

# Promote Habitat Diversity and More Options for Wildlife



SPECIAL PLACES HELP WILDLIFE ADAPT TO CHANGING CLIMATE

Forests are more than an expanse of trees. They are a matrix of habitats, an intricate web of soil, animals, sunshine, wildflowers, water, grasses, shrubs—and trees. Together, the pieces form an inter-connected system that reaches high up into the sky, deep down into the ground, and across the expanse of elevations and aspects of the landscape.

Forests are headwaters to our streams, thoroughfares for animal travel, and home to many varied wildlife species. Within this forested landscape there are meadows, springs, rock outcroppings, streams, and gaps where trees have fallen over. There are different ages of trees, some seedlings and some ancient. These scattered features add to the complexity, the heterogeneity, of the forest. Often, these areas are called special habitats within a forest.

## Variety across the forest

**Meadows:** Short herbaceous plants—sedges, rushes, California corn lilies, wildflowers—form field-like open meadows. Willows and aspen groves can line the stream channel. Large herbivores like elk and other wildlife enjoy wet meadows for sunshine, food, and water. Beavers help sustain them by flooding areas behind their aspen dams.

However, mountain meadows are among California's most threatened habitats due to fire exclusion. Encroaching conifers have lowered the water table drying out these very diverse habitats.

Where they flourish or have been restored, wet meadow soils are soggy for months a year, keeping evergreen trees at bay. During spring snowmelt, meadows hold water in the soil like a sponge. Later in the year as the forest dries, the meadows slowly release that water into creeks, as the sponge is squeezed. This cycle slows water flow through the forest; it reduces flooding and keeps water running in streams later into the spring and summer. Meadows are a key player in helping regulate water flow for

wildlife and all downstream users dependent on California's headwaters of the Klamath-Cascade.

**Hardwood forests:** In the Klamath-Cascade Region, most trees keep their needle-like leaves year-round. However, there are important pockets of broad-leaved trees. Some are deciduous, like black oaks, losing their foliage in the winter, and some are evergreen, like madrone. Known as hardwoods, these trees produce acorns, other nuts, and berries that are essential food for wildlife. During the winter months, acorns are a third or more of a deer's diet. The limbs



## Fens & plant diversity

Fens are similar to—and are often surrounded by wet meadows. In fens, the soil is always soaked, and there is continuous running water. Fens in the Klamath Ranges are famous for many rare and unusual types of plants—like the insect “eating” Cobra lily (*Darlingtonia californica*).



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of large old oaks offer safe resting spots for many creatures, vantage points for hunters, and roosts for birds. When a limb breaks off, the resulting cavity can become the perfect, defensible nest for owls as well as the threatened Pacific fisher to shelter their babies.

### **Waterways form hidden highways**

Waterways—drainages, seasonal creeks, rivers—crisscross the forests of the Klamath-Cascade Region. Flowing water and cool pools are hidden among alders, willows, and other water loving plants not found in the surrounding forest. The diversity of riparian woodlands provide special habitats and also help the water and nutrient cycling benefiting the whole forest.

This network of waterways quench thirsty animals, provide plants and other food, and shady safe shelter. Hidden riparian areas are particularly important for animal travel across the landscape – a full service highway for a long journey.

### **Special habitat features enliven the woods**

Forests are richest in habitat value and most resilient when they are lively assemblages of trees of different species and ages, with associated plants. Interspersed

across a forest are many important habitat structures. With their strong limbs and towering height, large trees give birds—like the northern goshawk—a “birds-eye view” when resting. Downed logs lie on the forest floor providing areas for animals to nest, den, or rest. Standing dead trees, snags, and large limby trees also provide animal habitat. Trees with cavities, broken tops, and platforms such as witches’ brooms are used by common as well as sensitive wildlife species. The Pacific fisher, like many more common mammals, depends on well-situated resting sites. These woody elements create diverse structures across the forest, supporting the needs of healthy wildlife populations.

### **Caring for forest complexity in the face of uncertainty**

In a changing climate, a resilient forest will be able to response to change and tolerate variation in the natural environment. The best bet for healthy, resilient forests is to keep the land in a naturally diverse state—covered in trees, waterways, rock outcroppings, meadows, logs, and snags. **It’s important to keep the landscape healthy and connected** by removing weeds, preventing pollution, keeping waterways intact, and giving animals safe ways to travel.

