



2019 ANNUAL REPORT OF THE WILDLIFE SOCIETY – WESTERN SECTION



Western Section

Events, Outreach, & Accomplishments



The Wildlife Society (TWS), founded in 1937, is an international non-profit scientific and educational association dedicated to excellence in wildlife stewardship through science and education. The Western Section serves eight regional chapters in California, Nevada, Hawai'i, and Guam: California North Coast, Sacramento-Shasta, San Francisco Bay Area, San Joaquin Valley, Southern California, California Central Coast, Nevada, and Hawaii.

2019 Annual Report of The Wildlife Society – Western Section

EVENTS, OUTREACH, & ACCOMPLISHMENTS

OVERVIEW

Mission

The Wildlife Society (TWS) is committed to a world where humans and wildlife co-exist. We work to ensure that wildlife and habitats are conserved through management actions that take into careful consideration relevant scientific information. We create opportunities for this to occur by involving professional wildlife managers, disseminating wildlife science, advocating for effective wildlife policy and law, and building the active support of an informed citizenry.

Our mission is to represent and serve the professional community of scientists, managers, educators, technicians, planners, and others who work actively to study, manage, and conserve wildlife and habitats worldwide.

The members of The Wildlife Society manage, conserve, and study wildlife populations and habitats. They actively manage forests, conserve wetlands, restore endangered species, conserve wildlife on private and public lands, resolve wildlife damage and disease problems, and enhance biological diversity. TWS members are active across the United States, Canada, and Mexico.

The products of The Wildlife Society include essential, practical, and objective information for wildlife professionals. We provide research, policy information, and practical tools in print and electronic forms, along with vibrant professional networks that allow solutions to wildlife conservation and management challenges to be anchored in science.

Area of Organization

The Western Section serves 8 regional chapters California, Nevada, Hawai'i, and Guam (California North Coast, Sacramento-Shasta, San Francisco Bay Area, San Joaquin Valley, Southern California, California Central Coast, Nevada, and Hawaii), and includes student chapters at Humboldt State, U.C. Davis, Cal Poly San Luis Obispo, U.C. Santa Barbara, San Francisco State, and the University of Nevada, Reno.

Section History

The Wildlife Society, founded in 1937, is an international nonprofit scientific and educational association dedicated to excellence in wildlife stewardship through science and education. The Western Section formed in December 1953 at U.C. Berkeley as the California Section with A. Starker Leopold as the first President. The first annual meeting was held in February 1954 at U.C. Davis. The Section changed its name to the California-Nevada Section in 1964 and finally to the Western Section in 1970.

2019 EXECUTIVE BOARD MEMBERS

Officers

President: Matthew Bettelheim • *AECOM*

Past-President: Jeff Davis • *Colibri Ecological Consulting*

President-Elect: Kelly Holland • *GEI Consultants*

Section Representative to TWS: Cynthia Perrine • *TWS Western Section*

Secretary: Bridget Sousa • *Swaim Biological, Inc*

Treasurer: John McNerney • *City of Davis*

Committee Chairs

Awards and Grants: Richard Burg • *CA Dept. Fish & Wildlife*

Communication Content Editor: Suzanne Marzcak • *San Diego Zoo Institute for Conservation Research*

Conservation Affairs: Kelly Holland • *GEI Consultants*

Diversity Committee: Bayan Ahmed • *Dept. of Water Resources*

Historian/Membership Services: Don Yasuda • *USDA Forest Service*

Professional Development: Janine Payne

Student Affairs: Katie Smith • *CA Dept. Fish & Wildlife/UC Davis*

Western Wildlife Chair: Howard Clark • *Colibri Ecological Consulting*

Contract Staff

Program Director: Cynthia Perrine

Bookkeeper: Mike Chapel

Project Manager / Meeting Planner: Candace Renger

Webmaster: Eric Renger

Workshop Coordinator: Ivan Parr

CHAPTER REPRESENTATIVES

California Central Coast

Chapter Representative: Clint Sheuerman
Environmental Consultant

Hawai'i

Chapter Representative: Laura Luther
University of Hawai'i

Nevada

Chapter Representative: Mitchell Gritts
Nevada Dept. of Wildlife

North Coast

Chapter Representative: Elizabeth (Lizzi) Meisman
GHD Inc.

Sacramento-Shasta

Chapter Representative: Carlos Alvarado
Ascent Environmental

San Francisco Bay Area

Chapter Representative: Natasha Dvorak
Swaim Biological, Inc.

San Joaquin Valley

Chapter Representative: Randi McCormick
McCormick Biological

Southern California

Chapter Representative: Jeff Lincer
Retired



STUDENT CHAPTER REPRESENTATIVES

Humboldt State

Chapter Representative: Sarah Daniel

UC Davis

Chapter Representative: Bruce Markman

Cal Poly San Luis Obispo

Chapter Representative: Ryan Vosbigian

UC Santa Barbara

Chapter Representative: Dimitri Katsioularis

San Francisco State

Chapter Representative: Noelle Kasilly

University of Nevada, Reno

Chapter Representative: Krymsen Hernandez

THE WILDLIFE SOCIETY – WESTERN SECTION PAST PRESIDENTS

A. Starker Leopold	1954-1955
Walter Howard	1955-1956
Frank Kozlik	1956-1957
Ray Dasmann	1957-1958
Chuck Fisher	1958-1959
Hank Hjersman	1959-1960
Harold Bissell	1960-1961
William Graf	1961-1962
J. Harold Severaid	1962-1963
Don Kelley	1963-1964
Howard Leach	1964-1965
Joe Hendricks	1965-1966
Phil Arend	1966-1967
Bruce Browning	1967-1968
Stan Harris	1968-1969
John Cowan	1969-1970
Jim Yoakum	1970-1971
Mert Rosen	1971-1972
Marshall White	1972-1973
Richard Laursen	1973-1974
Dick Teague	1974-1975
Dick Hubbard	1975-1976
Doug Donaldson	1976-1977
Lew Nelson	1977-1978

Brian Hunter	1978-1979
Hal Salwasser	1979-1980
George Tsukamoto	1980-1981
Dean Swickard	1981-1982
Kent Smith	1982-1983
Robert Fields	1983-1984
Judy Tartaglia	1984-1985
Donald Armentrout	1985-1986
James Brownell	1986-1987
Steve Holl	1987-1988
John Kie	1988-1989
Robert Schmidt	1989-1990
Scott E. Frazer	1990-1991
Ann H. Huffman	1991-1992
Richard Williams	1992-1993
Richard Anderson	1993-1994
Marti Kie	1994-1995
Mike Chapel	1995-1996
Dale McCullough	1996-1997
Reginald H. Barrett	1997-1998
Dean Carrier	1998-1999
Linda Spiegel	1999-2000
Michael Morrison	2000-2001
Barry Garrison	2001-2002
Catherine Hibbard	2002-2003
Lowell Diller	2003-2004
John Harris	2004-2005
Cynthia Graves Perrine	2005-2006

Kevin W. Hunting	2006-2007	Douglas Bell	2013-2014
Julie Vance	2007-2008	Natasha Dvorak	2014-2015
Rhys Evans	2008-2009	Don Yasuda	2015-2016
Scott D. Osborn	2009-2010	Rachel Sprague	2016-2017
Armand G. Gonzales	2010-2011	Rocky Gutierrez	2017-2018
John McNerney	2011-2012	Jeffrey Davis	2018-2019
Linda Leeman	2012-2013	Matthew Bettelheim	2019-2020

A. Starker Leopold (1913-1983)

Starker Leopold was the first-born son of Aldo and Estella Leopold. He received a B.S. in 1936 from the University of Wisconsin-Madison and studied at the Yale Forestry School before transferring to U.C. Berkeley where he received a Ph.D. in 1944. He worked briefly for the Soil Conservation Service, Missouri Conservation Commission, and the Pan-American Union before returning to become Assistant Professor of Zoology and Conservation at the Museum of Vertebrate Zoology at U.C. Berkeley in 1946. He became a full professor in 1957. He retired from his position as Professor of Zoology and Forestry in 1978 and, unfortunately, died of a heart attack in 1983.

Starker, along with a handful of wildlife biologists, was responsible for the formation of the Western Section when he arranged for a meeting of biologists at the 1953 meeting of the California Section of the American Society of Range Management. At that time, there were 145 members of The Wildlife Society (TWS) in

California and on December 21, 1953, 38 members signed and sent TWS their intention to form the California Section of TWS, which was subsequently approved by TWS Council. Starker was elected as the first President of the Section with Walter (Howdy) Howard the Vice President.

In addition to serving as Section President, Starker served on TWS Council in 1955 and 1956 and as TWS President in 1958. He was also instrumental in establishing the Sagehen Creek Field Station in 1951. Starker received many awards for his accomplishments, which included over 100 scientific papers and 5 books. He received an award for Outstanding Contributions to Wildlife in 1974 and the prestigious TWS Aldo Leopold Memorial Award in 1965.



FINANCIAL SUMMARY

Treasury

Checking: \$141,039.88

Savings: \$159,755.48

Investments: \$190,520.29

Total Assets: **\$491,315.65**



2019 Operational Expenses

(\$65,000 as of November 2019)

General Admin & Communications: \$13,162

Board and Committee Activities and Strategic Plan Implementation: \$23,147

Contract Staffing: \$20,994

Donations, Awards, and Grants: \$6,558

Other: \$1,100



2019 Income

(\$116,123 as of November 2019)

Annual Meeting Revenue: \$56,950

Membership Revenue: \$28,000

Workshop Revenue: \$19,466

Other: \$11,707



MEMBERSHIP

Members in Good Standing

Regular: 670

Life-Full: 35

Honorary: 1

Student: 181

Life-Partial: 5

Supporting: 14

New Professional: 118

Contributing: 1

Retired: 54

TOTAL: 1,079

2019 TWS Western Section Special Memberships

Honorary (TWS): Gutierrez, Ralph

Contributing (3x regular dues): Bridgman, Roy

Supporting (2x regular dues): Baldwin, Laura • Blandford, Chris • Burkett, Esther • Burkholder, Laura • Chapel, Michael • Eyes, Stephanie • Fifield, Virginia • Hamilton, Bryan • Jack, Justin • Lee, David • Paymard, Marshall • Pearson, Sandy • Taylor, Chris • Wyatt, David

Life Members (* = partial installments): Alvarez, Jeff • Bloom, Peter • Botzler, Richard • Campbell, Kurt • Carpenter, Nicole • Chow, Lehong • Cockrell, Laura • Coleman, Ginger • Coleman, Randolph • Cummings, Christopher • Cypher, Brian • Davis, Jeff • Fesnock, Amy • Fields, Lisa • Germano, David • Gruenstein, Elizabeth • Juarez, Stephen • Keyser, M. Dale • Krueger, Patti • Loveall, Andrew • Mendelsohn, Mark • Murphy, Michael • *Nerhus, Barry • Perrine, Cynthia • Rocha, Don • Saslaw, Larry • Scruggs, Janae • *Seville, Susan • Simon, Kathy • *Sosa, Samuel • Sprague, Rachel • Swaim, Karen • Terry, Dana • Van Horn-Job, Christine • White, Marshall • Whitfield, Erin • *Wilcox, Jeffery • *Wingert, Carie • Yasuda, Donald • Young, Ryan



2019 ANNUAL AWARD RECIPIENTS

Raymond F. Dasmann Award

David J. Germano

David has been a tenured faculty member in the Biology Department at CSU-Bakersfield since 2000 and has successfully mentored a number of graduate students. Dave has been a key contributor to research on rare species and conservation efforts in the San Joaquin Valley and elsewhere for over 30 years and was one of the original organizers of the San Joaquin Valley Natural Communities Conference, now going on its 20th year. He has served as an instructor for a number of workshops (most organized by the San Joaquin Valley Chapter) on small mammals, blunt-nosed leopard lizards, and pond turtles. Dave stepped up after the untimely passing of Barry Garrison and served as the Associate Editor for the TWS-WS Transactions for 4 years. Dave then was instrumental in “reinventing” the Transactions and morphing it into Western Wildlife, which is now a thriving and slowly growing on-line journal.

Conservationist of the Year

Yosemite Conservancy

The Yosemite Conservancy started back in 1923, when the Yosemite Museum Association was established as the original nonprofit partner organization in the National Park Service, created to manage funds for the first park building constructed to serve as a museum. To date, the Yosemite Conservancy has funded \$119 million in grants for trail and habitat restoration, wildlife management, historic preservation and other high-priority efforts in Yosemite, resulting in more than 600 completed projects.

James D. Yoakum Award

Cynthia Perrine

Cynthia has demonstrated her commitment to TWS-WS since early in her career. While a student at UC Davis Cynthia was active in the Davis Student Chapter and volunteered at the annual TWS-WS conference each year. Cynthia has been a long-standing member of TWS-WS and has held numerous positions on the Board including Section Secretary (2001 – 2002), Professional Development Committee Chair (2002 – 2004), President-Elect (2004), President (2005), Past President (2006), Central Coast Chapter Representative to Section Board (2007 – 2009), Newsletter Editor (2008), Section Representative to TWS (2014 – 2019). In addition, she has been the TWS-WS Program Director (2009 – Present), a Planning Committee member for the 2001, 2009, 2011, and 2019 TWS Annual Conferences hosted by TWS-WS, and a Planning Committee member since 2005 for the TWS-WS Annual Meeting. She was instrumental in developing the first comprehensive TWS-WS Strategic Plan in 2014, which was adopted in January 2015, and she is currently helping develop a new strategic plan. She was influential in the creation of TWS-WS “Western Field Camp” Program. Students ranging from 1st year undergrads to graduate-level are brought together for 7-10 days each summer to train in wildlife techniques. Finally, she has remained a long-term advocate for the Western Section and a significant influence in Executive Board development, communication and effectiveness.

Rich Burg

Rich has been the TWS-WS Awards and Grants Chair since 2001. For nearly 20 years, he has developed annual announcements for grants and awards, maintained databases of distinguished Section members for possible award recognition, devoted countless hours to researching and drafting nominations for TWS-WS awards, evaluated and summarized all applications for TWS-WS awards and grants before sending them to

the WS Executive Board for consideration, selected and ordered all award plaques, prepared the slide presentation for the annual awards banquet, made many improvements to the Section's process for recognizing meritorious members, and provided valuable assistance and guidance to the Executive Committee in all matters related to awards, grants, and student and professional support.

Western Section Chapter of the Year

Nevada Chapter

Among the many accomplishments in 2018, the Nevada Chapter held Bootcamps for learning R (statistical programming platform), which was attended by 30 local wildlife students and professionals raising substantial funds for the Student Chapter. They also hosted a Migration and Movement Workshop, which helped improve knowledge, facilitate state funding for projects through the Department of Interior's Secretarial Order 3362, and successfully raised funds for the Chapter. The workshop also included information and training on the "Migration Mapper" R plugin to run Brownian bridge movement models on migration data. With logistical support from the Nevada Chapter, the Student Chapter assisted with registration at the 28th Biennial Western States and Provinces Pronghorn Workshop. They also held a Science Symposium, attended by 51 individuals, that included 21 presentations from a variety of professional backgrounds, including graduate and undergraduate students from UNR, biologists from UNR, state, and federal agencies, and an archeologist from USGS.

TWS Distinguished Service Award

Reginald H. Barrett

TWS Fellows Award Recipient

Kelley M. Stewart

Barrett A. Garrison "Outstanding Mentor Award"

*** Not Presented ***

Student Presentation Winners – Oral Presentations

1st Place: Leila S. Harris, ASSESSMENT OF THE STATUS OF THE TOWNSEND'S BIG-EARED BAT IN CALIFORNIA, University of California, Davis

1st Place: Connor M. Wood, BROAD-SCALE MONITORING FOR BROAD-SCALE CHALLENGES: BIOACOUSTICS AND THE CALIFORNIA SPOTTED OWL, University of Wisconsin-Madison

3rd Place: Trinity N. Smith, ELUCIDATING PATTERNS OF BAT SPECIES OCCUPANCY ACROSS A DISTURBED LANDSCAPE IN CALIFORNIA'S CENTRAL VALLEY, Humboldt State University

Student Presentation Winners – Poster Presentations

1st Place: Diana Munoz, FERAL HORSES DISRUPT GREATER SAGE GROUSE LEKKING ACTIVITY IN THE GREAT BASIN, US Geological Survey/UC Davis

2nd Place: Matthew Delgado, ORNAMENT MORPHOLOGY AND SOFT TISSUE AND SKELETAL CORRELATES IN ALEUTIAN CACKLING GEESE (BRANTA HUTCHINSII LEUCOPAREIA), Humboldt State University

3rd Place: Shelby P. Moshier, CLIMATE CHANGE VULNERABILITY IS PHYLOGENETICALLY CLUSTERED FOR MOST OF CALIFORNIA'S BIRDS, California State University, Fresno

COMMITTEE ACCOMPLISHMENTS

Conservation Affairs

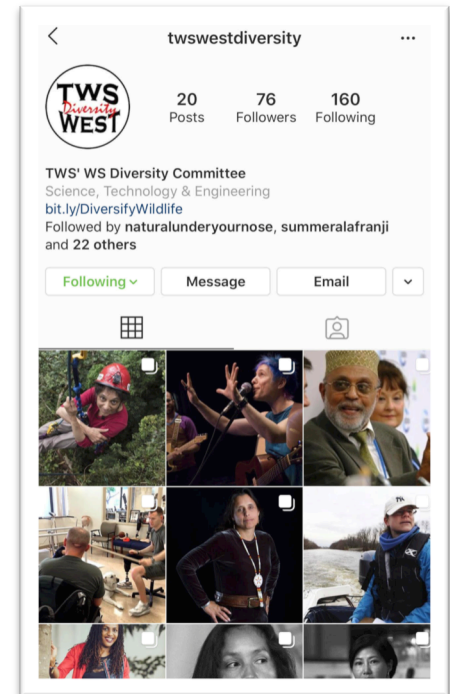
In 2019, the Conservation Affairs Committee (CAC) had full representation from all 8 geographic chapters in the Section. The Committee has worked to encourage elected officials to support continued funding of State and Tribal Wildlife Grants, and is supporting the efforts of TWS-National to solicit support from Congressional representatives to pass the Recovering America's Wildlife Act. The Committee also submitted a comment letter on the proposed changes to the definition of waters of the U.S. in the Clean Water Act. Lastly, the Committee has been working to develop many elements of the upcoming 2020 Annual Meeting, which will focus on the issues that CAC works on.

Professional Development

The PDC had an incredible year of collaboration in 2019. Our goal was to get more consistent representation from all chapters and increased participation in our monthly conference calls in general. We met and exceeded that goal, this being the first time in several years we've had 100% representation – each and every chapter called in and participated at least once. Several chapters also added additional committee members. Not only did our Workshop Coordinator collaborate with each chapter, but we also saw an increased level of chapter-to-chapter collaboration. Several chapters consulted each other for advice regarding creating an annual symposium. As a result, we are increasing our ability to provide a myriad of diverse professional development opportunities for our members, which is in alignment with our Strategic Plan.

Diversity

The Diversity Committee kicked-off an Instagram page to share the stories of scientists from all walks of life doing important and inspiring work. Follow us on IG: [@twswestdiversity](https://www.instagram.com/twswestdiversity) or FB: [@Diversity Committee - The Wildlife Society Western Section](https://www.facebook.com/DiversityCommittee-TheWildlifeSocietyWesternSection) to learn about these stories. Remember that you can always share your story with us using the hashtag [#diversifywildlife](https://www.instagram.com/hashtag/diversifywildlife).



Student Affairs

During 2019 the Student Affairs committee supported many student-centered activities at the Annual Meeting in Yosemite. These included professional development events, such as the elevator speech training, resume and interview workshops, and a career panel. We also provided students a number of outlets for networking with other students and professions such as the student-professional mixer, the t-shirt contest, and the student mixer at the banquet reception. Since the meeting, we have continued to work on our two main projects for the year; continuing to grow the mentor program and laying the groundwork for a youth outreach and education program. After the tragic loss of one of our core committee members, Randi Logsdon, we also worked with the Sacramento-Shasta Chapter to brainstorm ways to honor Randi's memory, while continuing her work of supporting underrepresented groups in our field.

Communication and Outreach

Working closely with Candace Renger (Project Manager/Meeting Planner), Janine Payne (Professional Development), and Ivan Parr (Workshop Coordinator), Suzanne Marczak regularly advertised Section news, new workshops, Annual Meeting updates, and individual Chapter events through the Section's Constant Contact digital newsletter and Facebook posts. This year marked a newsletter first – a feature highlighting one of our Section's wildlife professionals – a piece we hope to carry forward by featuring one new biologist from each of our Chapters throughout the calendar year.

Annual Meeting Arrangements

Our 2020 Annual Meeting will be held February 3-7, 2020 in Redding, California, at two adjacent hotels - the Red Lion Hotel and the Holiday Inn. Our Plenary theme for the 2020 Annual Meeting is *Navigating the Intersections of Science and Policy*. In 2021, our 68th Annual Meeting will be held in Riverside, California, at the Riverside Convention Center and the Mission Inn Hotel. We're hoping to meet in Reno, Nevada, for 2022, and again at the Tenaya Lodge in Fish Camp, California, for 2023. Contracts are currently in negotiations, and the Board will discuss further at future meetings.

Western Wildlife Journal

Western Wildlife - the journal of the Western Section of The Wildlife Society - continues to be a research outlet for Western Section members. Ten papers were published in the journal in 2019. Topics range from spadefoot toads and California red-legged frogs to San Joaquin antelope squirrels and western yellow bats. Journal staff strives to help seasoned researchers and graduate students alike share their discoveries in the field by assisting with peer-review, editorial contribution, and final publication. *Western Wildlife* accepts papers ranging in a variety of topics and taxa with the idea of providing a platform to unite researchers from a variety of backgrounds with the eventual goal of publishing a quality product that will benefit the continual professional development of our membership.



WEBSITE: <http://wwjournal.org>

AD HOC COMMITTEE ACCOMPLISHMENTS

At the close of the 2019 Board meeting at Tenaya Lodge in Yosemite – Fish Camp, CA, several topics were raised that warranted a more thorough examination and were formalized through a “Charge to Committee” by establishing specific Ad Hoc committees. These committees explored the following topics:

Business Meeting Attendance Ad Hoc Committee

During the 2019 Annual Meeting’s Business Meeting – a key moment during the year that provides a public opportunity for Section members to voice their opinions and concerns during an open forum in front of the Western Section Board and fellow Section members – several long-standing members expressed their disappointment at the continued poor attendance by fellow Section members. The Western Section Board took this issue to heart and established the Business Meeting Attendance Ad Hoc Committee. The Committee has (a) recommended that the Western Section better advertise and promote the benefits of attendance, (b) requested all Western Section and Chapter Board members to attend the Business Meeting, and (c) included the number of attendees as a performance criterion for Chapter of the Year Award.

Workshop Coordinator Support Ad Hoc Committee

The Workshop Coordinator Support Ad Hoc Committee was charged with resolving the challenges involved in coordinating the development and successful implementation of Section workshops. The Committee subsequently developed recommendations to assist the Workshop Coordinator in producing workshops, including marketing, registration incentives, and targeted feedback for future workshop development.

Scientific Integrity / Professional Ethics Ad Hoc Committee

The Scientific Integrity/Professional Ethics Ad Hoc Committee was charged with the review of both The Wildlife Society’s and the Western Section’s current policies to determine whether they adequately addressed Discrimination, Harassment, Sexual Harassment, and Bullying, using the American Geophysical Union’s 2017 Scientific Integrity and Professional Ethics policies as a guideline. The findings of the Ad Hoc Committee were several fold: to **(a)** strengthen and clarify the Western Section’s and The Wildlife Society’s policies, **(b)** recommend that The Wildlife Society review their policies for AWB/CWB members, **(c)** recommend that Western Section and The Wildlife Society implement a check-box during registration asking members to acknowledge standing ethics policies when registering for TWS or WS meetings and/or events, **(d)** recommend that The Wildlife Society join the Societies Consortium on Sexual Harassment in STEMM consortium to provide umbrella coverage for TWS and its constituent Sections and Chapters, and **(e)** develop an Ombudsman Program for the Western Section.

This fall, the Western Section Board took the first steps towards revising our policies, and prepared and submitted a Report to Council (TWS), recommending that they review their policies and AWB/CWB Certification standards. Members will also find a mandatory check box as part of the registration process, placing our policies on discrimination, harassment, sexual harassment, and bullying at the forefront to remind all members the code of conduct and professionalism expected of everyone during Section-sponsored events.

The Western Section is currently working with The Wildlife Society to determine the feasibility of joining the Societies Consortium on Sexual Harassment in STEMM consortium, and is in the beginning stages of developing an Ombudsman Program for the Section.

EVENTS

Workshops

VERNAL POOL BRANCHIOPODS •

January 28 - February 2, 2019

Davis, CA

This workshop combined both an ID class and 20 hours of wet season surveys, two of several requirements needed to begin the Vernal Pool Branchiopods 10(a)(1)(A) permit process for wet season surveys.

IDENTIFICATION COURSE - The classroom portion, led by Mary Belk, taught attendees an to become experts in identification. Mary taught students how to identify all 25 vernal pool branchiopods known from and likely to occur in California. Students spent two full days working on identifications under dissecting scopes and one day : the Scientific Collecting Permit (SCP) and the Memorandum of Understanding (MOU) on lecture, ensuring all students passed the test requirements of the U.S. Fish and Wildlife Service 10(a)(1)(A) permit. New to the class was a set of additional scientific illustrations created by artist Ben Witzke.

WET SEASON SURVEYS - The field portion of the workshop was designed to provide 20 hours of wet season work. Attendees visited three distinct locations within the Sacramento Valley, including areas rarely seen by the public. Participants had the opportunity to handle listed branchiopods species endemic to our vernal pool systems under supervision of some of the state's top fairy shrimp biologists.

- 24 Participants
- Endangered species encountered: California tiger salamander, vernal pool fairy shrimp, Conservancy fairy shrimp, vernal pool tadpole shrimp

R BOOTCAMP • February 4, 2019

Tenaya Lodge at Yosemite – Fish Camp, CA

The main goal of this workshop was to ensure participants have enough proficiency and confidence with data operations and programming in R to engage in productive, self-directed learning and problem-solving. The workshop was primarily intended for participants with little prior experience with R, but may be useful for others as a refresher – especially the second half of the workshop, which delved into more advanced topics. The first half focused on R syntax, data management (loading data, writing to file), data summaries and visualizations, R packages (loading, getting help), and basic statistical operations. The second half focused on more advanced programming operations (loops, functions, debugging etc.), vectorized operations (e.g., “apply()” operations), working with large data-sets.

The workshop consisted of a series of short modules, each of which covered a particular skill (e.g., reading in data, writing functions). Modules included a quick introduction, a demonstration in R, and some short challenges for participants to work through on their own (or with their neighbors!).

- 39 Participants



WILDLIFE BIOLOGIST CONSTRUCTION AWARENESS TRAINING (WildC.A.T.) • February 5, 2019

Tenaya Lodge at Yosemite – Fish Camp, CA

Wildlife biologists are often called on to provide technical expertise and implement protective measures on construction sites, but they rarely receive practical training in environmental permits or safety as they enter the workforce. This half-day workshop provided an introduction to construction monitoring for recent graduates, early career professionals, and regular construction monitors, and was taught by experienced wildlife biologists, construction personnel, and health and safety officers. Participants learned about the environmental permits that require construction monitoring, what to expect on construction job sites, situational awareness and health and safety basics, common environmental protection issues and Best Management Practices, effective communication techniques with construction crews, and useful tools of the trade. Upon completion of the workshop, attendees received a certificate of completion and helmet sticker that shows prospective employers and construction personnel in the field that they have attended WildC.A.T. training.



- 30 Participants

CALIFORNIA DEPARTMENT of FISH and WILDLIFE RESEARCH PERMITTING OVERVIEW • February 5, 2019

Tenaya Lodge at Yosemite – Fish Camp, CA

The goal of this workshop was to inform and clarify for prospective applicants and renewing permit holders how CDFW issues these two research take authorizations: the Scientific Collecting Permit (SCP) and the Memorandum of Understanding (MOU). This workshop helped increase proficiency for applicants and renewing permit holders for the application, renewing, and reporting stages for both SCPs and MOUs. For SCPs, this workshop covered regulatory and procedural changes effective October 1, 2018 (Sections 650 and 703, Title 14, California Code of Regulations), including the new online Scientific Collecting Permit Portal (SCPP). It also covered how to choose between General and Specific Use permit types, procedures for existing permit holders to amend SCPs issued under the old “legacy” process, as well as field notification and reporting procedures.

Specific topics covered: New regulations changes from old regulations; Wildlife SCPs, background, and do’s and don’ts; CESA and Fully Protected MOUs; and SCPP walk-through/ technical assistance

- 72 Participants

DRONE TECHNOLOGY & REGULATION: A WORKSHOP FOR BIOLOGISTS • April 9-12, 2019

Hastings Reserve, CA

Participants gained a basic understanding of drone technology and operations, how they are regulated by the FAA, USFWS and CDFW, and what to consider when planning a survey or project involving drones. Participants also had the unique opportunity to develop their flight skills using a drone simulator followed by actual flights under supervision of a certified drone pilot, and data processing with Pix4D on their personal laptop. An optional Mentored Research Project was available at the end of the workshop to allow participants to practice what they learned through a project designed by David Bird.

- 28 Participants

CALIFORNIA BOTANY FOR WILDLIFERS • May 1-4, 2019

Sedgwick UC Reserve, CA

Through lecture and field outings, this workshop aimed to equip the wildlife biologist with a more comprehensive understanding of their own field by exploring the basics of botany. Participants practiced habitat mapping, discussed the ins and outs of regulation, and explored resources available to biologists interested in plants. Attendees received a crash course in invasive species, terms to describe plants they don't know, and gained an appreciation about how plants can enrich wildlife surveys.

- 22 Participants
- Sponsored 2 \$150 Student Scholarships

BAT ACOUSTICS • June 20-23, 2019

Curry Ranch, Clayton, Contra Costa Co., CA

This four-day workshop introduced participants to noninvasive acoustic monitoring and species identification of bats. Beginning with the fundamentals of acoustics to interpret the biology and ecology of echolocation, attendees learned how bats use sound and how we can capture it for monitoring. Participants learned the theory and practice of recording and analyzing ultrasonic bat vocalizations to interpret bat activity and species presence, and the simple (but counterintuitive) ways to avoid poor and erroneous results. Attendees also connected these concepts to the regulatory setting in California to provide an overview of key considerations when applying acoustics to the environmental compliance realm.



Field outings provided hands-on experience in using recording equipment, when and where to deploy it, and how to recognize the acoustic signatures of local bat species.

- 25 Participants
- Sponsored 1 Hawai'i Chapter member discount

eDNA: A PRACTICAL WORKSHOP • July 29-31, 2019

Lompoc, CA (classroom) & Jack & Laura Dangermond Preserve, Santa Barbara Co., CA (field)

This three-day workshop trained attendees on the fundamentals and use of environmental DNA (eDNA), with a focused application for professional biologists. Instructed by leaders in the application and development of eDNA, along with experienced wildlife and fisheries biologists, attendees learned about the basis, function, application, and parameters for the use of this emerging technology both in the classroom and with hands-on practice at the Nature Conservancy's Jack & Laura Dangermond Preserve in Santa Barbara County.

As part of the workshop, attendees gained an understanding of what eDNA is and how to utilize eDNA sampling and interpret results. Attendees also had the unique opportunity to perform an eDNA-styled BioBlitz of the otherwise restricted Dangermond Preserve.

- 27 Participants

- Raffle proceeds were donated to the Cal Poly San Luis Obispo Student Chapter

BAT ECOLOGY & FIELD TECHNIQUES • [August 16-19, 2019](#)

Camp Roberts, CA

This workshop combined lecture, discussion, and field exercises to introduce participants to the ecology and conservation of California bats. It covered species accounts, physiology, anatomy, behavioral ecology, conservation issues, and mitigation strategies. Participants gained hands-on experience in field techniques, including mist-netting, assessing species presence or absence, and acoustic monitoring & analysis. Evening field excursions included capture of a half dozen bat species and, for those who had proof of current rabies vaccination, allowed for practice in extracting and handling. This workshop was the first to be held at Camp Roberts.

- 30 Participants
- Sponsored 1 Hawai'i Chapter member discount

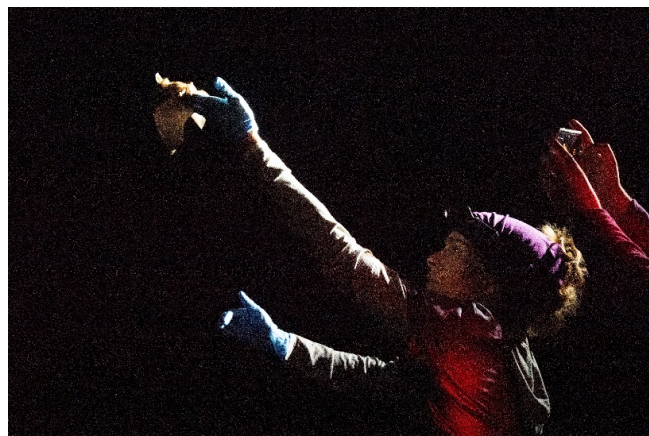
Symposia

FIRE ECOLOGY & FOREST HEALTH in the 21st CENTURY • [February 5, 2019](#)

Tenaya Lodge at Yosemite – Fish Camp, CA

This symposium brought together scientists that specialize in fire ecology, forest ecology, and wildlife ecology to discuss the rapid and dramatic ecological changes we are experiencing and will likely experience this century, focusing largely on the Sierra Nevada Bioregion. Topics covered included: the relevance of historical ecological context in a changing world; the effects of diversity (or a lack thereof) on ecological health, function, and communities; the future of fire in an era of mega-fires; and the implications of current rapid ecological change for wildlife conservation and ecosystem management. Panelists discussed their new and ongoing research, as well as how they are working closely with management and conservation practitioners to help tackle current ecological challenges.

- 73 Participants



Annual Meeting

66TH ANNUAL MEETING of the WESTERN SECTION of THE WILDLIFE SOCIETY • Feb 4-8, 2019

Tenaya Lodge at Yosemite – Fish Camp, CA

KEYNOTE ADDRESS:

Adapt or Die: Changes in Who We Serve and Who We Are

[Dr. Jennifer Malpass](#) – Bird Banding Lab Biologist, USGS Patuxent Wildlife Research Center

PLENARY SESSION THEME:

Death & Taxas: Extinction and Speciation During the Anthropocene

[Matthew Bettelheim](#) (Annual Meeting Chair), TWS-WS President-Elect



PLENARY SPEAKERS:

Of Creatures Huge, Fierce, and Strange: the Pleistocene Roots of our Anthropocene Extinctions in North America

[Dr. Alexis Mychajliw](#), Paleobiologist, La Brea Tar Pits of Los Angeles, California

California Condor Conservation 1930 – 2050

[Dr. Peter H. Bloom](#), Zoologist, V.P., Bloom Biological, Inc

Navigating the Complexities of Small Population Size, Hybridization, and Functional Role to Save the Sierra Nevada Red Fox

[Dr. Ben Sacks](#), Professor, University of California, Davis

Genetic Rescue: From Insights to De-Extinction

[Tom Maloney](#), Director of Conservation, Revive & Restore

EVENT HIGHLIGHTS:

Lecture

Birds and Their Habitats in the Sierra Nevada

[Ted Beedy](#) (author of "Birds of the Sierra Nevada")

Social

Wildlife T-Shirt Contest (Welcome Reception)

Student judges awarded prizes for: [Best Howling Wolf](#), [Best TWS-WS Shirt](#), [Funniest](#), [Best in Science/Nature](#)

ANNUAL MEETING CONDOR SPONSORS:



MEETING DETAILS:

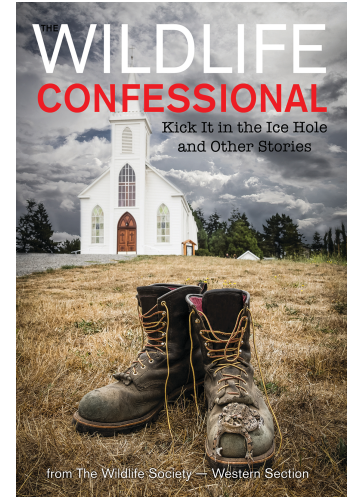
Visit <http://tws-west.org/tenayalodge2019/>

ACCOMPLISHMENTS

Member Support

THE WILDLIFE CONFESSIONAL (ANTHOLOGY): Beginning with the call for submissions in September 2014, the editors behind the Western Section's *The Wildlife Confessional – Kick It in the Ice Hole and Other Stories* have been hard at work curating (reviewing, selecting, and editing) the final fifteen stories for this anthology about wildlife biologists. In 2018, the print-side of the project launched through the crowd-source publisher Inkshares, and was successfully funded by backers through pre-orders at the end of February. In January 2020, the printed volume was distributed to backers and became available for purchase on Amazon.com (\$16.99).

WEBSITE: <https://www.amazon.com/Wildlife-Confessional-Kick-Other-Stories/dp/194784878X/>



AUGMENT CURRICULUM for WildC.A.T. WORKSHOP: At the recommendation of the Western Section Board the organizers behind the Section's WildC.A.T. workshop purchased Caterpillar's *Stand-Up/Speak-Up (SULU) conflict resolution training modules* at a promotional price. This purchase was inspired by prior feedback from attendees indicating they would like more interactive "modules" to augment the workshop's communication sessions.

CERTIFIED WILDLIFE PROFESSIONAL/ASSOCIATE WILDLIFE PROFESSIONAL LAPEL PIN: To recognize the Certified and Associate Wildlife Biologists that move invisibly amongst our ranks, the Western Section has been coordinating with TWS Council to fund the design and distribution of honorary lapel pins to all CWB and AWB members. In addition to commemorating CWB and AWB's accomplishments, we hope this will raise awareness in our ranks of the importance we place in achieving this certification, and encourage other members to recognize the importance of - and work towards - a certification of their own.

QUIZ BOWL PLAQUE: In February 2019, The Wildlife Society's Quiz Bowl committee was asked to consider developing a *perpetual "travelling" plaque* that could be passed from team to team over the next 25+ years, and the Western Section gladly stepped up to sponsor the plaque. Congratulations to the 2019 winner - Purdue University Wildlife.

CHAPTER of the YEAR NOMINATION FORM: In an effort to enhance chapter engagement and incentivize participation within each chapter and between chapters and the Western Section, the Western Section Board reviewed the nomination process and made recommendations to *update the Chapter of the Year application* process to help qualify and quantify chapters' accomplishments. The updated application provides better guidance on how chapters can both highlight their accomplishments and demonstrate their growth and progress.

COLUMBIA EMPLOYEE DISCOUNT: In one of the many ways we've tried to give back to our members this year, the Western Section hosted two *Columbia Sportswear Company Employee Store Discount* for members this year. Those that opted in had the opportunity to visit the private employee stores scattered throughout California and shop for gear at wholesale prices.

THIS YEAR, DONATE YOU!: Every year, the Western Section reaches out to supportive individuals and organizations in search of auction/raffle donors to support our Annual Meeting. In the past, generous donations to the Western Section raffle and auction have allowed us to help support the educational and professional development of the next generation of wildlife biologists and managers. For the 2019 Annual

Meeting, we expanded the scope of our auction to include member-donated experiences and items for our silent auction. This year the response was amazing, with donations ranging from Hawkwatching lessons with WS member Allen Fish, fly-fishing with Joe DiDonato, trapping San Joaquin kit fox with ESRP staff, and a behind-the-scenes tour of the African lion exhibit at the Oakland Zoo. It was such a success; we hope to do it again.

If you are an illustrator, a painter, a knitter, an author, an outdoorswoman, or simply a Western Section member with something unique to offer your fellow wildlifers, keep the Western Section in mind. Goods crafted by hand with love and experiences to share with fellow wildlifers not only can help support the Western Section, but also can help forge new friendships between members along the way.

GIVING BACK and MAKING a DIFFERENCE: This year, the Western Section researched environmentally responsible merchandise to distribute during the 2020 Annual Meeting. Attendees of the 2020 Annual Meeting in Redding, California, will receive a [The Wildlife Society - Western Section-branded reusable stainless steel telescopic straw](#) when they pick up their registration packets. This gift is another way the Western Section is giving back to our members this year.

CONTACT INFORMATION

The Wildlife Society (National)

Website: <http://wildlife.org/>

The Wildlife Society (Western Section)

Website: <http://www.tws-west.org/>

Facebook: <http://www.facebook.com/tws.western>

Twitter: <https://twitter.com/WesternTWS>

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California Giant Salamander (Front Cover) – by Zachary A. Cava

Bayan Ahmed (Chapter/Student Chapter Representatives) – by Korinna Domingo

Striped Skunk (Chapter/Student Chapter Representatives) – by Korinna Domingo

A. Starker Leopold (Western Section Past Presidents) – from Sagehen Collections
<https://sagehen.ucnrs.org/home/about-us/>

California Red-Legged Frog (Financial Summary) – by Zachary A. Cava

American Kestrel (2019 Operational Expenses) – by Joseph DiDonato

American Badger (2019 Income) – by Bridget Sousa

California Quail, Modoc County (Membership) – by Matthew Brinkman

Banana Slug (Committee Accomplishments) – by Zachary A. Cava

Vernal Pool Sampling (Events) – by Ivan Parr

Bat Acoustics (Events) – by Ivan Parr

Bat Field Techniques (Events) – by Ivan Parr

Coyote (Back Cover) – by David Harelson, Wildlife Management, Presidio Trust, San Francisco

