

Town Hall

2-3 pm, Feb. 15, 2024

Agenda

- Welcome
- Leadership Update
- Stories from the field
- Donor Feedback
- Strategic Focus
- ANR in the News
- New Hires
- Other Updates

Chat warmup
Learning about each other:

What's your love language?



Leadership Update

Vision & News - (10-15 mins)

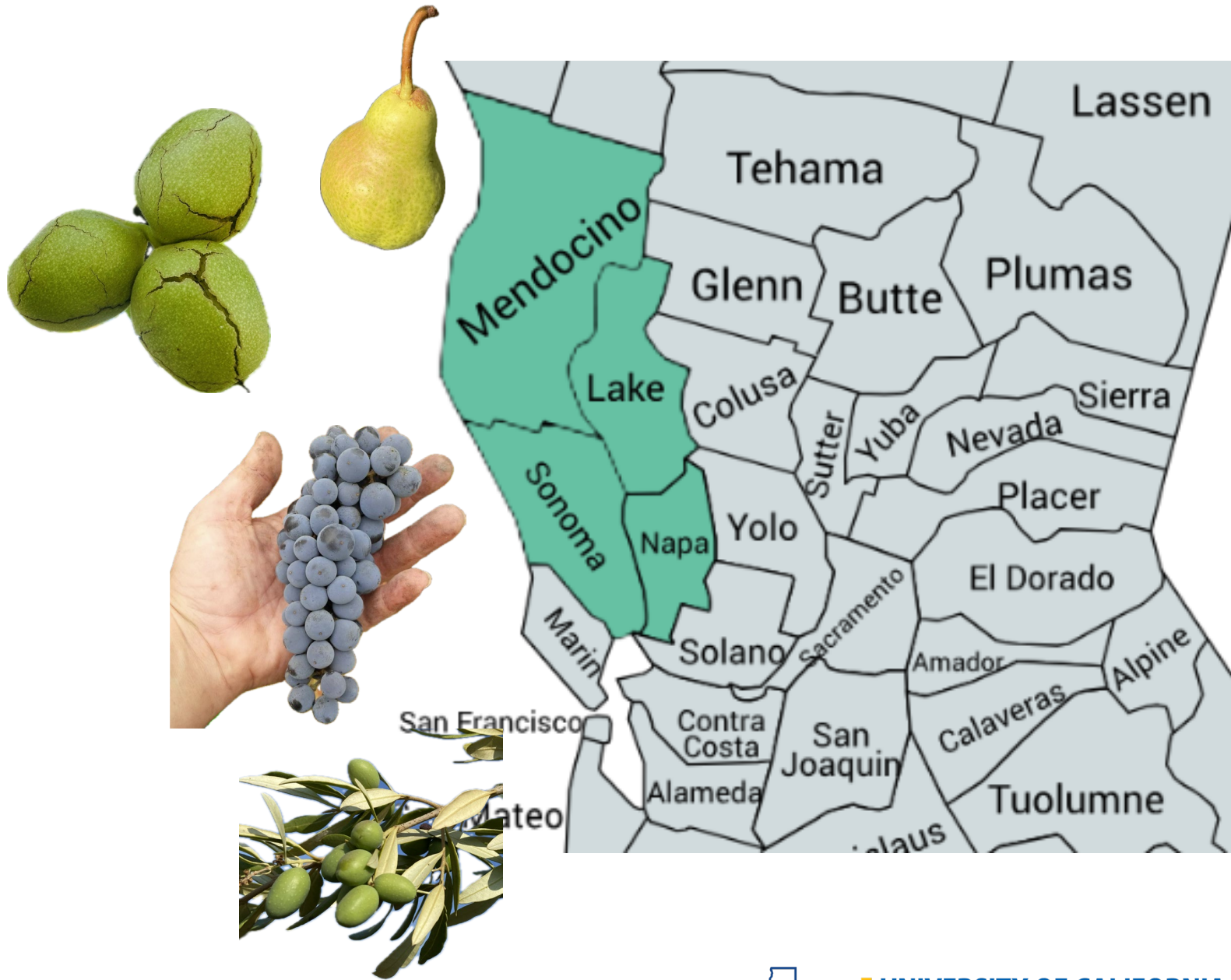


Story from the field

Cindy R. Kron¹, Clebson G. Gonçalves², Broc Zoller³, Axel David Gonzalez Murillo⁴, J. Kevin Moulton⁴, Karla Adesso⁵, William E. Klingeman⁴

¹University of California Agriculture and Natural Resources, Santa Rosa, CA; ²UCANR, Lakeport, CA; ³The Pear Doctor, Inc., Kelseyville, CA; ⁴University of Tennessee, Knoxville, TN; ⁵Tennessee State University, McMinnville, TN





August 2023



Photos: Broc Zoller



UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

■ Integrated Pest Management Program

Flatheaded borer infested fruit in the orchard



Flatheaded borer infested fruit in the orchard



Flatheaded borer damage



No frass at entrance hole

Codling Moth damage



One or more holes plugged with frass

Entomologist: Flatheaded borer in fruit?!?!





Phylum: Arthropoda

Class: Insecta (Insects)

Order: Coleoptera (Beetles)

(400,000+ species)

Family: Buprestidae (Metallic wood-boring beetles)

(15,500+ species)(larvae called flatheaded borers)

Genus: *Chrysobothris* (CDFA Identified)

(690+ species – at least 69 species in California)

Species: ?



What are the possible scenarios

- This was a weird year, and we don't see this behavior again
 - But it was not just one confused female that laid her eggs in the wrong spot supporting that this is a behavior change
- A native agricultural species of pear or walnut that moved to pear fruit
- A native forest species that moved to pear fruit
- Invasive species without preferred host species present



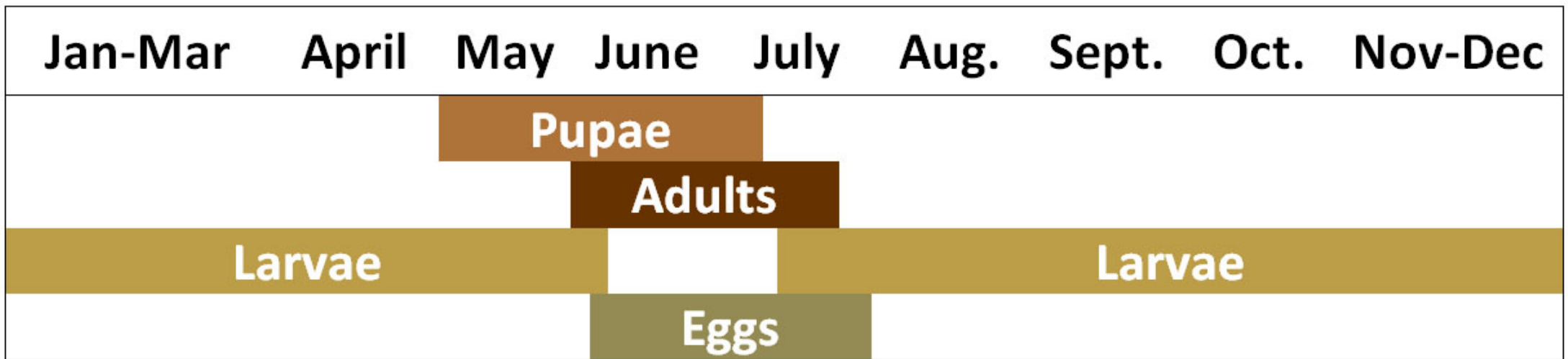
Rearing on artificial diet

- Spoke with Jhalendra Rijal, Area IPM Advisor working with flatheaded borer on walnut
- Received an artificial diet recipe from Karla Adesso, Associate Professor at Tennessee State University
- Sent sample to CDFA and received a *Chrysobothris* spp. ID
- Sent samples for DNA analysis to William Klingeman, Professor at University of Tennessee

The process could take 5+ months to get an adult

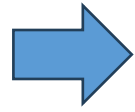


Flatheaded Borer Life Cycle

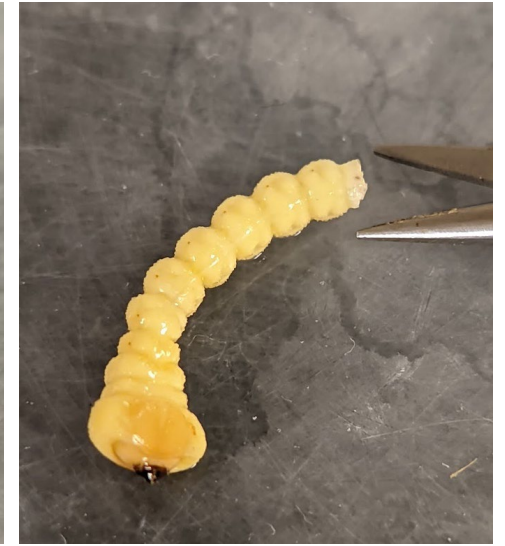
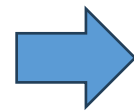




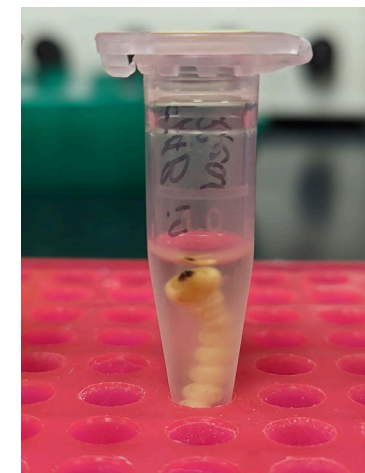
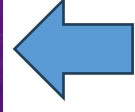
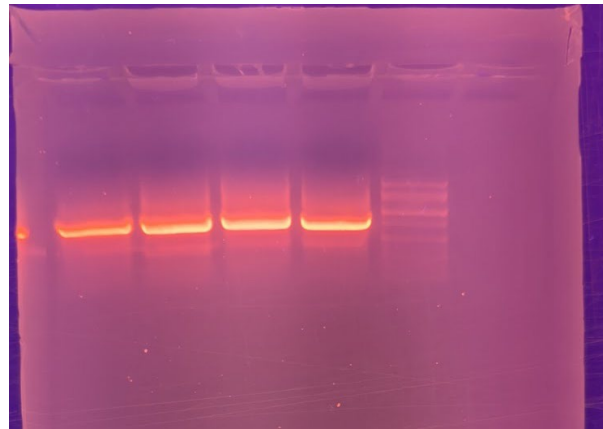
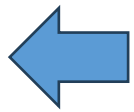
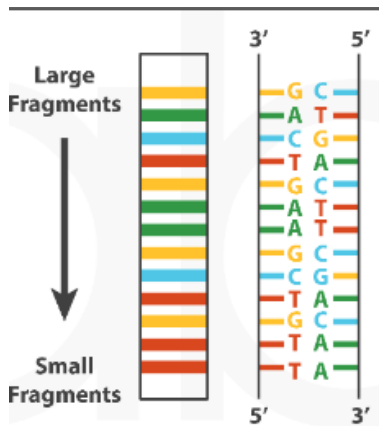
Larvae were found in infested pear fruits that were collected in Kelseyville, CA



A subsample of larvae were preserved in molecular-grade, non-denatured ethanol



The last larval segment was removed & then a hole was made in the second thoracic segment to give access to soft tissue for better DNA extraction



The whole larvae was exposed to lysis buffer & proteinase K for 4 hrs, and then placed in a heat block at ~52C°.

DNA was obtained using an extraction protocol designed by Dr. Kevin Moulton (University of Tennessee)

PCR was completed using a customized (730 bp) COX I primer that amplifies coding regions of *Chrysobothris* species. Finally, DNA samples were sent for DNA sanger sequencing

Assemble Interactively

Candidates	Matches	%Match	Overlap	Mismatch	Gaps	New Contig Len
A05_369_F#287412#...	B17.fasta	100	29	0	0	1,462
B1.fasta	E05_371_F#287416#_0...	99	726	3	0	726
B11.fasta	C05_370_F#287414#_0...	99	726	3	0	726
B12.fasta	B52.fasta	98	727	8	1	1,522
B13.fasta	B72.fasta	98	727	9	1	870
B14.fasta	G04_368_F#287410#...	98	726	13	0	726
B15.fasta	B33.fasta	95	336	12	0	1,466
B17.fasta	B24.fasta	94	110	6	0	1,466
B19.fasta	B67.fasta	92	727	50	1	1,004
B2.fasta	B68.fasta	92	727	52	1	1,522

Assembly Parameters

Overlap of 727 bases.
8 bases mismatch.
Inserted 1 Gaps.
98.76% of Overlap matches.
Contig Length of 1522 bases.

Candidate
Match

Assemble
Done

GTCC TGGCAGG CATAGTAGGACTGCATTAGACTCCTTATTCGAGCTGAF
ATGGARCA TTATAC TTTATTTTGGTGC TGGCAGG AATAGTAGGACTGCATTAGACTCCTTATTCGAGCTGAF
40 50 60 70 80 90 100
ATGGARCA TTATAC TTTATTTTGGTGC TGGCAGG AATAGTAGGACTGCATTAGACTCCTTATTCGAGCTGAF

Analysis of returned Sanger Sequencing data were completed using Sequencher v.5.4



Annotated sequences were blasted against the National Institute of Health's NCBI GenBank database

Based on database resources, we determined that DNA extracted from the larva from pear fruit is 98.75% similar to (homologous with) the COX I mitochondrial region for *Chrysobothris mali* (658 bp match)



Chrysobothris mali ♂

Distance tree of results MSA viewer

Descriptions Graphic Summary Alignments Taxonomy

Sequences producing significant alignments Download Select columns Show 100

select all 100 sequences selected

Description	Scientific Name	Max Score	Total Score	Query Cover	E value	Per. Ident	Acc. Len	Accession
<input checked="" type="checkbox"/> Chrysobothris mali voucher RGF16610 cytochrome oxidase subunit 1 (COI) gene, partial c...	Chrysobothris...	1133	1133	87%	0.0	98.75%	658	KX283168.1
<input checked="" type="checkbox"/> Chrysobothris inaequalis voucher BUP0166 cytochrome oxidase subunit 1 (COI) gene, par...	Chrysobothris...	992	992	100%	0.0	91.33%	1233	KM364358.1
<input checked="" type="checkbox"/> Ectophasia rotundiventris voucher YSUW180401074 cytochrome c oxidase subunit I (COX...	Ectophasia ro...	902	902	98%	0.0	89.51%	806	MW392928.1
<input checked="" type="checkbox"/> Ectophasia rotundiventris voucher YSUW180401073 cytochrome c oxidase subunit I (COX...	Ectophasia ro...	902	902	98%	0.0	89.51%	806	MW392927.1
<input checked="" type="checkbox"/> lotarphia australis voucher CNUIC856 cytochrome c oxidase subunit I (COX1) gene, partia...	lotarphia aust...	900	900	99%	0.0	89.10%	1492	MT188367.1
<input checked="" type="checkbox"/> Pterostichus fasciatopunctatus voucher hs907 cytochrome c oxidase subunit I (COI) gene...	Pterostichus f...	898	898	99%	0.0	89.18%	1444	JX535633.1
<input checked="" type="checkbox"/> Ectophasia rotundiventris mitochondrion, complete genome	Ectophasia ro...	896	896	98%	0.0	89.37%	15792	NC_050938.1
<input checked="" type="checkbox"/> lotarphia australis isolate CNUIC0329 cytochrome oxidase subunit I (CO1) gene, partial cd...	lotarphia aust...	885	885	98%	0.0	89.06%	1458	MK234522.1
<input checked="" type="checkbox"/> Ochthebius uniformis voucher IBE<ESP>:AN437 mitochondrion, complete genome	Ochthebius u...	883	883	99%	0.0	88.71%	16212	NC_052905.1
<input checked="" type="checkbox"/> Maoraxia auroimpressa voucher BUP0017 cytochrome oxidase subunit 1 (COI) gene, parti...	Maoraxia aur...	881	881	100%	0.0	88.61%	1257	KM364366.1

Pear damage



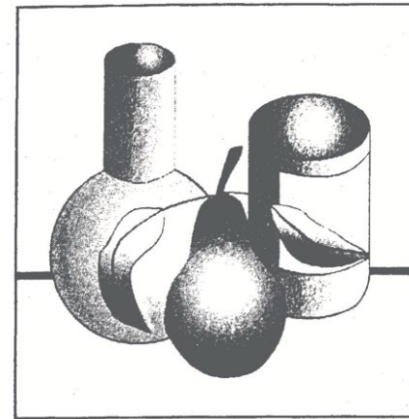
Pear damage



Funding provided by the Pear Pest Management Research Fund



CALIFORNIA
PEARS



Pear Pest Management
Research Fund



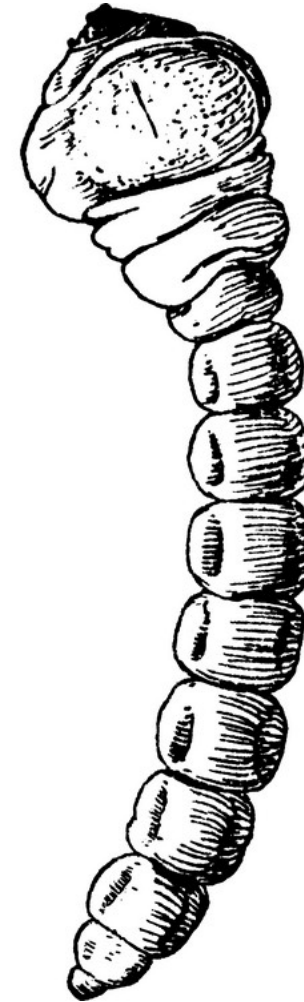
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■ Integrated Pest Management Program

Unknown flatheaded borer pest found in Pear Fruit

Cindy R. Kron¹, Clebson G. Gonçalves², Broc Zoller³, Axel David Gonzalez Murillo⁴, J. Kevin Moulton⁴, Karla Adesso⁵, William E. Klingeman⁴

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■ Integrated Pest Management Program

Donor Feedback

People care about what we do.

“Thank you for your service to the community! I live in Santa Clara County but have been able to view your educational programming through your association with the San Mateo County Public Library!”

Janet H.
Master Food Preserver



Strategic Focus

 **UNIVERSITY OF CALIFORNIA**
Agriculture and Natural Resources

UC Environmental Stewards* & You

*Opportunities to collaborate with our team,
instructors, naturalists, and climate stewards.*

*The program formerly known as UC California Naturalist

Presented by Greg Ira
Director, UC Environmental Stewards

Date: February 15, 2024



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Environmental Stewards

First: What's in a name, change?

Before:

UC California Naturalist
(Program)



Courses:

Now:

UC Environmental Stewards
(Program)



Mission

To foster a diverse community of stewards advancing sustainability and resilience in California's communities and ecosystems through education and service.



What is Environmental Stewardship?

- **An Ethic:** principles that address our relationship with our environment (e.g., respect, responsibility, reciprocity)
- **An Action:** a set of civic engagement strategies (e.g., conservation, restoration, education)
- **A Goal:** a desired result or future vision (e.g., resilience, equity, health & wellness)



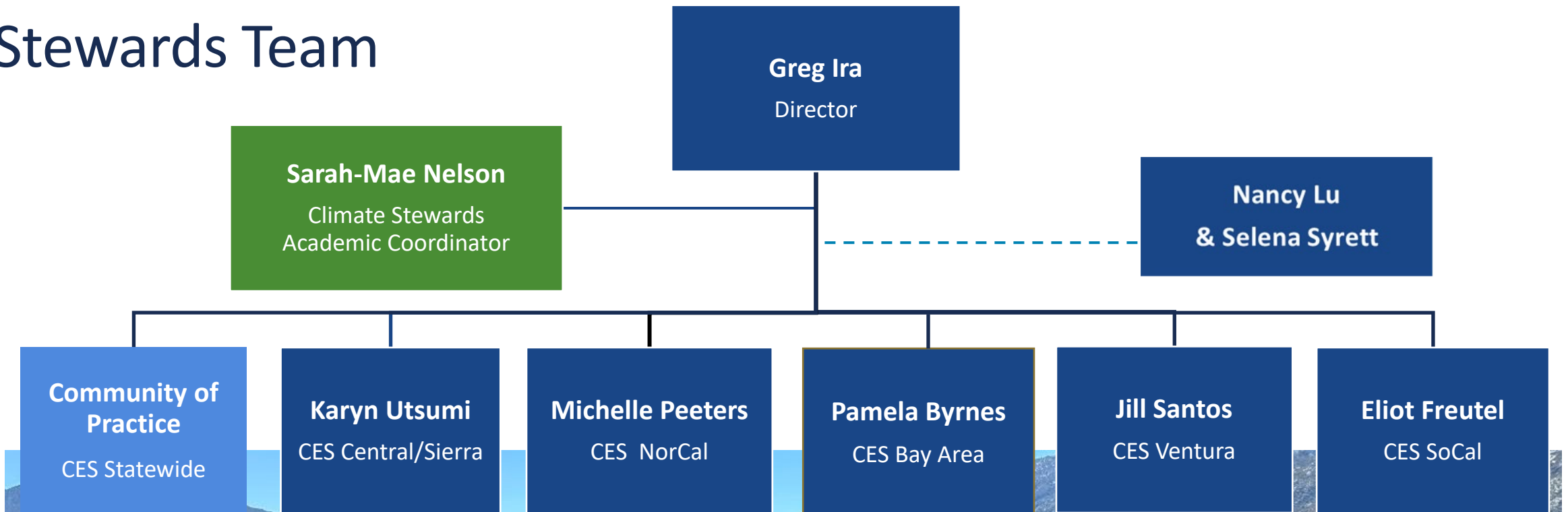
Why Do We Need Stewardship?

To address the pressing challenges that affect . . .

- Biodiversity
- Climate
- Health & Wellness
- Equity & Justice
- Sustainable Development



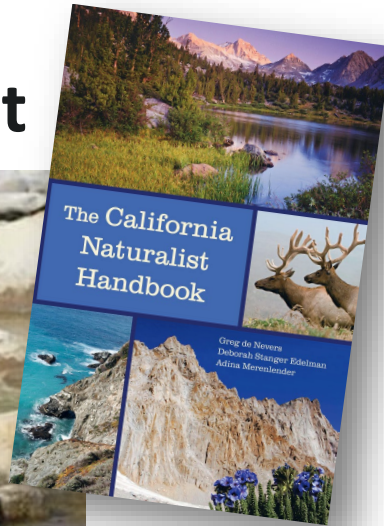
The UC Environmental Stewards Team



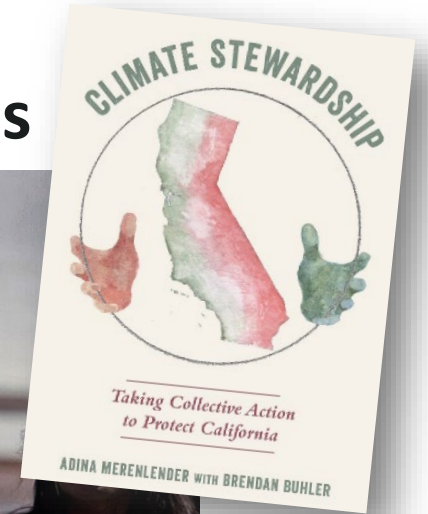
What We Do?

Working with local partner organizations, we combine community education with civic engagement to advance environmental stewardship through two courses:

1. California Naturalist



2. Climate Stewards



Now, how can you get involved?

Here are some examples of how to create, collaborate and coordinate with UC Environmental Stewards.



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■ Environmental Stewards

Take a course for professional development

- **Tracy Celio:** Program Manager Southwest Regional Food Business Center
- **Marcel Horowitz:** Community Nutrition and Health Adviser, Capitol Corridor
- **Mimi Enright:** Program Manager UC Master Gardener, Sonoma
- **Amber Butland:** Climate Smart Agriculture Program, Fresno-Madera



Help us identify local partners to host a course

- **Susie Kocher** (Forestry and NR advisor, Central Sierra) Helped launch several new CalNat courses in the Central Sierra
- **Rita Clemons** (Area County Director San Bernardino, Riverside & Orange Counties) Initiated connections with local Community College District



Present a CaNat or Climate Stewards session

- **Sheila Barry** (County Director, Santa Clara) Presented and hosted field trips on rangeland management
- **Tapan Pathak** (Specialist in Climate Adaptation, UCM) Presented climate change impacts on Ag in CA
- **Safeeq Khan** (Cooperative Extension Specialist, Water UCM) Presented “Integrated Management of Forests and Groundwater to Mitigate Climate Whiplash”



Engage our volunteers in “citizen” science

- **Beatrice Nobua-Behrmann** (Urban Forestry Advisor, Orange & LA)
Trained Naturalists on Invasive Shot Hole Borer monitoring

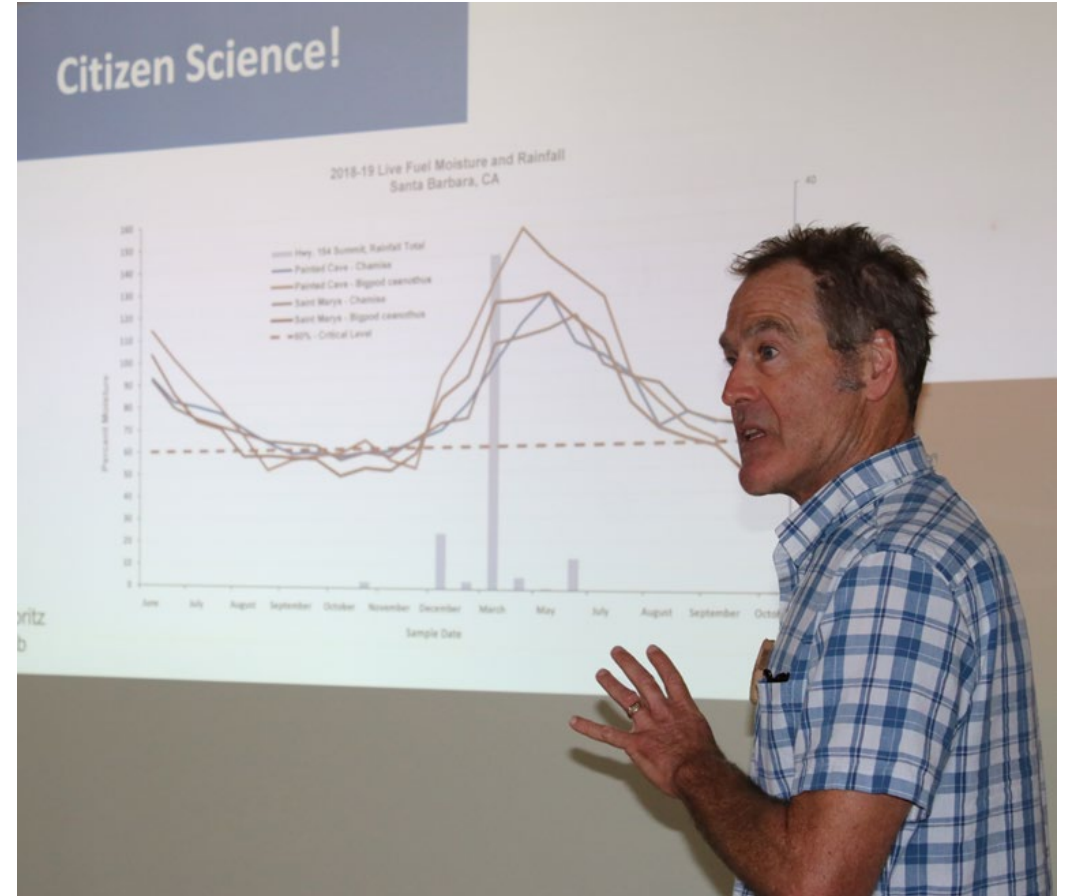


- **Max Moritz**
(Specialist in Cooperative Extension, UCSB)
Trained Naturalist on the protocols for monitoring Live Fuel Moisture.



Conduct an advanced training session

- **Sam Sandoval** (Cooperative Extension Specialist, Water, UCD) Presented a session on water at our statewide conference and webinar series
- **Max Moritz** (Specialist in Cooperative Extension, UCSB) Conducted a citizen science session during an instructor training
- **Igor Lacan** (Interim County Director and Urban Forestry Advisor) Conducted an urban forestry session during an instructor training



Collaborate on grants & other projects

- **Ricky Satomi** (Forestry Advisor, Sutter-Yuba) PI for the “Into the Forest Curriculum” mini grant project
- **Austin Roughton** (Forestry Youth Education Coordinator, Sutter-Yuba) Project instructor
- **Katie Reidy** (Post-Fire Academic Coordinator, Central Sierra) Project co-instructor



Serve on our Program Advisory Committee (PAC)

PAC Members (*past & present*):

- *Keith Nathaniel*
- *Lynn Schmitt-McQuitty*
- *Fadzayi Mashiri*
- *Jeremy James*
- *Susie Kocher*
- *Claudia Diaz Carrasco*
- *Jim Downing*
- *Jairo Diaz*
- *Tapan Pathak*
- *Sam Sandoval Solis*



Author a program related publication

- **Bill Tietje** (Area Natural Resource Specialist UCCE San Luis Obispo) Author of the Natural History of the Central Coast Bioregion
- **Adina Merenlender**, (Professor of Cooperative Extension, UC Berkeley) Author of both course handbooks



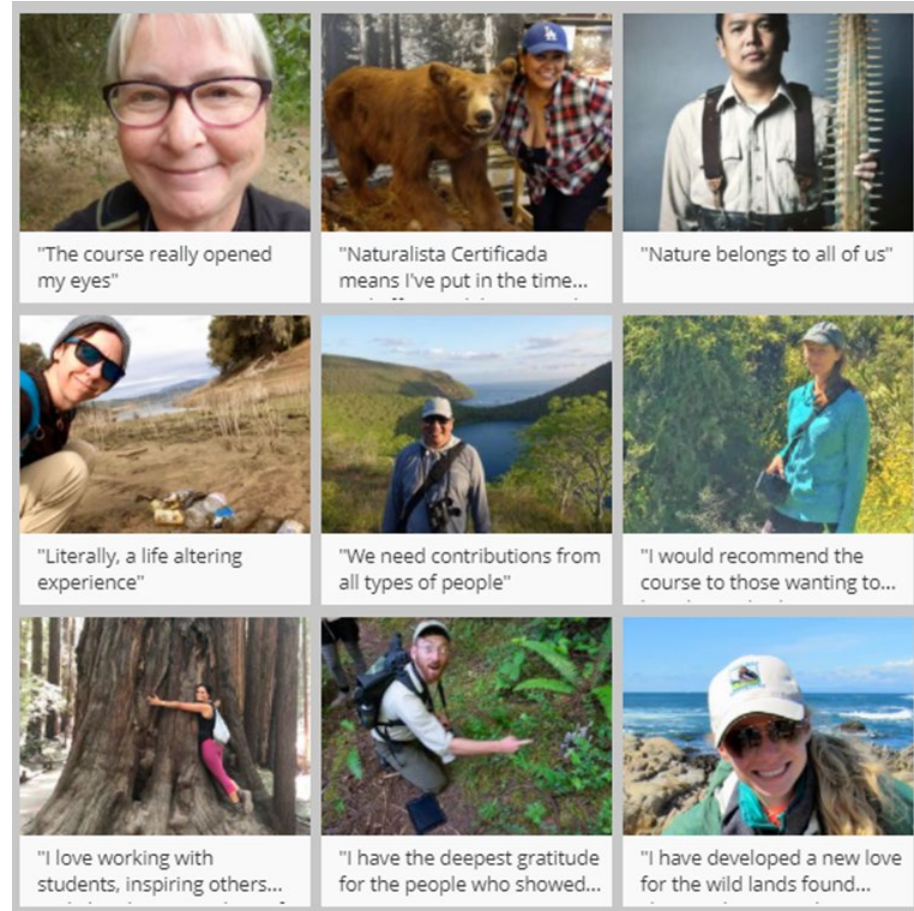
Host a course at your REC or other location

- **John Bailey**,
Director, Hopland REC
- **Hannah Bird**,
Community
Educator,
Hopland REC
- **Todd
Merrifield**,
Business Officer,
Hopland REC



Join us in Discovery, Service, & Stewardship

Together we can transform the way people see their environment, and their role in protecting it.



You belong with us

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Agriculture and Natural Resources

Environmental Stewards

<https://calnat.ucanr.edu/>



In the Media

- **Maurice Pitesky** talked about avian flu in hundreds of news outlets including [The Yeshiva World](#), [US News and World Report](#), [The Guardian](#), [Los Angeles Times](#), [The Hill](#), [NPR](#) and [Fortune](#).
- **Jennifer Smilowitz** was quoted in [Comstock](#) saying breast milk is an “awe-inspiring bio-fluid.”
- **Dan Macon** was quoted in [LA Times](#) on packs of dogs killing livestock.
- **Helen Dahlke** was quoted in [Grist](#) about global groundwater depletion
- **Brent Holtz** was featured by [Australian Broadcasting Corporation](#) about orchard recycling
- **Edith de Guzman** told the [LA Times](#) our flood management isn’t keeping up with the changing flood risk.
- **Florent Trouillas** warned Bakersfield [Californian](#) readers that almond plant disease thrives in wet weather



Louise Ferguson on table olive harvesting

New Hires: Welcome to UC ANR!

January 16 – February 12, 2024

Santosh	Bhandari	UCCE TULARE COUNTY
Leonard	Clark	UCCE RIVERSIDE COUNTY
Austin	Dalmasso	UCCE SAN MATEO COUNTY
Elsa	Jimenez	IMM OFFICE OF HR
Gagandeep	Kaur	UCCE FRESNO MADERA MCP
Tadeo	Kaweesi	KEARNEY REC
Karina	Lundahl	UCCE MARIN COUNTY
Sara	Qadiree	UCCE FRESNO MADERA MCP
Jorge	Quinonez-Neri	UCCE CAPITOL CORRIDOR MCP
Angel	Rubalcava	UCCE RIVERSIDE COUNTY
Harmanpreet	Sharma	UCCE FRESNO MADERA MCP
Alison	Smith	HOPLAND REC
Danny	Vang	UCCE SAN JOAQUIN COUNTY
Adam	Yandel	COMMUNITY NUTRITION AND HEALTH
Michelle	Zavala	UCCE RIVERSIDE COUNTY



Other Updates

- **New Covid Policy** – Duwon Choi
- **Theft prevention** – Matt Rapperlie
- **Distinguish Service Award nominations**
- **My Favorite Extension Methods Webinar from The Sustainable Food Systems Strategic Initiative Panel**
- **Celebrate Black History Month with Black and Allied Employees (BAE)**

COVID-19 Guidelines

UC ANR Risk & Safety

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Infectious Period

Infectious Period, for the purpose of cases the Cal/OSHA COVID-19 Prevention Non-Emergency Standards, is now defined as:

- For COVID-19 cases with symptoms, it is a minimum of **24 hours** from the day of symptom onset:
 - COVID-19 cases may return if 24 hours have passed with no fever, without the use of fever-reducing medications, AND
 - Their symptoms are mild and improving.
- For COVID-19 cases with no symptoms, there is no infectious period for the purpose of isolation or exclusion. If symptoms develop, the criteria above will apply.

If you test **positive** for COVID-19:

- Report to your supervisor and the UC ANR COVID-19 Safety Team by completing the Screening Survey on <https://ucanr.edu/covidscreening>
- **STAY HOME IF YOU HAVE COVID-19 SYMPTOMS**
- You may return to working in-person when all of the following conditions are met:
 1. More than **24 hours** have passed since the onset of symptoms
 2. You have **NO FEVER** without the use of fever-reducing medication
 3. Symptoms are mild and improving
- If you have symptoms other than fever, you may coordinate with your supervisor to isolate until symptoms improve or until after Day 10.
As a reminder, Day 0 is the onset of symptoms.
- Wear a well-fitting mask around others through Day 10 after the start of symptoms or testing positive. You may remove your mask sooner than 10 days if two sequential negative tests are at least one day apart.

If you had **Close Contact** with Someone with COVID-19:

- ANR EH&S will continuously reach out to the employees who were listed as Close Contact.
- Wear a well-fitting mask or respirator around others (at your worksite, indoors, in vehicles, in the field when working near others) for at least 10 Days after exposure.
- Monitor yourself for COVID-19 symptoms. If you develop **new** symptoms, testing is recommended.
- If you are at a higher risk of severe disease or if you've had contact with someone at higher risk of severe disease, testing is recommended.
- You may still voluntarily get tested after the exposure.

Exception for Close Contact: if you or the Close Contact were wearing a respirator or an N95 mask at the time of interaction.

The updated [Quarantine, Isolation, and Return to Work Guidelines](#) and [Quarantine, Isolation, and Return to Work Summary Chart](#) can be found on the ANR Environmental Health & Safety website

Avoiding Vehicle Break-Ins

Presented by: Matt Rapparlie
Title: Risk Management Analyst

Date: February 15, 2024



Vehicle Break-Ins By The Numbers

- In 2022, 203,018 vehicle break-ins/thefts were reported across California.
- Total value of break-ins and thefts estimated at \$1.7 billion.
- Largest percentages by area were: 53.7% in Southern California, 17.9% in the Bay Area, 12.7% in the Central Valley
- The average car break-in takes less than 10 seconds.

What Coverage Is Available Through ANR

- Insurance coverage is available through the University's Self Insurance program only for Vehicles and University Property.
- Insurance coverage is unfortunately not available for personal property within the vehicle.
- Some insurance coverage may be available through our additional travel insurance policy for out of country travel.

Coverage Continued

- Property claims are subject to a \$1,000 deductible.
- The UC Travel Policy allows for deductible reimbursement up to \$500 when personal vehicles are being used for University business. Note: This is for physical vehicle damage, not lost contents within it.
- More information can be found at:
https://ucanr.edu/sites/risk/Insurance/Automobile_Liability_Insurance/

What Can You Do?

- Ensure belongings are NEVER left within the vehicle, even for short periods of time.
- If transporting University Equipment, whenever possible, do not store the items within the vehicle overnight.
- Report all incidents and thefts to ANR Risk Management at: risk@ucanr.edu

Questions?

Other Updates

Distinguish Service Award nominations

Celebrate Black History Month with Black and Allied Employees (BAE)

Topic: Black Reconstruction in America

Wednesday, Feb. 28, 10 am-12 pm

<https://ucanr.zoom.us/meeting/register/tJcpdOCtrjgtHdwfCZa5k7kjhinhGEjwP5l4#/registration>

My Favorite Extension Methods Webinar from The Sustainable Food Systems Strategic Initiative Panel

Wednesday, March 27, 11 am-1 pm

<https://surveys.ucanr.edu/survey.cfm?surveynumber=42298>

THANK YOU!

The next town hall will be
Thursday, March 21, 2024

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