



CCGP Newsletter

Issue #08 - October 20, 2022

Contents

- 01:** All-Hands Meeting
- 02:** IUCN Publication
- 03:** 30x30 Virtual Expo Series
- 04:** Reference genome assembly progress
- 05:** Recent CCGP talks
- 06:** CCGP “Comings and Goings”



CCGP All-hands Meeting

The CCGP All-Hands meeting was a huge success in our books! We had over 100 CCGP PIs, team members, collaborators, and members of the California conservation community. We shared project progress updates, discussed strategies to wrap up data collection, and provided overviews of our Bioinformatics and Landscape Genomics pipelines. Our keynote speakers Mark Gold (CNRA) and Jen Norris (CNRA) shared their insights on marine and terrestrial conservation action in California and the 30x30 initiative. Finally, Director and CCGP PI Brad Shaffer led an exciting open discussion on the future of the CCGP.

If you would like to peruse anything from the meeting, you can find the slides and recordings linked on our website [here](#).



IUCN Publication

The CCGP is featured in the new IUCN guidelines “[Selecting species and populations to monitor for genetic diversity](#)”. This publication provides guidance to conservation managers through the decision and evaluation processes that take place when designing a genetic diversity monitoring program and identifying

the most appropriate set of species or populations to monitor. Monitoring and documenting biodiversity trends at the population level is one of the big challenges for conservation biology. Genetic diversity provides the foundation of biodiversity. It is necessary for long-term survival, adaptation, and resilience not only for individuals, but also for populations, species, and entire ecosystems. Monitoring genetic diversity across different time is a first step in our overarching goal to determine populations or species that are in decline. Genetic monitoring can also guide and evaluate the efficacy of some conservation actions. However, putting genetic diversity monitoring into practice in the form of an effective, implemented project can be challenging. Monitoring changes in genetic diversity will be increasingly important in the future and this document will provide an important resource for the post-2020 Biodiversity Framework by the Convention on Biological Diversity (CBD).

30x30 Virtual Expo Series

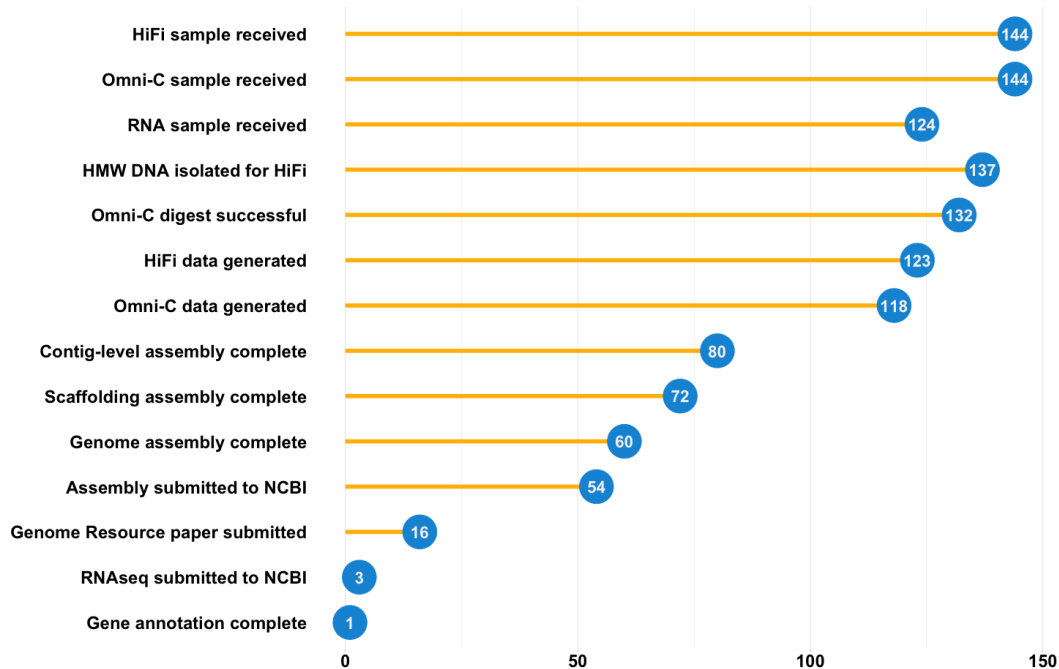
The California Natural Resources Agency is hosting a virtual expo series with eight expos between Oct. 25- Nov. 11, 2022. These expos feature various California conservation agencies and organizations, including CCGP partners California Department of Food and Agriculture and California



Department of Fish and Wildlife. You can join Jennifer Norris, California's Deputy Secretary for Biodiversity and Habitat, and partners from across a variety of state agencies to learn more about the programs, funding opportunities, and other resources available to help all of us reach California's 30x30 goal. Each Virtual Expo will include a Q&A for you to ask questions about funding programs, technical assistance, and more.

[Click here for more information](#)

Reference genome sequencing progress



Number of Species Completed (as of October 20, 2022)

The lab teams at UCD and UCSC have prepped about 90% of our species for sequencing, and HiFi and Omni-C data have been generated for approximately 80% of all reference genome species. Our genome assembler, Merly Escalona, has assembled 60 reference genomes with the majority of these submitted to NCBI. About 10% of the anticipated CCGP Genome Resource articles have been submitted to JOH, and more are on the way. A couple of the recently accepted manuscripts include the [Reference genome of the Woolly Sculpin, *Clinocottus analis*](#) by Daniel B Wright *et al.* and the [Reference genome of the color polymorphic desert annual plant *Linanthus parryae*](#) by Ioana Anghel *et al.* We're looking forward to a great body of publications!



Recent CCGP Talks

CCGP Director and PI Brad Shaffer was one of the invited speakers for

the [17th Annual Meeting of the International Conference on Genomics \(ICG\)](#). At this meeting, Brad discussed the CCGP, sharing our reference genome and whole genome resequencing progress while highlighting the CCGP's phylogenetic representation. He placed a major emphasis on how the CCGP will help resource managers identify landscapes (and seascapes) that are the most important to protect, connect, or purchase as protected areas, bringing population genomics into the toolkit of managers in a way that was never



previously possible. It was a great opportunity to share the goals of the CCGP with an international audience.

Brad Shaffer also gave a talk titled, "Conserving biodiversity through genomics: The California Conservation Genomics Project". As the keynote speaker for the conservation section of the 4th Genomes of Animals & Plants Virtual Conference (GAP22.2), hosted by Cantana Bio (formerly Dovetail Genomics). This conference was held on Oct. 18-20 and focused on bringing together leading researchers in the field of plant and animal genome biology from around the globe for three days of scientific presentations and discussion. You can find more information [here](#).

CCGP Genome Assembler, Merly Escalona, presented a plenary talk entitled "Genomes genomes genomes! Can we help save California's biodiversity one genome at a time?" at the [Biodiversity Genomics 2022 Conference](#) (Oct. 3rd-7th). The conference is hosted by the [Earth BioGenome Project](#). Merly also gave a version of this talk, sharing her exciting work on the CCGP reference genomes, virtually at the [departmental seminar at Humboldt State](#) on Friday Oct. 14th.



CCGP "Comings and Goings"

Our CCGP Data Wrangler, Cade Mirchandani, is moving on to pursue his PhD in the Biomolecular Engineering and Bioinformatics program at UC Santa Cruz. Cade played an enormous role in developing, deploying, and maintaining protocols for whole genome resequencing data use and archiving. We wish him the best of luck!

Given Cade's departure, we are thrilled to welcome Mara Baylis to the Bioinformatics team to take over WGS data ingest and management. Mara will continue to carry out the bioinformatics workflows to confirm the quality of the sequence data and work with the sample-submitting labs to ensure the accuracy and quality of the sample metadata. CCGP PIs and team members can find info on sharing data with the Bioinformatics team [here](#), but feel free to reach out to [Mara](#) with any questions.

CCGP IN THE NEWS

CCGP Director and PI Brad Shaffer highlights the CCGP in NY Times piece, "[Humans Have a Long History of Making 'Very Bad Decisions' to Save Animals](#)".

Have anything to share?

As always, if your lab has any interesting information to share or you come across something that may be of interest to the CCGP community, please don't hesitate to let us know. [Click here to get in touch!](#)

CCGP Contacts:

Brad Shaffer (Director) brad.shaffer@ucla.edu

Erin Toffelmier (Associate Director) etoff@ucla.edu

Courtney Miller (Fund/Project Manager) courtneymiller@ucla.edu

Andrew Tully (Lab Technician) andrewtully@ucla.edu

Merly Escalona (Reference genomes) mmescalo@ucsc.edu

Mara Baylis (WGS data wrangler) mbaylis@ucsc.edu

Erik Enbody (BioInformatics) eenbody@ucsc.edu

Ryan Harrigan (Landscape analysis & mapping) iluvsa@ucla.edu

Anne Chambers (Landscape genomics) eachambers@berkeley.edu

California Conservation Genomics Project

ccgproject.org

[Unsubscribe](#)

