



Oregon *Ensatina* salamander: Thriving at JDSF

In the lush landscapes of Mendocino County, the Oregon *Ensatina* salamander (*Ensatina eschscholtzii oregonensis*) reigns as one of the region's most prevalent terrestrial amphibians. This captivating creature is part of a distinguished family of lungless salamanders, scientifically known as Plethodontidae, where respiration occurs through their delicate, moisture-laden skin due to the conspicuous absence of lungs.

Comprising seven subspecies, the *Ensatina eschscholtzii* complex stretches its range from British Columbia down through the scenic territories of Washington, Oregon, and California. All seven subspecies call California home, with their unique distributions tracing intricate patterns within the mountain ranges encircling the Central Valley and extending into the southern Californian peaks.

Unlike their amphibious counterparts, *Ensatina* salamanders have fully embraced a terrestrial lifestyle, forsaking the traditional aquatic larval stage. In a mesmerizing display of evolutionary adaptation, these "direct developers" undergo their entire larval development within the protective confines of their eggs, emerging as miniature replicas of fully-fledged adults, ready to conquer life on land.



Thriving in cool, damp environs, *Ensatina*s find solace in forested areas adorned with decaying logs, woody debris, and deep forest duff. When faced with excessively dry conditions, they seek refuge in moist recesses within large logs or underground shelters, demonstrating remarkable adaptability. Under the veil of darkness, these salamanders come alive, actively foraging for a diverse range of invertebrates, aligning their feasts with their respective body sizes.

As custodians of the night, *Ensatina*s dance through their habitats, their fortunes safeguarded by the rich biodiversity of Mendocino County. Despite their current status as non-threatened species, the looming specters of climate change, invasive predators, and the introduction of diseases cast shadows on the future of these amphibians.

In the evolutionary theater, the *Ensatina* complex takes center stage as a mesmerizing "ring species." Exhibiting subtle variations in color patterns among subspecies, these salamanders can interbreed in narrow contact zones. However, at the extremes of their distribution, they have evolved distinct differences, teetering on the brink of reproductive isolation. This fascinating dance between contact and isolation epitomizes incipient speciation, offering a glimpse into the dynamic process of evolution.

For those enchanted by the captivating world of *Ensatina* salamanders, additional resources like the California Herps website and Robert C. Stebbins' "A Field Guide to Western Reptiles and Amphibians" provide valuable insights. Delving even deeper, the research of Thomas J. Devitt, Stuart J.E. Baird, and Craig Moritz in "Asymmetric reproductive isolation between terminal forms of the salamander ring species *Ensatina eschscholtzii*" offers a finer understanding of the intricate genetic dance unfolding in these amphibian realms. The Oregon *Ensatina* salamander, a creature of mystery and adaptability, continues to enchant the landscapes it calls home.

Additional Resources:

<https://californiaherps.com/>

Stebbins, Robert C. 2003. A Field Guide to Western Reptiles and Amphibians. Third Edition. Houghton Mifflin Company.

Thomas J. Devitt, Stuart J.E. Baird and Craig Moritz, 2011. Asymmetric reproductive isolation between terminal forms of the salamander ring species *Ensatina eschscholtzii* revealed by fine-scale genetic analysis of a hybrid zone". BMC Evolutionary Biology 11 (1): 245. DOI:10.1186/1471-2148-11-245