ACCG Monitoring Meeting

Wednesday, April 14, 2021

9:15 AM

**Point Blue Guest Presentation**

Take Home Points:

* The Sierra Nevada avian community is adapted to a frequent-fire disturbance regime that has been suppressed for decades.
* The highest bird diversity and the most unique community was associated with moderate- to high-severity fire.
* The bird community in low-severity fire and mechanically treated forest was more similar to undisturbed forest.
* Mechanical treatments, prescribed fire, and mixed-severity fire can be complementary tools to restore resilient forests and conserve biodiversity.



* Chrono sequence of high severity fire across the landscape
* Calculated abundance and diversity of 70ish species which was vast majority of bird community
* A number of disturbances were represented including low severity fire
* Undisturbed both open and dense has lowest bird diversity
* Birds are adapted to disturbance especially fire disturbance
* Also look at species presence looking at dissimilarity - community ecology metric - grouped disturbances into time bins to look at recovery post disturbance
* Usually dominated by a few species
* Lower total abundance immediately after the fire and then the similarity levels out with other types of disturbance

Any fluctuations of these species as lack of disturbance increases?

* There are a number of points that are in the undisturbed areas actually the - bulk of data is included - averaging all the ages post disturbance into these
* Only goes to 30 years - better maps for fire severity but Landsat only goes back to the 80s
* Undisturbed areas could be broken down by FRID to look at the time since disturbance and whether this has any impacts on the bird communities
* Undisturbed shrub is made up of about 10% tree cover and 40% shrub cover
* Likely generating a lot of these areas that are being created from high severity areas
* Does this analysis cover areas of beetle mortality? Some plots are located in the S. Sierra. There is other work that will address the beetle mortality and effects on bird communities
* Size and severity of fire of patch sizes are another aspect also covered in the shared work

**Cal Fire CCI Grants Prospects**

* Machine learning and ARU units to develop tools that could be used to assist with restoration treatments and their effects on biodiversity
* This work would be done in conjunction with Sonoma State University
* Looking for locations to implement this work and ACCG landscape might fit
* Specific areas of interest where there is planned management and where treatments are going to occur or landscapes that are likely to burn – there are a lot of treatments
* Compare two different regions to compare methods and results
* Sierra Nevada and Coastal forests in Sonoma County
* Remote Sensing variables - LIDAR - interpolate with space based radar data to get detailed forest structure - canopy height, leaf area index - foliar chemistry - water content to measure drought stress
* Landsat remote sensing data to get at species composition
* Drought is surprisingly NDVI sensitive difference ratios - looking at different bands to calculate drought stress using chlorophyll and water content and soil content
* Actively updated vegetation monitoring
* Fuels treatments - looking at 2/5 years - a number of treatments that have been occurring - track where we are now and moving forward
* How to describe the work in a compelling way - provides outputs - framing the needs statements
* SPI as a collaborator since those treatments will also be of interest
* Ultimate goal would be to automate this process - happens
* Make sure if the ACCG is putting in for CCI forest health or fire prevention that we evaluate for monitoring needs

**Variable Density Planting**

* WCB - planting with CHIPs with planting density are not the variable planting density
* CHIPs finished planting for this year
* 2 of 3 VDS units are CHIPs units - Rocky Knob and Salt Springs/Ellis Springs Rd.

-black oak is treated but canyon live oak is treated more like understory species

* There are contract specs for the variable density planting which could be helpful if these are planned in the future
* 154 acres that CHIPs will be planted - Megan will check on this

**Arnold Avery Fuels Monitoring**

* Chips is moving forward with finalizing monitoring protocols
* Which indicators need to be used for the monitoring of this project?
* Understory vegetation will be focus of this project with some minimal work on the overstory trees
* Stem mapping isn’t important for this work as the spatial arrangement isn’t tied to a question in the monitoring strategy
* Use CSE protocols for trees - added a few more metrics for height to live canopy to capture fuels questions
* Invasive species would be done at 11.37 meter plot utilizing percent cover
* Contracts will be awarded this week and work should be started soon so the monitoring will get underway
* Run plan by the full ACCG at the May meeting - might require us to do some review prior to this work

 **Round Robin**

* May 4th – CFSC Caples Webinar (see link here for registration - https://www.cafiresci.org/events-webinars-source/category/caples2019)
* Alissa has Foster Meadow and the Three Meadows monitoring on her agenda for this field season
* CFLR extension - discussion with CBI and ACCG - parameters is working toward for completion of the overall project - original proposal has been met or exceeded so the original concept has been met
* Power Fire field tour – some interest and topics that the group wants to focus on is the prescribed burning, variable density planting and effects of herbicides on wildlife (add to the May agenda to review our work and start to set up field tour for fall)

**Task List:**

All Ongoing

* Short presentation to appropriate audience re: need for monitoring funds post-project (up to 10 years post).
* **U**se SLAWG to help address whether we are treating/monitoring the right acres.
* Share relevant papers or talks that might be important to share with the group (ongoing)
* Online Symposium to Present Monitoring Data – Add to April ACCG monitoring meeting. Maybe delay presentations until winter when we have reviewed data.

All

* Review Arnold Avery monitoring plan if necessary prior to the full group ACCG meeting in May (should this be on our next agenda)
* Complete review of ACCG monitoring strategy by the May meeting

Alissa/Jay:

* Share presentation/webinar with the group

Becky

* Check in with Point Blue on CCI prospects to determine if we want to move forward with this work – need to frame a needs statements
* Along with Helen, Chuck and Megan verify who and when the variable density planting units will get planted to determine whether this should be on our 2021 monitoring list
* Send Chuck planting units (done)
* Share homework on reviewing the monitoring strategy with group for May monitoring meeting
* Dig up oak protocols for the WCB work – might be useful framing
* Check on using Teams or contact Helen for Zoom for next monitoring meeting
* Facilitate presentation of ‘postscript’ application to Planning WG (hold off on this until the tool is updated)
* Snow survey Hemlock update (Bales or Conklin)
* Continue to merge all monitoring spatial data into one place

Chuck

* Share contract specs with the group for internal use only (done)

Megan

* Share fuels monitoring strategy with group – will be presented at full May ACCG meeting
* Look at map of fuel reduction/fire break units to determine how many plots we need (megan will run this by us)

Gwen

* Check with MaryAnne Garamendi to see if Forestry Institute students might take on Thompson meadow monitoring.
* Add Little Indian Valley, Thompson, and Foster Firs to Climate Engine monitoring
* Recruit ACCG folks to monitoring group

Helen

* Continue as lead in Review/Summarize ACCG monitoring questions in strategy
* Helen will share WRAM with group when finalized.

## Future Agenda Topics

1. Monitoring Strategy - review the strategy and see if there is something else we might need to pursue (ongoing)
	1. Track key issues and make sure we are monitoring them
	2. Is there any new information gained that can be applied to management?
2. May – Power fire field symposium – reevaluate if there are additional speakers (i.e. Gwen and conifer effectiveness), need to be able to carpool for field tour to be feasible
3. CA Forest Observatory – could be a good topic for our group (this might be a great SLAWG topic as well)
4. Landscape Scale Assessment – circle back to reporting and how we can tackle assessing at a broader scale – maybe LiDAR will help us with this? (linked to part 2 of SLAWG been postponed)
	1. Think about how we can use the LiDAR as a monitoring tool and start looking at outputs
	2. Shana could present about how was used in LTW for assessment and now for monitoring
5. Summarizing data now that we have data – what projects need a report out?
	1. discuss how information is being presented/translated and if we can improve that
6. Presentation or working group meeting on POSCRPT tool – post fire regeneration tool