



iNat to SDM Workshop - August 19th, 2025 9:00 AM - 1:00 PM

Instructor: Dr. Benjamin Nyman

In this one-day workshop you will learn the basics of species distribution modeling (SDM) from theory to practice in an informal, hands-on, four-hour period. This will culminate in using public records and environmental data to build and visualize an SDM for a California species of your choice completely within R, no GIS software required!

Learning outcomes:

Understand the basics of SDM theory and niche modeling.

Learn how available data shapes what information can be gained from SDM.

Carry out SDM from data preparation to model selection and evaluation.

Source and handle basic spatial datasets in R.

I will provide all code backbone for aggregating and cleaning occurrence data, handling spatial data, and fitting a variety of models with an emphasis on machine learning. I will also prepare various CA environmental datasets to use as predictors.

Participants will need:

An intermediate understanding of R and data structure.

Computer with R and RStudio installed.

A species of interest that has a reasonable number (50+) of RG California observations on iNat or digitized records via GBIF.

Example schedule

9:00 - 9:30 Introduction and accessing scripts and files

9:30 - 10:00 SDM Crash course

10:00 - 11:00 Data importing, cleaning, visualization

11:00 - 12:00 Environmental rasters, model selection

12:00 - 12:30 Running models

12:30 - 1:00 Model evaluation, next steps