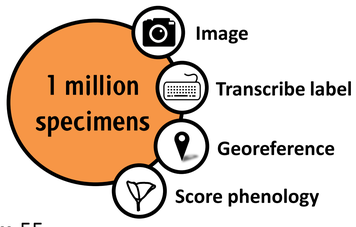
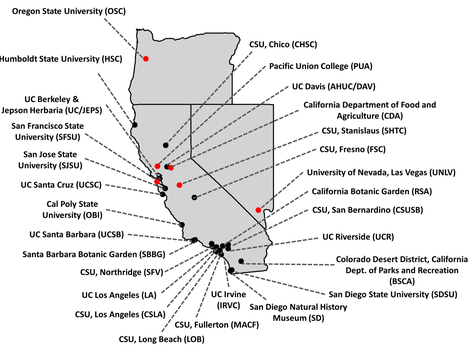
CALIFORNIA PHENOLOGY COLLECTIONS NETWORK

Using digital images to investigate phenological change in a biodiversity hotspot

WHO ARE WE?

The California Phenology (CAP) Network is a collaboration of 28 California herbaria—collections of preserved plant specimens—that is working to digitize **over 1 million specimens** by 2023. These data are made publicly available on a newly developed data portal, cch2.org. CCH2 now includes specimen data from 55 herbaria across the state.



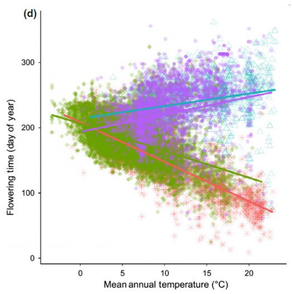


Map of California Phenology Network herbaria. Herbaria represented by red dots were funded through a supplementary Partner to Existing Network grant in 2020.

The CAP Network also aims to record the phenological status (e.g., flowering, fruiting) of digitized specimens, generating a massive dataset with which we can answer questions such as:

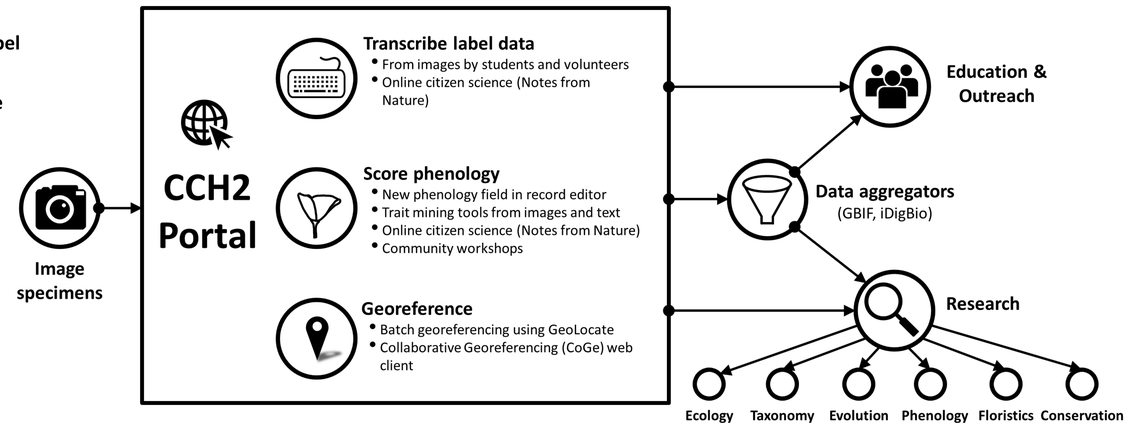
1. Which species are in the most danger of phenological mismatches?
2. Which habitats and vegetation types are most phenologically sensitive to changes in precipitation and temperature?,
3. Where might mismatches occur between flowering plants/agricultural plants and their pollinators, pathogens, and pests?,
4. And many more.

Maximizing the use of herbarium specimens for phenological research is important not only to **advance our understanding of ecological change**, but also to **address potential environmental and agricultural crises** in California**,** home to the **most endemic and imperiled flora in the U.S.**



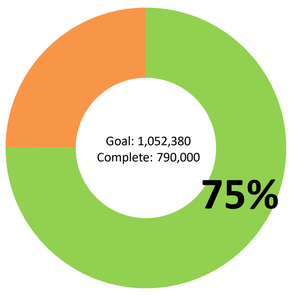
Munson & Long 2016
New Phytologist

WHAT DO WE DO?

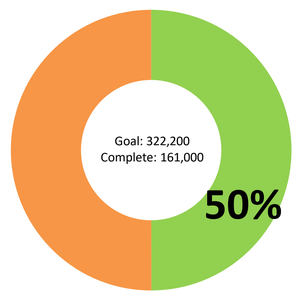


WHERE ARE WE NOW?

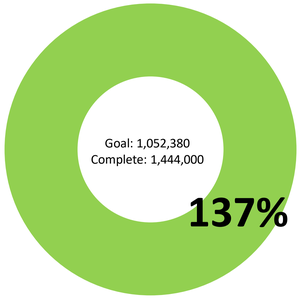
Imaging



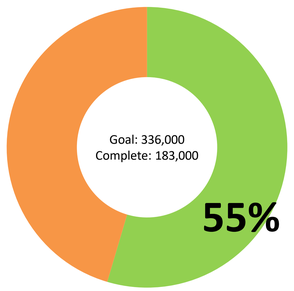
Transcription



Phenological Scoring



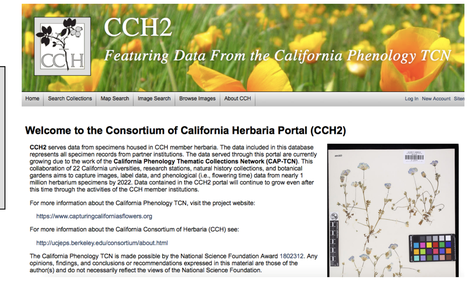
Georeferencing



RESEARCHERS:

Get data on CCH2.org

- Search, view, and download specimen data
- Discover and create species maps and checklists
- Manage and disseminate collection data
- Use specimen and phenological data for research



EDUCATORS & MORE:

Get involved!

- Use CCH2.org data for teaching - see our website for an adaptable research-based undergraduate course
- Learn about herbarium specimens and phenological research on our website: capturingcaliforniasflowers.org
- Get involved on NotesFromNature.org, an easy-to use website where you can help digitize herbarium specimens!

capturingcaliforniasflowers.org

@CalPhenologyTCN

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