SAN JOAQUIN VALLEY CHAPTER
THE WILDLIFE SOCIETY

THE VALLEY FEVER

February 2021

SAN JOAQUIN VALLEY CHAPTER
50th ANNIVERSARY
THE WILDLIFE SOCIETY

Rainey Reedy's Candidate Statement

Rainey's passion for wildlife stems from a very young age, where her common hobbies were picking up lizards, frogs, and even snails to bring home as pets. She has taken that passion for wildlife and turned it into a career as a Biology Consultant with McCormick Biological, Inc. She earned her B.S. in Biology in 2018 from CSU, Bakersfield. She has participated in volunteering opportunities with the Endangered Species Recovery Program since 2011 and volunteered with the California Living Museum from 2013-2016. Rainey has been an active member of the San Joaquin Valley Chapter for the last few years and has assisted with the Natural Communities Conference annual photo competition for the past couple years. Rainey is running for president-elect because she believes it provides wonderful opportunities for wildlife enthusiasts and wants to assist the organization with growth during one of the most difficult times for outreach. Rainey believes that most people enjoy wildlife, but they simply don't know where to look for opportunities and, as president-elect, hopes to do more for the chapter to expand our diversity.

Blunt-Nosed Leopard Lizard (*Gambelia sila*), San Luis Obispo County, CA. Photo by Howard Clark.

Announcement

San Joaquin Valley Chapter TWS Natural Communities Conference

Thursday, March 25, 2021

Virtual Conference
9:00 a.m. – 5:00 p.m.

This one-day conference is an opportunity for biologists conducting research, management, regulation, and conservation activities for natural communities and biota in the San Joaquin Valley Chapter area to exchange information, ideas, results, and progress of their work. The conference is set in a casual and informal environment.

Presenters will be giving 15-minute talks and 5-minute Quick-Talks. In addition to the presentations, you might be interested in the other activities that have become part of the event:

Photo Contest: The Photo Contest is open to photos taken with trail cameras or through binoculars or scopes. Photos will be displayed during the conference and all attendees will have the opportunity to vote for their favorite shot. Photos may be cropped but no other edits can be made to the entries. Maximum of 2 entries per person. Prizes will be awarded to the top three photos. Please submit entries by Thursday, March 18th, 2021 via email to Rainey Reedy at rreedy@mcbioinc.com.

Registration Rates (see the Registration Form for details)

Member Rate	Presenter Rate	Nonmember Rate
Free	Free	$5 (includes membership for 2021)

For Presenters: Check the Call for Abstracts; contact Brian Cypher by March 11, 2021 at bcypher@esrp.org with questions or to submit an abstract for a presentation.

Links to the event will be sent to registered participants prior to the event.

Check for event updates on the Chapter's website: https://wildlife.org/san-joaquin/

The San Joaquin Valley Chapter is on Instagram

The San Joauqin Valley Chapter is on Instagram—our account name is @sanjoaquintws. Feel free to send photos of wildlife or fieldwork for posting to:
Howard Clark (*howard.clark.jr@gmail.com*) or simply tag the IG account in the app.

Western honey bees (*Apis mellifera*) on Matilija poppy (*Romneya coulteri*), northern San Diego Co. Photo by Howard Clark.

BOOK REVIEW

The Wildlife Techniques Manual, Eighth Edition

Review by Howard O. Clark, Jr., CWB®, Senior Technical Specialist, Colibri Ecological Consulting, LLC; *hclark@colibri-ecology.com*

Reprinted with permission from Amphibian & Reptile Conservation 14(3):70-73 (e255).

The 8th edition of *The Wildlife Techniques Manual* (Fig. 1) is a welcome sight in today's information hungry world. Since 1960, The Wildlife Society has produced several editions of techniques manuals that started off fairly modest, but now, in 2020, have grown into a monstrous, two-volume set (Fig. 2).

The chapters in the new manual are divided into two major categories: Research (Volume 1) and Management (Volume 2). The research volume is sub-divided into several sections, including Design and Analytical Techniques (7 chapters), Identification and Marking Techniques (4 chapters), Measuring Animal Abundance (7 chapters), Measuring Wildlife Habitat (4 chapters), and Research on Individual Animals (3 chapters). The management volume is divided into three sections: Management Perspectives (6 chapters), Managing Landscapes for Wildlife (12 chapters), and Managing Wildlife Populations (7 chapters).

The 7th edition, which I reviewed in 2012 (Clark 2012), was the first time that the manual was published as a two volume set. The 8th edition continues this trend, but adds several new chapters; the 7th edition only had 37 chapters and the new edition has now grown to 50 chapters. As I predicted in 2012, the 8th edition reflects new challenges and research frontiers as wildlife managers and biologists invent new ways to study wildlife questions.

One of the most exciting and innovative approaches is explored in chapter 17: *Use of Unmanned Aerial Vehicles in Wildlife Ecology* (Rosario et al. 2020). The use of unmanned "drones" has exploded on the wildlife scene over the past few years. Drones are useful in capturing data on research subjects difficult to access via foot or vehicle. But one major caveat in using these drones is the Federal Aviation Administration's (FAA) Unmanned Aerial Vehicle (UAV) licensing and flight regulations. Safety is paramount when using drones and it is imperative that when using drones, wildlife managers and researchers understand the latest laws, directives, and policies. With a high level of FAA regulation understanding, better conservation of biological resources will result as well as an enriched research deliverable. The chapter covers several other topics, including types of UAV platforms and considerations, data management and analysis, UAVs in wildlife ecological research, and UAV safety. I was pleased to see a chapter on drones added to the 8th edition and I am sure as drone technology improves a chapter on UAVs continue to appear in future editions.

The final chapter, Chapter 50, *Managing Wildlife in a Changing Climate* (Inkley and Stein 2020), really

The Wildlife Techniques Manual, 2 Volumes

Editor, N.J. Silvy. The Johns Hopkins University Press, Baltimore, Maryland, USA. 8th Edition, published 28 July 2020.

Trim Size: 8.5" × 11"

1400 pages

Illustrations: 260 halftones, 165 line drawings

ISBN: 9781421436692

Hardcover: USD $174.95

Fig. 1. Book cover and details. Photo by Howard Clark.

binds all the others together. Although climate change (formerly known as "global warming") has been on the scientific radar for decades (e.g., Chamberlin 1899) only now has a chapter in the manual been devoted to it. All of the research techniques and management philosophies discussed at length in *The Wildlife Techniques Manual* will be conducted under the auspices of global climate change. The trend of increased change in global temperature (Fig. 3) have a significant effect on the global landscape and the wildlife species that occupy it. Research conducted from now on will no doubt have climate change as a factor, or at least something running in the background driving evolution and environmental adaptation. Chapter 50 provides an excellent overview and summary of the effects of climate change on wildlife. As the authors state on page 443, "The scientific record conclusively demonstrates that impacts of climate change on wildlife are not just a concern for the distant future, but already are happening." Climate effects are physically visible, such as the 17 of the 18 hottest years in the 136-year record have all occurred since 2001. We are witnessing catastrophic wildfires, hurricanes, droughts, and other extreme (but increasingly frequent) weather events. As noted in recent news media, the droughts in the western USA have driven beetle-kills of trees in western coniferous forests, which exacerbate the wildfire season. The "cause and effect" and

Fig. 2. *The Wildlife Techniques Manual* (8th edition, 2 volumes) compared to the slender 1st edition published 60 years earlier (Mosby 1960), which has 17 chapters. Photo by Howard Clark.

interconnectedness of global climate change and landscape impacts are alarming.

In addition, Chapter 50 covers climate change basics, such as climate versus weather, climate models, scenarios of greenhouse gas concentrations, and best practices for the use of climate projections. An important section of the chapter covers abiotic and physical climate impacts, with discussions on elevated carbon dioxide levels, temperature changes, precipitation changes, intensified hurricanes and storms, snow cover changes, permafrost melting, declines in ice cover and glaciers, sea-level rise, ocean temperature increases, and ocean acidification. These sections paint a bleak picture, but subsequent sections provide approaches to mitigate the pending deleterious trends. The authors explore four overarching principles for effective climate adaptation:

1. Act with intentionality; link actions to climate impacts.
2. Manage for change, not just persistence.
3. Reconsider goals, not just strategies.
4. Integrate adaptation into existing work.

There are various things that we can do to respond to climate change, such as developments in wind energy and biofuel, changes in agricultural practices, shifting human population centers and infrastructure, and coastal armoring.

Chapter 50 is key in understanding global climate change and how we, as a species, can address and mitigate it. The authors state on page 468, "The future of our wildlife depends on wildlife professionals incorporating climate considerations into all aspects of their work."

Overall, *The Wildlife Techniques Manual* is a critically important tool in the continued management and conservation of wildlife and landscape habitats. I encourage biologists and wildlife managers to field test the recommendations and guidance provided by the many authors who contributed to these monumental volumes. By working together, and using sound science, we may be able to create a sustainable global community on every level, launching us into a future of hope.

Acknowledgments.—I thank C.J. Randel and N.J. Silvy for allowing me to be a voice and participate in this extraordinary work. I am also incredibly grateful for the Johns Hopkins University Press production team and their collaboration effort with The Wildlife Society.

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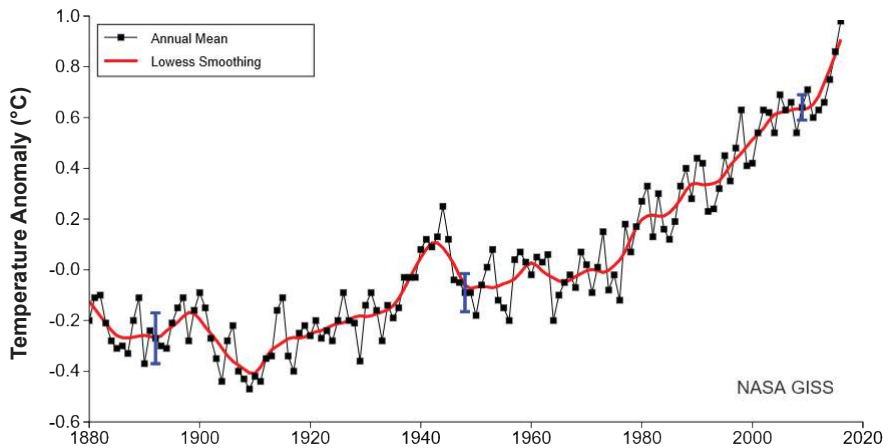

Fig. 3. Global temperature trends 1880-2017. Global mean estimates based on land and ocean data. https://data.giss.nasa.gov/gistemp/graphs/. Graphic in the Public Domain.

Chapter Executive Board and Committee Chairs

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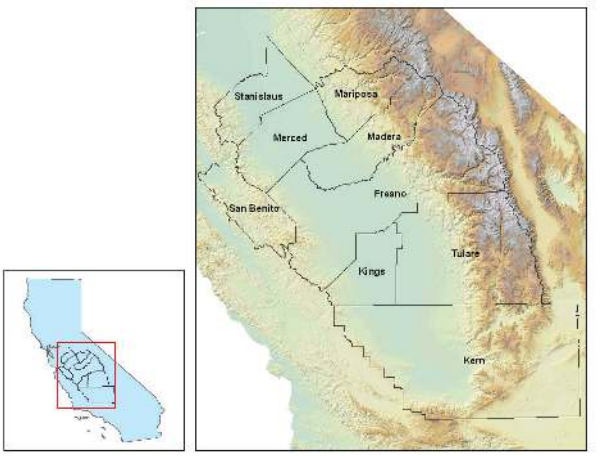
The San Joaquin Valley Chapter Area

The San Joaquin Valley Chapter covers a nine county area that includes areas of the San Joaquin Valley, Coastal Range, Sierra Nevada Range, and western Mojave Desert.



The Goals of the Society and the San Joaquin Valley Chapter

- Develop and maintain professional standards for wildlife research and management.
- Enhance knowledge and technical capabilities of wildlife managers.
- Advance professional stewardship of wildlife resources and their habitats.
- Advocate the use of sound biological information for wildlife policy decisions.
- Increase public awareness and appreciation of the wildlife profession.