



CCGP Newsletter

December 1, 2021

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Recent CCGP project-wide meetings

On November 1st and 2nd, the CCGP hosted an all-PI meeting focused on whole genome resequencing and the next phases of the CCGP. We discussed project-wide progress, heard updates from our bioinformatics team, and provided guidance on genomic data organization and policies. CCGP PIs have nearly 15,000 samples in hand, over 5,000 with DNA extracted, and about 1,400 with completed library preps. Considering that projects are at various stages of progress, we held four breakout sessions to discuss challenges relating to field work and bench work for plants and animals. These discussions revealed several valuable insights on project challenges and successes. To help facilitate further progress, we encourage projects which are planning on using the Mini-Core to submit samples in two or three batches, rather than waiting until all field work is complete. We also have several Slack channels available for fostering discussions, troubleshooting, and collaboration.

Given that we shared many important updates regarding CCGP genomic data resources, if you would like to review any of the meeting content, our presentation slides and recording can be found on the CCGP website [here](#).

We are excited to report that the [first CCGP Genome Resource article](#) is in press in the Journal of Heredity (JOH)! One of the next articles coming out will be for *Actinemys marmorata*, along with about 20 others that are at the writing stage.

CCGP is covering the cost of publication and open access as part of a standing agreement with JOH. These genome releases are a collaborative effort between CCGP PIs and their teams, who contribute the biological elements specific to their species, and CCGP technical staff and genomics core staff, who contribute most of the technical details in the article, including the methods, results, and data availability sections.

Funded CCGP project highlight: bull kelp

We would like to acknowledge the CCGP funded project: *Conservation Genomics of the bull kelp, Nereocystis luetkeana* led by Bob Miller (UC Santa Barbara), Peter Raimondi (UC Santa Cruz), and Filipe Alberto



(U Wisconsin-Milwaukee). This group has received two Sea Grant awards - California and Washington. This funding will support their endeavors to use population genomics and the resources generated by CCGP to tackle conservation genomic issues, including bull kelp restoration, aquaculture, and conservation. We are always thrilled to learn that CCGP efforts have been leveraged to pursue new conservation and scientific frontiers.



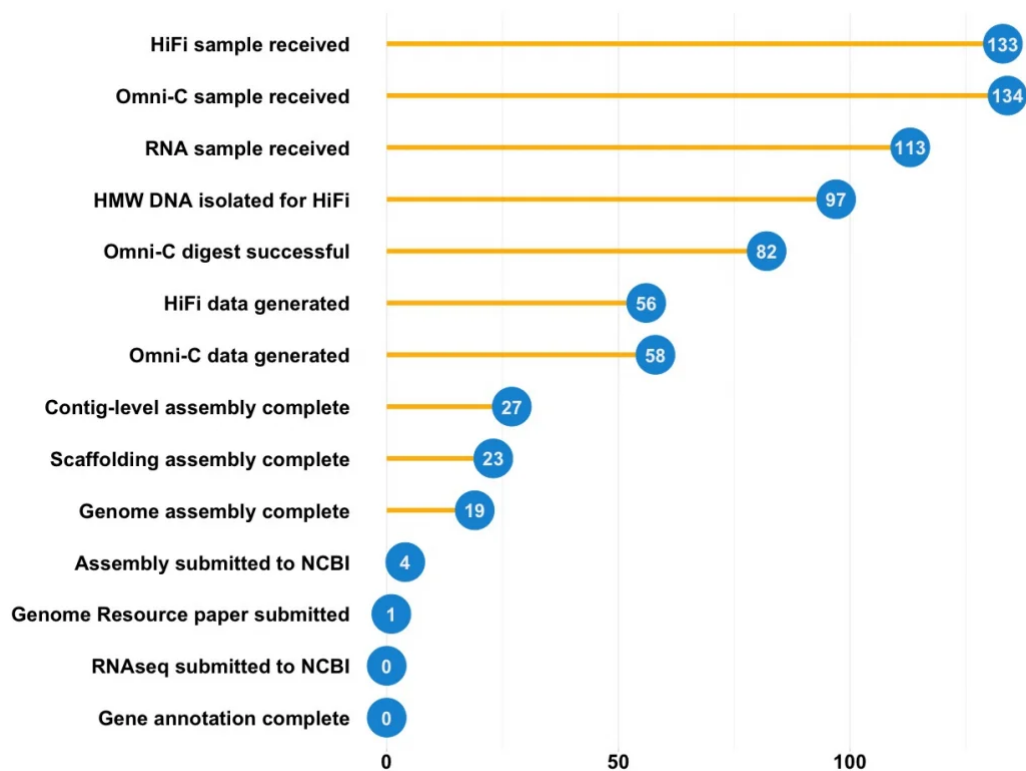
The CCGP featured at AGA 2021

The CCGP's director, Brad Shaffer, presented on the CCGP at the [American Genetic Association](#) meeting in early October. His talk,

titled, "Can genomics help save California's biodiversity? The California Conservation Genomics Project" was presented to a live audience in Snowbird, UT. Phred Benham, one of the collaborators on the CCGP funded projects "Mapping California's Vertebrate Genomic Diversity", also gave a talk on population responses to anthropogenic change. Congrats to Phred for receiving a travel award in the *Conservation Genomics in Action* category! If you are interested in these presentations or any of the other conservation genomics-themed talks, video recordings from the live Symposium, virtual attendee lightning talks, and poster presentation videos are available in the member account portal.

Reference genome sequencing progress

The last of the reference genome tissue samples are trickling in and both the UC Davis and UC Santa Cruz lab teams are keeping pace with DNA extractions and sequencing. Given that HiFi and Omni-C data are available for nearly 60 submissions, the lab component is complete for about 40% of the CCGP species. Our genome assembler, Merly Escalona, has assembled almost 20 reference genomes and has several more in the pipeline. We're getting ready to submit a large set of samples for RNA sequencing to complement many of these projects.



Number of Species Completed (as of Nov. 30, 2021)

CCGP-relevant PI highlights: Felipe Zapata (UCLA)

CCGP PI Felipe Zapata and CCGP team member Claudia Henriquez were coauthors on a recent [publication in PNAS](#) that was featured in Science News, "[How these sea-loving mangroves ended up far from the coast](#)" and ScienceDaily, "[Hidden mangrove forest in the Yucatan peninsula reveals ancient sea levels](#)". The study integrates genetic, geologic, and vegetation data with sea-level modeling to analyze the unique mangroves of the San Pedro River in the Yucatan Peninsula. It presents new findings regarding the impacts of past climate change on the world's coastline as well as opportunities to better understand future scenarios of relative sea level rise.

Happy holidays!

The CCGP team would like to wish everyone a happy and healthy holiday season. It has been a great year of collaboration and progress and we are

looking forward to working with everyone in the new year!

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!](#)

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California Conservation Genomics Project

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