

CALIFORNIA PHENOLOGY TCN – QUARTERLY REPORT – NOVEMBER 2019

Assembled by Katie Pearson and Jenn Yost, November 1, 2019

Progress in Digitization Efforts:

All institutions are continuing to image specimens or have achieved their imaging goals and have moved on to image processing, transcription, and/or georeferencing. Figure 1 shows the distribution of unprocessed, barcoded/processed, and imaged target specimens per institution as of November 1, 2019. To date, five institutions (BSCA, CSUSB, LOB, SFV, and SJSU) have imaged their entire collections, and two institutions (OBI, UCSB) have surpassed their digitization goals and have continued to image.

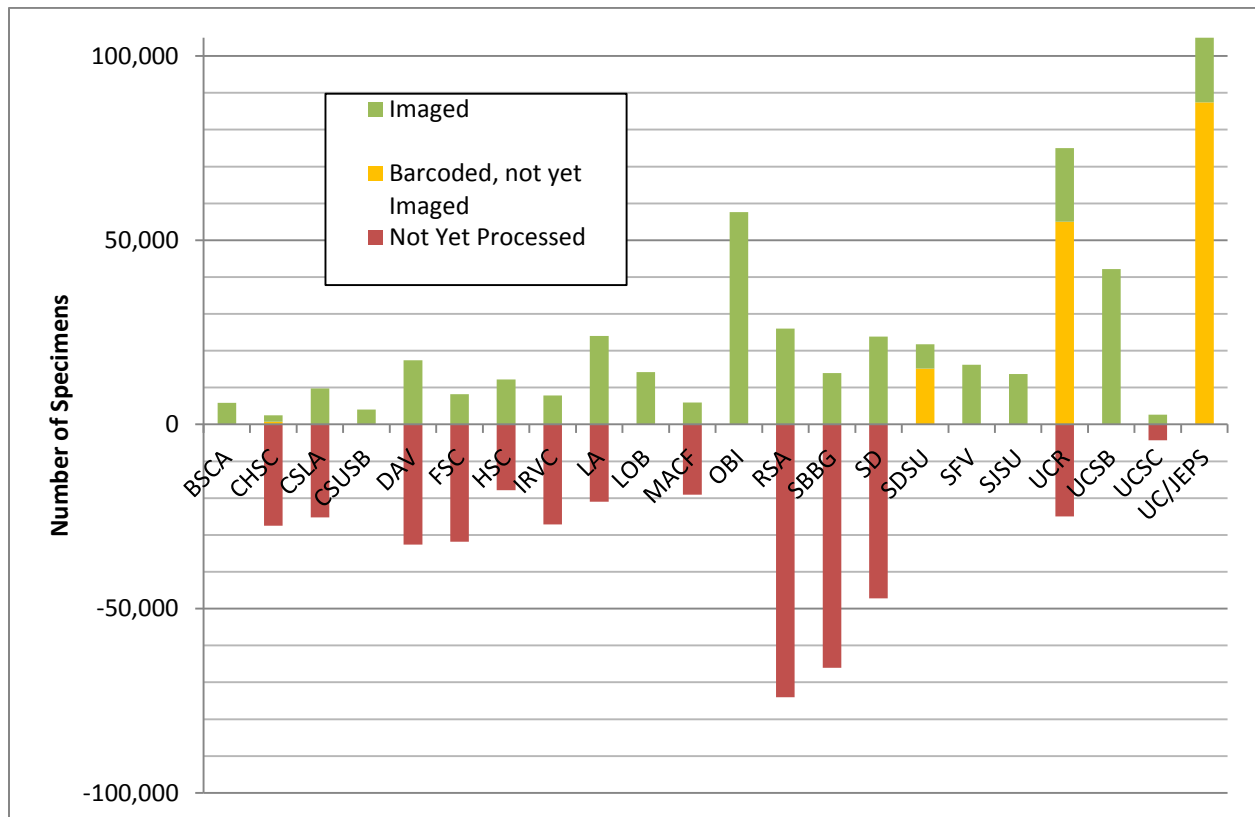


Figure 1. Digitization progress, in terms of number of specimens imaged, barcoded, or not yet imaged. Bars above the zero line indicate specimens that have been processed in preparation for imaging or have been imaged. The green portions of these bars represent the number of specimens that have been imaged. Red bars below the zero line indicate the number of target specimens (i.e., specimens to be imaged as part of the CAP TCN) that have not yet been pre-processed or imaged. These numbers do not indicate transcription, georeferencing, or phenological scoring progress.

Four institutions have created expeditions on Notes from Nature to engage citizen scientists in transcribing several thousand imaged specimens. Two expeditions were completed in October 2019 as the result of the WeDigBio event, resulting in the transcription of 2594 records that were then migrated into the CCH2 data portal.

Share and Identify Best Practices and Standards (including Lessons Learned):

Nothing to report.

Identify Gaps in Digitization Areas and Technology:

Nothing to report.

Share and Identify Opportunities to Enhance Training Efforts:

Two webinars were held to communicate new developments and outreach opportunities. Abby Benson, the U.S. Node Manager for GBIF, led a webinar to introduce CAP participants to GBIF on September 4th, 2019. Five CAP TCN members participated in this webinar. Libby Ellwood represented WeDigBio to 10 CAP TCN participants in a webinar held September 18th, 2019. All webinars were recorded, and recordings were posted on YouTube and linked to the project website.

A new version (3.0) of the comprehensive Symbiota/CCH2 portal guide was developed and disseminated to all collaborators. It is also available on the project website. This new version includes coverage of data cleaning, specimen management, and other tools that were not described in versions 1 or 2.

Share and Identify Collaborations with other TCNs, Institutions, and Organizations:

Lead PI Yost, the PM, and collaborator Nazaire attended the ADBC Summit on October 2nd-3rd and benefited from the sharing of best practices and ideas from other institutions and TCNs.

Two new herbaria, JROH and MCCC, are now managing their data live in the CCH2 portal, benefiting from data management, data cleaning tools, and support from the data manager and PM.

CAP TCN leadership collaborated with Oregon State University and six additional institutions to submit a PEN proposal to enhance digitization across the entire California Floristic Province, a biodiversity hotspot. If funded, this PEN would enable the digitization of approximately 148,000 specimen records.

The CAP TCN is coordinating with our Data Advisory Committee to prepare for 2020 conferences and meetings. Lead PI-Yost and the PM plan to submit a workshop proposal for the Ecological Society of America meeting that will introduce participants to the many types of available phenological data and how they can be integrated using, e.g., the Plant Phenology Ontology.

Share and Identify Opportunities and Strategies for Sustainability:

The new workflow for web-hosting images on CyVerse was officially rolled out to CAP TCN collaborators. The new protocol was disseminated to all CAP institutions, and the PM has worked with institutions on troubleshooting various problems during the transition.

Share and Identify Education and Outreach (E&O) Activities:

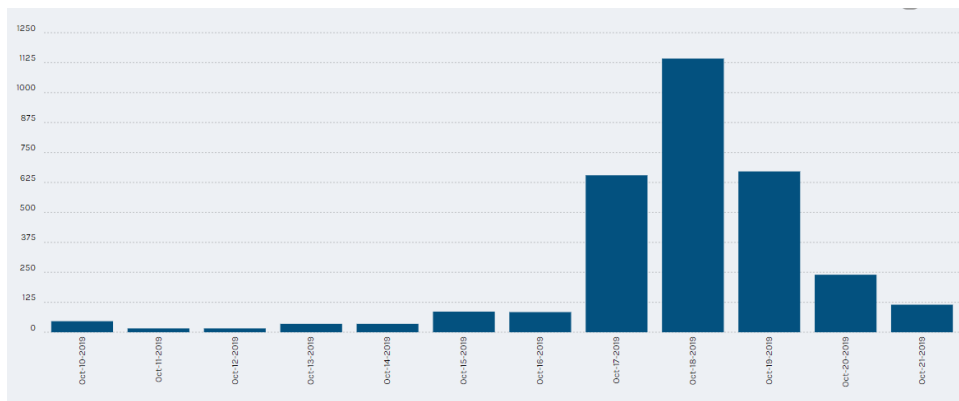
An article introducing the CAP TCN, its goals, and its outreach efforts was accepted for publication in the peer-reviewed journal *Madroño*. This paper is currently in press and will be published as open access.

The PM shares updates on the project and phenology-related news via the network Twitter account (@CalPhenologyTCN).

A new blog, *The ReCAP*, was developed as an outreach tool to share stories from herbaria and offer announcements, such as CAP-related events (<https://www.capturingcaliforniasflowers.org/blog-recap>). Two blog posts were published in October 2019.

Two Notes from Nature (NfN) expeditions were launched, one in September 2019 featuring the CSU Long Beach and CSU Los Angeles specimens, and one in October featuring UC Irvine specimens. Blog posts associated with each of these specimens were developed and disseminated on the Notes from Nature blog (<https://blog.notesfromnature.org>).

This year, the CAP TCN participated in WeDigBio from October 17th-20th. The CAP Network hosted ten on-site events that engaged over 160 volunteers, including students and California Native Plant Society (CNPS) members. More volunteers participated online in CAP NfN expeditions. Over the course of four days, volunteers completed 2,708 transcriptions, finishing two Notes from Nature expeditions. A snapshot of digitization progress (in terms of transcriptions per day) is shown in the graph below.



Lead-PI Yost and the PM summarized CAP TCN progress at the ADBC Summit on October 2nd, 2019. At the Southern California Botanists annual symposium, the PM gave an invited talk, and collaborator Rebecca Crowe presented a poster on digitization at the UC Irvine Herbarium (citations below).

- Crowe RE and Bowler PA. 2019. Reopening the UCI Herbarium (IRVC). [Poster]. 45th Annual Southern California Botanists Symposium New Frontiers in Botany: Discoveries and Emerging Tools. 5 October. Rancho Santa Ana Botanic Garden, Claremont, CA.
- Pearson KD. 2019. Old plants, new tricks: Phenological revelations from herbarium specimens. 45th Annual Southern California Botanists Symposium New Frontiers in Botany: Discoveries and Emerging Tools. 5 October. Rancho Santa Ana Botanic Garden, Claremont, CA.

The CAP TCN was featured in a news article at CSU Long Beach (<http://www.csulb.edu/news/article/universitys-plant-collection-now-part-of-national-database>), and the WeDigBio events at Cal Poly SLO were highlighted in the Cal Poly Report (https://calpolynews.calpoly.edu/cpreport/2019/oct_30).