



Large-blotched Salamander (*Ensatina eschscholtzii klauberi*)

Cynthia J. Hitchcock — watercolor on paper, 11 × 14 inches

The plethodontid salamander, *Ensatina eschscholtzii* is one of the best known examples of a ring species (Wake and Yanev 1986. *Evolution* 40:702–715), wherein neighboring subspecies from a common ancestor gradually differentiate phenotypically and genetically until reproductive isolation and therefore speciation has occurred (Mayr 1942. *Systematics and the Origin of Species*. Dover Publications, New York. 334 pp.; Wake 2001. *Nature* 409:299–300; Pereira et al. 2011. *BMC Evol. Biol.* 11:194). *Ensatina eschscholtzii klauberi*, in this painting, is one of seven subspecies that mainly occur in a ring bordering California's Central Valley (Wake, *op. cit.*; Stebbins 2003. *A Field Guide to Western Reptiles and Amphibians*, 3rd ed. Houghton Mifflin Co., Boston, Massachusetts. 533 pp.). This subspecies, however, occurs in Southern California's peninsular ranges and eastern San Bernardino Mountains as well as isolated locations in northern Baja California (Stebbins, *op. cit.*). This specimen illustrated was from Baja California.

The painting was commissioned by Christina J. Campbell as a birthday gift for her father-in-law, David B. Wake. The digital photographs used as a model for this painting were provided by L. Lee Grismer. Cindy generally paints from multiple photographs to achieve greater detail and include the specific diagnostic characteristics required for species identification. It can be a challenge to emphasize the diagnostic traits and still have all of the specimen's body in focus in photographs, whereas illustration allows the artist to capture the best qualities of the photographs and create a complete and detailed depiction. Many of Cindy's pieces are commissioned by herpetologists who want a

plate for a publication, or as a personal memento of their study species. One such piece was of the new lizard species from Argentina, *Phymaturus extrilidus*, which was described by her spouse Robert E. Espinoza and colleagues. This image was featured on the cover of *Copeia* in March 2012. Cindy's watercolor of a California Red-legged Frog (*Rana draytonii*) was featured in *Herpetological Review* in June 2012. Her painting of a Tiger Salamander (*Ambystoma tigrinum*) was used by artist Nancy O'Neil in an installation collage that now adorns one of Denver Colorado's Train Stations. As a dabbler in graphic design (a former career), Cindy has also created logos for UCLA's La Kretz Center for California Conservation Science, and for the Joint Meeting of Ichthyologists and Herpetologists in Reno, Nevada in 2015.

Cindy received her B.A. in Studio Art from Hartwick College and an M.S. in Biology from the University of Nevada, Reno. As noted above, her first career was as a graphic designer working for Pepsi Cola Company and Lennox China. After earning her Master's degree, Cindy's second career was as a field biologist for the U.S. Geological Survey, focusing on the ecology and conservation management of amphibians and reptiles in Southern California. Cindy stumbled on her ability to portray her study organisms in great detail using watercolor paints, thus combining her interests in art and biology. Her first attempt at a life-like herpetological painting was in 2010, and since then she has created about 40 watercolor paintings, which can be viewed and purchased as prints or originals from her webpage: <http://fineartamerica.com/profiles/cindy-hitchcock.html>.