down; cone scales persistent; bracts 3-cleft***Pseudotsuga menziesii*– Douglas Fir.**
- 11b. Needle scars round; cones erect; cone scales fall from axis at maturity; bracts not cleft***Abies bifolia (lasiocarpa)*– Subalpine Fir.**