

Stronghold for California's Wildlife

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REFUGES AND STEPPING STONES FOR SPECIES IN A CHANGING CLIMATE

According to local folklore, lanky, fairy-like beings called Lemurians live on Mount Shasta. Purported survivors of a sinking continent, the peak is the last stronghold for their mythical villages. **In real life, the Mount Shasta Headwaters area will be a central stronghold for California's wildlife as habitats shift and climate change forces them to seek new homes.**

The Klamath-Cascade: Crossroads region

The Klamath Cascade is a central cross roads, with many plants, animals and fish traveling this super-wildway as they adapt to new conditions across the state. The region's abundant water and great diversity of habitats also welcome newcomers seeking refuge.

Mount Shasta connects a complex landscape where five of California's eco-regions converge. This volcanic Cascade peak juts to the east of the ancient metamorphic Klamath Ranges, forming the headwaters of the Sacramento River. Just beyond, the Modoc Plateau expands to the northeast, drained by the mighty Pit River, which flows into the Sacramento at the head of the Central Valley. To the southeast, the northern Sierra Nevada abut Mount Lassen where the Cascades begin their rise.

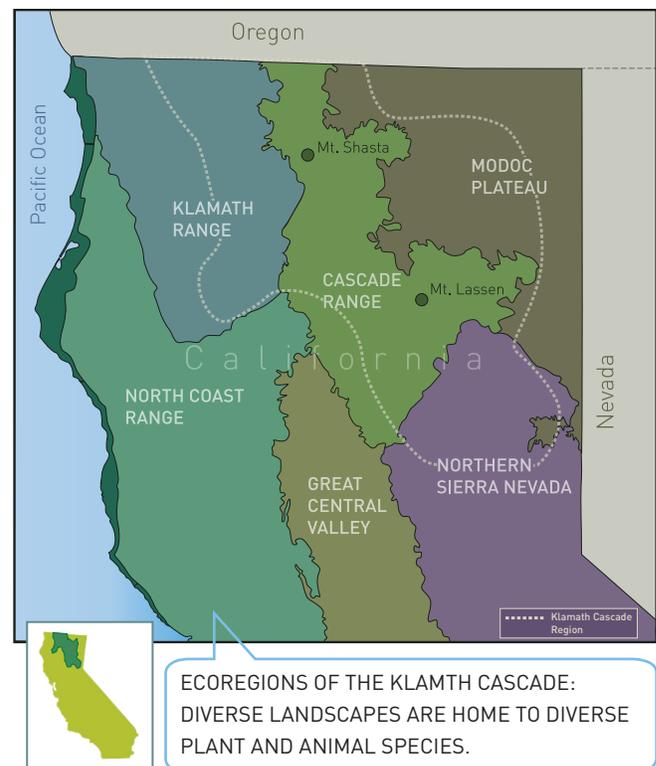
Convergence and complexity create options for wildlife

As plants and animals respond to a changing climate, the diverse geography of the Klamath-Cascade gives them the best chance to find new places to call home. The complexity of the landscape forms and soils means there are countless unique pockets of habitat across this relatively intact and undeveloped expanse.

The wealth of habitats are nourished with water—lots of it. It flows not only from annual snow packs, but the state's only expanding glacier and thousands of springs burbling up from subterranean reservoirs in vast volcanic formations.

Safe havens for stressed creatures

While the full extent of climate change is unknown, experts anticipate that rising temperatures will outpace the ability of some plants and animals to move to new latitudes (or evolve to thrive in new conditions). Some will need to take refuge in nearby safe havens or pockets of the right habitat features and stable temperatures.



Due to a particular combination of aspect, soils, water and elevation, the Klamath-Cascade is expected to offer many safe havens. Here, the impacts of climate change are not expected to be as rapid or dramatic as elsewhere. Scientific research discovered that this region has provided safe havens in past millennia during glacial periods, and scientists think that it has a good chance of doing it again. In fact, recent analyses of California’s climate during the 20th century show that in general it was cooler and wetter across the Klamath-Cascade—and the Mount Shasta hub in particular—than the rest of the state. Climate change projections suggest this trend will continue through the 21st century.

Diverse habitats can be refuges or stepping stones to new homes

Cool stream sides, productive soil patches, large old trees or spongy wet meadows provide habitat features for wildlife on their journey in search of new, suitable homes. Some species may find new places to thrive far beyond their historical range

Conserving the Klamath-Cascade as California’s strong-hold for wildlife

The Klamath-Cascade Region is remarkable: as a cross roads with extraordinary biodiversity it can serve as the safe haven for thousands of species.

By identifying and conserving key connections across the Klamath-Cascade, we can ensure that there is a flow of diverse habitats across the landscape.



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NOT JUST SPECTACULAR, SPECIAL: RECOGNIZED AS A GLOBAL BIODIVERSITY HOTSPOT, THE KLAMATH-CASCADE IS HOME TO OVER 600 SPECIES, INCLUDING THE ENDANGERED SISKIYOU MOUNTAIN SALAMANDER.

WHAT MAKES A SAFE HAVEN?

Safe havens are found in areas with complex landscapes: elevation changes, valleys and ridges, slopes that face different directions, intermixed soil types, and a range of wet and dry areas. Although the process is not entirely understood, **complicated ground forms safe havens with stable environmental conditions.** Along a stream, or in a gully, air temperatures are cooler. In areas with deeper soils or more shade, the ground holds water longer and drought stress is less. Local climate and terrain combine influences and form cooler and wetter pockets. To plants and animals, these are the link to survival.