**Ecosystems across a Southern California Climate Gradient**

**Introduction**

**Methods**

<https://github.com/stevenallison/UCIClimateExperiment>

Data access page:

<https://www.ess.uci.edu/~california/>

Fluxnet sites: <https://ameriflux.lbl.gov/sites/site-search/#searchbar=US-SCf&filter-type=all&has-data=All&site_id=>

**Litter parameterization**

**Desert**: <https://ameriflux.lbl.gov/sites/siteinfo/US-SCd>

BSV (Barren Sparse Vegetation: Lands exposed soil, sand, or rocks and has less than 10% vegetative cover during any time of the year.)

**Scrubland**: <https://ameriflux.lbl.gov/sites/siteinfo/US-SCc>

OSH (Open Shrublands: Lands with woody vegetation less than 2 meters tall and with shrub canopy cover between 10-60%. The shrub foliage can be either evergreen or deciduous.)

**Grassland**: litter (*Avena barbata and A. fatua*)

<https://ameriflux.lbl.gov/sites/siteinfo/US-SCg>

The grassland plots (6.7 × 9.3 m) consisted of exotic annual grasses such as *Avena*, *Bromus*, and *Lolium* and forbs such as *Erodium*, whereas the shrub plots (18.3 × 12.2 m) consisted of crown-sprouting shrub species such as *Salvia mellifera*, *Artemisia californica* and *Malosma laurina*. This shrub litter is known to have higher *C*:*N* ratio, higher proportion of lignin and other recalcitrant compounds and lower proportion of cellulose, hemicellulose and cell solubles than the grass litter [[17](https://www.nature.com/articles/s41396-020-0683-6#ref-CR17)].

GRA (Grasslands: Lands with herbaceous types of cover. Tree and shrub cover is less than 10%. Permanent wetlands lands with a permanent mixture of water and herbaceous or woody vegetation. The vegetation can be present in either salt, brackish, or fresh water.)

**Pine-oak**:

flux tower info.: <https://ameriflux.lbl.gov/sites/siteinfo/US-SCf>

Note: tower site is further north of the transplantation site.

MF (Mixed Forests: Lands dominated by trees with a percent cover >60% and height exceeding 2 meters. Consists of tree communities with interspersed mixtures or mosaics of the other four forest types. None of the forest types exceeds 60% of landscape.)

**Subalpine**:

Subalpine forest description from NPS:

<https://www.nps.gov/seki/learn/nature/subalpine-forests.htm#:~:text=Foxtail%20pine%20growing%20near%20treeline,area%20of%20Sequoia%20National%20Park.&text=Subalpine%20forests%20define%20the%20upper,crooked%20wood%22%20in%20German>).