

INTRODUCTION TO TREE VOLES



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A Workshop on Genus **ARBORIMUS**

RED, SONOMA, and WHITE-FOOTED TREE VOLES



**JOIN US VIRTUALLY
OR IN CORVALLIS, OR**

**AUGUST 24, 2023
OPTIONAL FIELD
DAYS AUG 25-26**



Photo by Bert Gildart

Instructor Team Includes

Dr. Katie Moriarty
Lead Instructor
Ecologist
NCASI

Jason Piasecki
Graduate Researcher
Oregon State
College of Forestry

Dr. Eric Forsman
Emeritus Wildlife Researcher
United States Forest Service

Dr. Tim Bean
Associate Professor
Cal Poly San Luis Obispo

Sal Chinnici
Director of Forest Sciences
Humboldt and Mendocino Redwood
Companies

Vanessa Petro
Lead Wildlife Biologist
Oregon Department of Forestry

Dr. Charlotte Erikson
Postdoctoral Scholar
Oregon State University

Scott Hopkins
Wildlife Biologist
Northwest Oregon District
Bureau of Land Management

Jim Swingle
Wildlife Biologist
Pacific Northwest Research Station
US Forest Service

Shauna Everett
Biologist
US Fish & Wildlife Service

Chad Marks-Fife
District Wildlife Biologist
Willamette National Forest, Middle Fork
Ranger District
Forest Service

Brad Valentine
Senior Environmental Scientist Specialist
California Department of Fish & Wildlife

Shauna Everett
Biologist
US Fish & Wildlife Service

Dr. Scott Osborn
Nongame Wildlife Program
Wildlife Branch
California Department of Fish & Wildlife

Collette Yee
Field Scientist
Rogue Detection Teams

WORKSHOP POSTPONED

Description: The Oregon Chapter and the Western Section of The Wildlife Society team up to demystify the all three members of the genus *Arborimus* - the enigmatic red, Sonoma, and white-footed tree voles of the Pacific Northwest. Join us by Zoom or in-person at Oregon State University (Corvallis, OR) for a full day lecture on tree vole natural history, survey methods, population status, threats, management considerations, and permitting. An optional field excursion August 25-26 will take 30 participants to explore occupied tree vole habitat and *possibly* even see researchers capture one of these rare animals.

What to Expect: The workshop is geared towards professional biologists and students. Online participants will need access to stable internet and Zoom software. Field participants will need to be in good physical condition to traverse steep areas bushwhacking through dense forest. Participants are expected to provide their own transportation and carpool, although we may also assist in transport.

Registration

All participants must fill out a registration form, here: **POSTPONED**

Important: Please **triple check** that you are using your preferred email when registering. The registration page often auto-fills fields with old information. Note: we cannot process American Express.

In-person registration includes lunch at Oregon State University, courtesy of the Boone & Crockett Club.

Your registration is secure when payment is received.

Registration is payable by check or credit card and must be received or postmarked by August 14, 2023.

Registration Categories	
Lecture Only, August 24, 2023 (in person participation limited to 4; online limited to 70)	
Member, TWS Western Section or Oregon Chapter*	\$80
Non-Member Rate	\$110
Student (limited to 5 registrations)	\$30
Lecture and Field Days, August 24-26, 2023, limited to 26	
Member, TWS Western Section or Oregon Chapter*	\$470
Non-Member Rate	\$520
Student / Early Career Professionals (limited to 4 registrations)	\$370
*OR Chapter Members , please use code TV2023OregonMember in the Promotion / Discount Code box just above the green Check Out button on the last page of the registration form.	

The maximum enrollment for the full workshop is **100** for the lecture. After the class is filled, a waiting list will be kept. A minimum of **45** participants must register by **August 10th** or the class will be canceled and all registration fees will be returned. Maximum enrollment for the field portion is

Cancellation and Refund Policy: To receive a refund of workshop registration fees, we must receive your cancellation no later than 24 days before the first day of the workshop. All refunds are subject to a 5% processing fee. Afterwards, there will be no refunds due to inclement weather, Federal budget issues, furloughs or other events beyond the control of the workshop organizers. However, registration may be transferred to another individual for a 2.5% transfer fee.

Contact workshops@tw-west.org

What Happens Next? After registration, you will receive detailed information about the field course at least two weeks prior to the event.

Waitlist Policy: If placed on the waitlist, you will not be charged. If spots open up, the first person on the waitlist will have 48 hours to accept the registration up until 4 weeks prior to the event, after which participants will have 24 hours.

No Pets or Outside Guests are allowed.

Location

The classroom portion will be held either online. In-person participants will meet at Oregon State University, College of Forestry.

[Address: 140 Peavy Forest Science Center, 3100 SW Jefferson Way, Corvallis, OR 97331](#)

Expect to pay for parking and walking up to a ½ to reach the classroom.

Field participants will meet at OSU on the 24th and 25th as well, and carpool. Further details will be provided after you register.



Photo by Jason Piasecki

Virtual Participants

Zoom

Prior to the course, please have [Zoom](#) downloaded on your computer and have tested all your microphones, etc. so you are not caught off-guard by technical difficulties during the event.

Requirements

Zoom downloaded (free/basic version is just fine) to your device prior to the course. Headphones or head-set are recommended to improve sound quality, but not required (by now we probably all know if our systems work well).

Internet / System Requirements

If you have not used Zoom before, please run some teleconference tests to ensure that you have enough bandwidth to run Zoom. You can find a list of [system requirements here](#).

Condensed Itinerary

(SUBJECT TO CHANGE PER INSTRUCTORS)

All times in Pacific Time (Los Angeles, Victoria, Seattle)

August 24, 2023

Day 1 - Lecture	Lecturer	Time
Check-In		7:00 - 8:00
Workshop Introductions and Basics	Ivan	8:00 - 8:30
Workshop Goals and Key Points	Katie	8:30 - 8:45
NATURAL HISTORY	Lecturer	
Intro to Arborimus and the three species	Eric Forsman	8:45-9:00
Habitat and Natural History	Eric Forsman	9:00 - 9:30
Population Status, Distribution, Natural History, Physiology - red tree vole	Eric Forsman	9:30 - 9:45
Population Status, Distribution, Natural History, Physiology - white footed vole	Tim Bean	9:45 - 10:00
Population Status, Distribution, Natural History, Physiology - Sonoma tree vole	Brad Valentine	10:00 - 10:15
Q&A Session		10:15 - 10:30
Break		10:30 - 10:45
DETECTABILITY		
Challenges with Detectability	Katie Moriarty	10:45 - 11:00
Techniques and Research, remote cameras, climbing, videos	Jason Piasecki	11:00 - 11:15
Detectability in Northern CA	Scott Osborn	11:15 - 11:30
Telemetry: Estimating Movements	Jim Swingle	11:30 - 11:45
Telemetry: Survival and Predation	Jim Swingle	11:45 - 12:00
	Questions	12:00 - 12:15
Lunch (provided by OSU Boone and Crocket Foundation/Club)	Lunch	12:15 - 13:30
Detection dog teams	Collette Yee	13:30 - 13:45
NOVEL METHODS		
Arborimus in captivity	Eric Foresman	13:45 - 14:00
Genomics 2 - novel methods	Charlotte Erikson	14:00 - 14:15
Nest platforms/Restoration	Damon Lesmeister?	14:15 - 14:30

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Questions/Answers		14:30 - 15:00
Break		15:00 - 15:15
HABITAT MODELING		
Telemetry and Home Range	Mackenzie McCoy	15:15 - 15:30
Habitat Model for White-footed vole	Tim Bean	15:30 - 15:45
REGULATION		
New ISSSSP Survey Protocol	Chad Marks-Fife	15:45 - 16:00
Regulation, Threats and Status of Tree Voles	Shauna Everett (USFWS)	16:00 - 16:15
Permitting - CA	Scott Osborn	16:15 - 16:30
HCP Conservation Actions for Red Tree Voles	Vanessa Petro	16:30 - 16:45
Questions/Answers		16:45 - 17:00
Break		17:00 - 17:15
LAND MANAGEMENT		
Land Management on BLM	Scott Hopkins	17:15 - 17:30
Sonoma Tree Voles and the Humboldt Redwood Co. HCP		17:30 - 17:45
Land Management on USFS		17:45 - 18:00
Questions/Answers		18:00 - 18:15

August 25, 2023

7:00 AM - 4:00 PM

We will meet at OSU at 7:00 AM and travel by bus to the field

Location: Starker

We will visit several areas on Timber Lands within a 10-mile radius of OSU, looking at occupied habitat and discussing habitat requirements of red tree voles.

August 26, 2023

7:00 AM - 4:00 PM

We will meet at OSU at 7:00 AM and carpool to the field

We will visit several different areas on Timber Lands, watching researchers climb trees in search of occupied nests. It is possible that we find a live red tree vole, in which case, the researcher will bring it down for us to observe.



Photo by Eric Forsman

Thanks to Our Sponsors

This workshop would not be possible without the generous support of several sponsors, and from the experts who are volunteering their time to put on this event. Through the following sponsors, the workshop venue, catered lunch, field day 1 transportation, instructor lodging, IT services, and field team time are being covered!



Oregon State University
College of Forestry

The Oregon State University College of Forestry is an internationally recognized leader that is transforming education, research and policy for managing and sustaining working forest ecosystems in the 21st century. We offer a world-class education that provides a wide variety of opportunities following graduation. For our partners, we are a trusted authority and world leader in outreach and research, providing the latest scientific knowledge, woven together with Traditional Ecological Knowledge and multiple ways of knowing, to inform policy and business decisions across the forest landscape. The College of Forestry is kindly providing our lecture venue for free!



Boone and Crockett Club was Founded by Theodore Roosevelt in 1887. It has long been at the forefront of conservation in America. We're best known for our historic big-game records. But today's B&C members continue to be a Rooseveltian force in the ever-more-complex arena of wildlife and hunting policy.

The Boone and Crockett Club is sponsoring our lunch for August 24th.



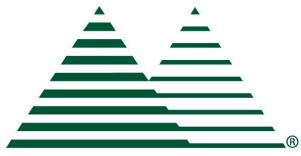
IMPACT. SCIENCE. SOLUTIONS.

The National Council for Air and Stream Improvement, Inc. (NCASI) is a 501 (c)(6) tax-exempt association organized to serve the forest products industry as a center of excellence providing unbiased, scientific research and technical information necessary to achieve the industry's environmental and sustainability goals.

NCASI's mission is to help our members cost-effectively meet their environmental and sustainability goals through basic and applied research, technical support, and education. Through the execution of our Mission, we provide essential support to our forest products industry members in their efforts to ensure the availability of a sustainably managed fiber supply, characterize and help improve the effectiveness of pollution control measures at manufacturing facilities and provide valuable insights and assistance to members in the manufacture of sustainable forest products.

NCASI is sponsoring lodging for instructors and its team's information and field efforts.

Contact workshops@tw-west.org



MENDOCINO • HUMBOLDT
Redwood Companies



Mendocino Redwood Company, LLC (MRC®) and Humboldt Redwood Company, LLC (HRC™) chose the FSC® standard for certification because we, as well as many others, believe that it is the toughest standard available for management of forests on a commercial basis. Our commitment is to manage productive timberlands with a high standard of environmental stewardship, and also operate a successful business. Mendocino and Humboldt Redwood Companies are sponsoring workshop speakers.



**STARKER
FORESTS, INC.**

Starker Forests, Inc. owns, grows and manages forests and strives for excellence in terms of forest resource stewardship. We are a fifth generation family business and strive to successfully meet the needs of our owners, employees and the community. We are grateful to Starker Forests, Inc. for providing transportation for the workshop.

We Would Also Like to Thank

Dr. Katie Moriarty, Planning Lead

Jason Piasecki, Field Lead

Dr. Mindy S. Crandall, Associate Professor in Forest Policy

Katie Rock, Moderator

Sam Sosa, IT Specialist

Dr. AJ Kroll, President of the Oregon Chapter of TWS

John McNerny, Treasurer of the Western Section of TWS

Randi McCormick, President of the Western Section of TWS

Preparation

List of Items to Bring

In-Person Classroom

- Thermal coffee mug
- Snacks
- Pen or pencil
- Water bottle
- Notebook/laptop if desired
- Cash/credit card for parking

Field Portion

- Binoculars
- Headlamp/flashlight just in case
- Boots which cover the ankle (required!)
- Field camera
- windbreaker
- fleece jacket or vest
- Rain gear
- layered clothing
- Beanie
- water bottle(s) - refillable please
- Extra socks
- Snacks
- small notebook for the field
- pen or pencil
- water bottle(s) to refill
- backpack or field pack
- Sunglasses
- Sunscreen
- Eco-friendly bug spray
- First aid kit
- Hat
- Extra socks
- Extra clothes
- Epipen and anything you may need for bee stings!
- Toilet paper and trowel - El Baño Natural is going to be your friend on long field days
- Hiking poles (optional)



Photo by Eric Forsman

Instructors



Katie Moriarty, Ph.D.

Dr. Katie Moriarty is a senior research scientist and western forest wildlife ecologist with the National Council for Air and Stream Improvement. Her research focus on sustainable forestry, balancing needs of sensitive wildlife species, and biodiversity. Katie's current projects include assessing sensitive species use of managed forest landscapes and evaluating biodiversity (e.g., pollinators, carabid beetles, mammals) responses to variation in forest management intensity across broad spatial scales. Katie is active within The Wildlife Society, International Martes Working Group, and the IUCN Small Carnivore Group.

Katie earned her BS at Humboldt State University, and received her MS and doctorate through Oregon State University, Corvallis. Dr. Moriarty specializes in detection and habitat use among mesocarnivores, particularly the elusive Pacific marten (*Martes caurina*). Within the Lassen area, she worked on the Forest Carnivore Detection Study, using remote cameras to gather information on the presence and movement of mammals within Lassen National Forest. As a grad student, Dr. Moriarty received national recognition through her accidental rediscovery of the wolverine in California. Her photographs of the wolverine, taken by a remote camera set up in Tahoe National Forest, have become the standard example in demonstrating the value and utility of remote cameras.



Jason Piasecki

Jason Piasecki is a wildlife biologist with the National Council for Air and Stream Improvement and a graduate research assistant at Oregon State University in the College of Forestry. He has been working in the forest canopy studying red tree voles since 2019 with Dr. Katie Moriarty. His graduate research focuses specifically on the capacity of young forests to support tree vole populations in the central Oregon coast range.

Jason holds a BS in Fisheries and Wildlife Science from Oregon State University and is concluding his MS thesis research in August 2023. He has a wide range of field experience in the Oregon coast range covering a variety of species including chinook salmon, marbled murrelets and red tree voles. He is pursuing a career in research and conservation biology focusing on landscape disturbance and sensitive species.



Sal Chinnici

Sal is a wildlife biologist with over twenty-five years of experience in blending the habitat needs of threatened and endangered species with forest management in the redwood region. He has initiated and supervised long-term monitoring programs for the northern spotted owl and marbled murrelet under a multi-species Habitat Conservation Plan at Humboldt Redwood. In 2007 Sal was designated as a Certified Wildlife Biologist® by The Wildlife Society. At HRC/MRC, Sal's responsibilities include wildlife, fisheries, botany, geology and hydrology. Sal earned his Bachelor of Sciences Degree in Wildlife Management from Humboldt State University in 1977.



Shauna Everett

Shauna Everett is a wildlife biologist with the U.S. Fish and Wildlife Service in Portland, Oregon, and has been the species lead for the red tree vole the past two years. She has worked on many aspects of the Endangered Species Act over her 20-year career, with current focus on Pacific Northwest forest conservation and management, ESA section 10 conservation programs, and compensatory mitigation programs and policy.

The first half of Shauna's wildlife career was spent in the southeast working in bottomland hardwood and longleaf pine forest ecosystems, with a focus on mammals and herpetofauna. Shauna's academic degrees include an M.S. in Wildlife Ecology from Oklahoma State University and a B.S. in Zoology, Magna Cum Laude, from the University of Arkansas. She enjoys

working on her backyard habitat and adventuring with her wildlife biologist husband and their four children, especially in the great outdoors.



Dr. Scott Osborn

Scott Osborn is CDFW's Statewide Coordinator for Small Mammal Conservation. He works with researchers and managers to advance conservation of at-risk species of rodents, bats, insectivores, lagomorphs, and of course, Sonoma and white-footed tree voles in California. You may recognize his name associated with a variety of mammal research, particularly on bats. Dr. Osborn is also the lead for the MGS Technical Advisory Group since 2009.



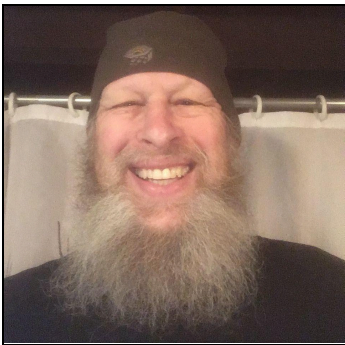
Vanessa Petro

Vanessa Petro is the Lead Wildlife Biologist for the State Forests Division with the Oregon Department of Forestry. In her current role, Vanessa provides wildlife policy and plan development, technical support for wildlife issues on ODF managed lands, and serves as the Division lead in wildlife monitoring and research.

Prior to this role, she was a Senior Faculty Research Assistant with the College of Forestry at Oregon State University where she received her master's degree in 2013. Vanessa's research career primarily focused on wildlife-forestry interactions, specializing in American beaver and black bear

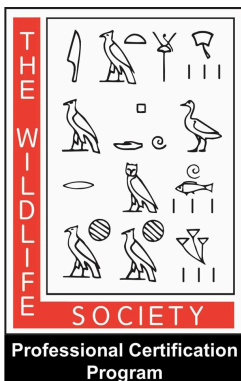
species. She is a subject matter expert in American beaver ecology in the Pacific Northwest and continues to support effective conservation of this species.

In her free time, Vanessa enjoys looking for beaver activity, bear dens, old growth stands, and fire scars with her sons Aldo (4) and Sawyer (1), and husband Andrew.



Jim Swingle

Jim Swingle is a wildlife biologist with the USDA Forest Service, Pacific Northwest Research Station. He received a Bachelor of Science degree from the University of Washington and Master of Science degree from the Oregon State University. He has spent the last 35 years conducting research primarily on red tree voles, owls, northern goshawks, Humboldt marten, and pileated woodpeckers.



Certified Wildlife Biologist

Certified Wildlife Biologist Renewal/ Professional Development Certificate Program

The Wildlife Society will allow a maximum of 14.5 Continuing Education Units in Category I of the Certified Wildlife Biologist Renewal/Professional Development Certificate Program.