

*The Santa Cruz Mountains Bioregional Council presents*  
**A Virtual Symposium on Big Basin Post-fire Research**

**November 9, 2022**

**PROGRAM AGENDA**

*Program co-moderators: Zane Moore, PhD Candidate, UCD and Will Russell, PhD, Prof., SJSU*

<b>6:00 PM</b>	<p><u>Introductory Remarks</u> <i>Jen Michelsen, President, SCMBC</i> The 2020 CZU Lightning Complex Fire had an unprecedented catastrophic impact on park biota. Recovery will be slow and difficult and require use of the best available science. To this end, SCMBC is promoting these and other research findings to aid in that effort.</p>
<b>6:15 PM</b>	<p><u>Influence of Prescribed Burning on Forest Resistance, Resilience, and Fuel Load in Big Basin Following the 2020 CZU Lightning Complex Fire</u> <i>Sky Biblin, Graduate Student Researcher, San Jose State University</i> This presentation will share preliminary results on the influence of past prescribed fires (1999, 2007, and 2011) on coast redwoods and associated species in terms of resistance, resilience, and risk of future fires based on data collected approximately one year after the 2020 CZU Lightning Complex fire. Preliminary results will include prescribed fire's influence on tree species mortality, canopy cover and retention, bole char height, basal and epicormic sprouting, seedling establishment, understory composition and fuel loading.</p>
<b>6:30 PM</b>	<p><u>Early Post-fire Survival and Response of a Coast Redwood Forest</u> <i>Mojgan Mahdizadeh, Graduate Student in Environmental Studies at SJSU</i> In August 2020, the CZU Lightning Complex Fire burned 95 – 98 % of Big Basin State Park. The survival and recovery of the redwood trees and some of their associated species were studied six months after the fire.</p>
<b>6:45 PM</b>	<p><u>Into the Pyrocasm: Fire and Fungi in the Santa Cruz Mountains</u> <i>Christian Schwarz</i> Although fire has been a driving force in the ecology of western North American landscapes since prehistoric times, the frequency and intensity of fires has dramatically increased across the American west in the past decades. We'll look at a few of the immediate outcomes of the CZU Fire that burned through the Santa Cruz Mountains through the lens of macrofungi, and talk about what the future of these lands might look like.</p>

<p><b>7:00 PM</b></p>		<p><u>Fungi, Forests, and Fire: Wildfire-induced Changes in Soil Microbial Communities Affect Seedlings in Coast Redwood Forests</u>  <i>Caroline Daws, PhD Candidate, Peay Lab, Stanford University</i></p> <p>Mycorrhizal fungi are key mutualists in forests, scavenging for nutrients in the soil in exchange for sugars from their tree hosts. Unfortunately we don't know much about how these important fungi respond to high severity wildfire. I will present results from a field study in Big Basin State Park after the CZU Lightning Complex Fire about how different guilds of mycorrhizal fungi respond to fire and what this might mean for seedling growth and competitive ability after severe wildfire.</p>
<p><b>7:15 PM</b></p>		<p><u>Effects of the CZU Lightning Complex Fire on Hermit Thrushes of Big Basin Redwood State Park</u>  <i>Allison Ruth Paules Nelson, MS, Director, Gold Country Avian Studies</i></p> <p>In August 2020 through July of 2021, the CZU Lightning Complex fire burned 95 – 98 % of Big Basin Redwoods State Park, including two field sites where Allison Nelson studied and deployed geolocators on breeding hermit thrushes (<i>Catharus guttatus slevini</i>) from 2013 to 2015. Allison will discuss how the pre-fire distribution of hermit thrushes differs from the post-fire distribution observed in 2021.</p>
<p><b>7:30 PM</b></p>		<p><u>Mammal Recovery After the CZU Fire</u>  <i>Kristy Doerr, MS Student, San Jose State University</i></p> <p>I will be presenting my research on the recovery of mammals in the Santa Cruz Mountains after the CZU Fire. My study uses camera traps to monitor changes in wildlife communities and to investigate the impact of fire severity on mammal recovery.</p>
<p><b>7:45 PM</b></p>		<p><u>Impact of the CZU Fire on Stream Habitat in Coastal Portions of Gazos and Waddell Creeks</u>  <i>Jerry Smith, PhD, Emeritus, San Jose State University</i></p> <p>Shading, water temperature, and stream flow effects of streamside and upslope tree and canopy loss from the CZU Fire. Channel substrate and habitat effects of sediment and wood loading in the first two years following the fire.</p>
<p><b>8:00 PM</b></p>		<p><u>End of Symposium</u></p>