

DESERT TORTOISE COUNCIL NEWSLETTER

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Conservation Organizations Gathered to Discuss Enhanced Wildlife Protections in the U.S.-Mexico Border States By Juan Carlos Bravo (Wildlands Network)

TUCSON, ARIZONA (March 22, 2019) — Last month, some 40 wildlife conservation leaders and specialists representing 22 American and Mexican non-governmental organizations were gathered during the 44th Annual Symposium of the Desert Tortoise Council in Tucson, Arizona to celebrate recent successes and accelerate protection of transboundary wildlife corridors, with a focus on supporting private lands conservation on the U.S.-Mexico border states.

The symposium resulted in the creation of an informal working group dubbed the **Border States Conservation Collaborative**, whose participants in-

clude major landowners, scientists, representatives from regional and national non-profit conservation organizations, consultants and concerned conservationists from both the United States and Mexico.

“We came together to think about how we can do more as a collective for the sake of all wildlife, from tortoises and thick-billed parrots to black bears, Mexican wolves and jaguars,” said Eric Goode, president and CEO of the Turtle Conservancy. “And we realized we need to reach out more to the public and inform people about these species, their landscapes and their needs, of



Inside the conference room at the 2019 Desert Tortoise Council Symposium, held at the Westward Hotel in Tucson, Arizona.

the threats they face and how we can address them.”

Participants focused on how best to build on existing programs and leverage interorganizational collaboration to en-

hance protection of key habitats, promote human and wildlife coexistence, raise public awareness, implement youth education and establish profes-

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Letter from the Editor

Included in the Summer Solstice 2019 issue of the Desert Tortoise Council Newsletter are articles highlighting collaboration among conservationists, threats to tortoise populations in Utah, and a recap of last year's Symposium. Also included are announcements regarding the 2020 Symposium, biographies of our recent grant awardees, and a list of relevant literature that has been published since Issue 43[1]. This issue also includes an announcement for the 2019 In-

troductory Course—the 28th of its kind that the Council has offered—and a recap of the recent HAT Training Course.

Finally, our Board of Directors Spotlight details the journeys of Larry LaPré and Mari Quillman, two dedicated members of the Board who have contributed their invaluable knowledge and skill to not only the Council, but to the recovery of desert tortoises at large for many years.

As always, follow us on social media to stay up to date on all things desert tortoise, including Council actions, courses offered, annual symposia, recovery efforts, and more!

Halle

Halle Kohn

newsletter@deserttortoise.org

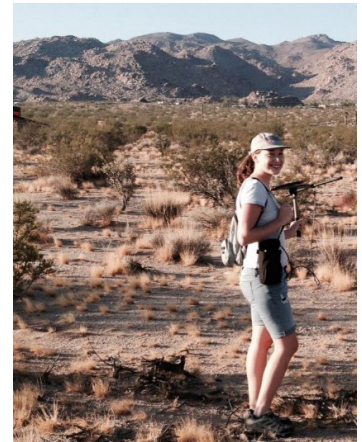


Photo by Paul Delaney

A Recap of the 44th Annual Desert Tortoise Symposium: Where Science Meets Winter Wonderland

By Halle Kohn

The 44th Annual Desert Tortoise Symposium kick-started with a field trip to Gila monster study sites north of Tucson led by Roger Repp, Dale DeNardo, Daniel Beck, Marty Feldner, John Slone, and others. That evening of the 20th, as folks strolled in after arriving from their far-flung places throughout the country, there was a rooftop mixer sponsored by Southern Nevada Environmental, Inc. (SNEI). Tantaliz-

ing conversations took place in the muted aura of soft lights and gentle wind. The symposium took place from February 21st through the 23rd at the Westward Look Wyndham Grand Resort and Spa in Tucson, Arizona; a place with a rustic appeal and no shortage of cacti to inadvertently walk into during the repeated back-and-forth strolls to and from the conference room. This possibility was particularly sali-

ent in the nighttime, when the moon was tucked under the gray winter clouds. What does an authentic desert rendezvous make, but an experience with a cactus spine (or two) in your shoes after all is said and done?

After the welcome address and other announcements were made on Thursday morning, the presentations began. This year's Conservation Award Recipients were Anders G.J. Rhodin and Peter Paul van Dijk. The Robert C. Stebbins Research Award was awarded to Kristina Drake. The day consisted of five thought-provoking sessions: feature speakers presented on nutrition and growth in desert tortoises, followed by health, disease, and new approaches, featuring a session comprising of research on genetics, which included the Best Student Paper Award winner Kirsten E. Dutcher who presented her paper titled

“Genes in space: What Mojave desert tortoise genetics can tell us about landscape connectivity in the Ivanpah Valley”; and a diverse array of topics including avian use of tortoise burrows, protected areas, and assessments of herpetofaunal composition.

Ephemeral snow fell cautiously over Tucson on the second day of the symposium. There was snow, and there was rain; snow, and then rain again. Attendees who neglected to bring a rain jacket to the dry Sonoran Desert location lamented. The morning began with reports on the multi-year translocation at a large-scale translocation site. The late morning session focused on *Gopherus morafkai*, the Sonoran Desert Tortoise, while session 9 looked at applications of models and new technology applied to tortoise conservation and management. Immedi-

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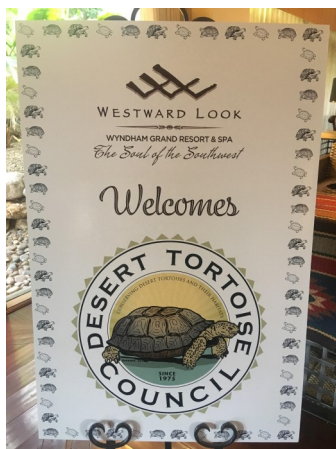


Photo of the walking trail at the Westward Look Wyndham Grand Resort and Spa

Conservation Organizations Gathered to Discuss Enhanced Wildlife Protections in the U.S.-Mexico Border States (continued)

sional development opportunities to foster a sustainable economy that incorporates land restoration as a source of prosperity.

“Maintaining healthy and connected ecosystems is difficult where development, transportation corridors and hardening international boundaries bisect long-established wildlife corridors,” said Wildlands Network Mexico Program Director Juan Carlos Bravo. “It will take many coordinated efforts based on science and goodwill to preserve the diversity of life and its ability to move and adapt throughout the border

states and across state and national borders.”

The **Border States Conservation Collaborative** concluded that despite the many threats posed to the region’s ecological integrity, creating a shared vision for protected binational wildlife corridors proudly stewarded by sustainable human communities is a powerful, hopeful and enduring vision for the future that is well worth a collective investment. The group’s next meeting is scheduled for August.

Present at this gathering were representatives of Borderlands Restoration, Cuenca Los Ojos,

Defenders of Wildlife, Desert Tortoise Council, Diamond A Ranch Animas Foundation, Fondo Mexicano para la Conservación de la Naturaleza, A.C., Global Wildlife Conservation, International Union for Conservation of Nature Tortoise and Freshwater Turtle Specialist Group, Malpais Borderlands Group, Nature and Culture International, Northern Jaguar Project, Rancho El Aribabi, Rancho El Uno, Sky Island Alliance, The Nature Conservancy, Turner Endangered Species Fund, Turtle Conservancy, Universidad Juárez del Estado de Durango,

University of Queretaro, and Wildlands Network.

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Wildlands Network envisions a world where nature is unbroken, and where humans co-exist in harmony with the land and its wild inhabitants. Our mission is to reconnect, restore, and revild North America so life in all its diversity can thrive.

The original publication is:

<https://wildlandsnetwork.org/blog/conservation-organizations-gathered-to-discuss-enhanced-wildlife-protections-in-the-u-s-mexico-border-states/>

Non-native Tortoises Found in Red Cliffs Desert Reserve are Likely Former Pets

By Mori Kessler, St. George News (<https://www.stgeorgeutah.com>)

ST. GEORGE— On rare occasions, that tortoise you encounter in the Red Cliffs Desert Reserve may not be what you think it is. Instead of a wild Mojave Desert tortoise, you may be looking at someone’s former pet.

Lacey McIntyre, the reserve’s outreach and administrative coordinator, and her husband found one tortoise on the Owens Loop trail, while a trail steward found the other on Gap trail.

Staff members were able to identify the tortoises as non-natives thanks to pictures of

taken of them.

“Sulcatas can be distinguished by the ‘furrows’ on the tortoises scales,” staff posted on the [reserve’s Facebook page](#). “The front legs have what look like spikes on their scales. Those spikes, or furrows, can be found on the back near the tail as well.”

People who see tortoises within the reserve that don’t look right are asked to contact the reserve so staff can investigate, McIntyre said.

Staff are asking who have pet



One of two Sulcata tortoises found in the Red Cliffs Desert Reserve. The popular pets were likely dumped by their owners. St. George, Utah, Oct. 16, 2018 | Photo courtesy of the Red Cliffs Desert Reserve, St. George News

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A Recap of the 44th Annual Desert Tortoise Symposium: Where Science Meets Winter Wonderland (continued)

ately before the mixer and poster session held in the Santa Catalina Ballroom was session 10, which broadened our focus and highlighted land and conservation for the three sister species of tortoises and the Bolson Tortoise.

Individuals and organizations who had demonstrated dedication to desert tortoise conservation were recognized at the banquet on February 22nd. 2019 Award Winners include Peter Paul van Dijk and Anders G.J. Rhodin (Conservation Award), Center for Biological Diversity and Ileene Anderson, Lisa Belenky, and Patrick Donnelly (Kristin H. Berry Annual Award), Kristina Drake, Team Leader (Robert C. Stebbins Research Award), and Tortoise Group (Pat von Helf Recognition

Award). The banquet address was titled *Bottom Up! Nature and Culture International's Model for Conserving Over 25 Million Acres and Counting*, and was presented by Nature and Culture International's own Charles Smith. The captivating raffle and auction followed.

Breakfast, as always, was reserved for the early birds on the final morning of the symposium. Session 11 shared new insights on translocation and head-starting of desert tortoises, and featured Student Travel Fund awardee Pearson McGovern, while the following sessions recognized the importance of legal actions, other desert fauna, and governmental and private approaches to recovery. Session 12 featured a presentation by the Kristin H. Berry Annual Award winner,



Auction items from the 2019 Symposium.

Ileene Anderson.

The 2019 Student Poster Award was awarded to Matheo Morales of Arizona State University for his poster, "Mining Genomes to Reveal the Evolution of Gene Families in Reptiles Relevant to Tortoise Health."

See [our website](#) for more information including photo contest winners, [abstracts](#), [awardees](#), and other details regarding the 43rd Desert Tortoise Symposium. For our 2020 Symposium announcement, see page 6.



Photo by Ken MacDonald

The Council wants to emphasize its sincere gratitude for those individuals and organizations that made the 44th Annual Symposium possible through their generous [sponsorships](#), including:

Special Event Sponsor

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Contributors

Monster In My Garden

Non-native Tortoises Found in Red Cliffs Desert Reserve are Likely Former Pets (continued)



A Sulcata tortoise found by staff of the Red Cliffs Desert Reserve. The popular pets were likely dumped by their owners. St. George, Utah, Oct. 16, 2018 | Photo courtesy of the Red Cliffs Desert Reserve, St. George News



A Mojave desert tortoise. St. George, Utah, March 28, 2018 | File photo by Mori Kessler, St. George News

Sulcatas not to dump them in the reserve.

“If you put one of those tortoises out there, there’s no way it’s going to survive,” McIntyre said.

Sulcata tortoises make popular pets due to their mild temperament, but they aren’t built for life in the desert and do not have a great survival outlook if released to the wild.

Unlike the Mojave Desert tortoise, the Sulcata tortoise doesn’t hibernate in winter and will likely freeze to death as cold temperatures roll in.

“The Sulcatas are better built for an African savanna than the Mojave Desert,” McIntyre said.

The Sulcatas can pose the threat of disease to the Mojave Desert tortoise.

“We don’t want our native tortoises hurt because of this,”

McIntyre said.

The two Sulcatas reported to the desert reserve office, they were soon found and relocated.

The Sulcata that McIntyre found has since been named “Barnabus Tortoise,” according to a Facebook post.

For those who may want to get rid of their pet Sulcatas, McIntyre encourages them to drop the tortoise off at the Red Cliffs Desert Reserve Office in St. George, or let others in the community know you’re giving the tortoise away. There’s bound to be someone in the community who be willing take the tortoise, McIntyre said.

While dumping pets in the desert reserve can be an issue, McIntyre said its far more common for people to poach Mojave Desert tortoises out of the reserve, which is illegal. Some people don’t even realize

they’re breaking the law by attempting to make a pet out of desert tortoise, McIntyre said.

People who have taken tortoises out of the reserve are asked to return them to the desert reserve office, no questions asked, McIntyre said. The desert reserve staff would like to be able to test the returned tortoises for any possible signs of disease before reintroduction into the reserve’s tortoise native population.

If you see a strange tortoise in the reserve, have a Sulcata tortoise you want to drop off or need to return a Mojave Desert tortoise, contact the Red Cliffs Desert Reserve at [435-634-5759](tel:435-634-5759). The office is located at 10 N. 100 East, St. George.

Those who come across a tortoise in the reserve are also asked to take a photo of it and

email it to [in-fo@redcliffsdesertreserve.com](mailto:info@redcliffsdesertreserve.com) or the reserve’s biologist Mike Schijf at mike.schijf@washco.utah.gov.

This article was reprinted courtesy of St. George News. The author can be reached by email at mkessler@stgnews.com and can be found on Twitter: [@MoriKessler](https://twitter.com/MoriKessler)

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The original publication is:

<https://www.stgeorgeutah.com/news/archive/2018/10/22/mgk-non-native-tortoises-found-in-red-cliffs-desert-reserve-are-likely-former-pets/>

Winners of the 2019 Morafka Award and the 2019 Lockheed Martin Diversity Grant:

Francesco Origgi, Corey Mitchell, and Anuja Mital

The Desert Tortoise Council is pleased to announce that we have two Morafka Award winners this year, Francesco Origgi and Corey Mitchell, and a Lockheed Martin Diversity Grant winner, Anuja Mital. We have included their stories below.

Francesco Origgi

Being awarded the Morafka award has two fundamental meanings for me, besides the honor of receiving such an award.

The first is the name of the award itself, the “Dave Morafka” award. I was lucky enough to meet Dave back in the late 90’s, when I was working on my PhD with Elliott Jacobson at the University of Florida. Immediately, he came across as a wonderful human being and as an exceptional scientist. I could have listened to him for hours. A true source of interesting things only. No room at all for mediocrity. Just a wonderful person. It was after talking to him and to my former mentor Elliott Jacobson that I become interested in Desert

tortoises. Back in those days, I was working on a herpesvirus affecting Mediterranean tortoises and there had been reports describing the infection of Desert tortoises as well with a herpesvirus. Talking to Dave and Elliott, we came up with the idea of investigating the presence of this virus in Desert tortoises and exactly during my last few days as PhD student we got the very first evidences that a herpesvirus was actually present in free-ranging desert tortoises.

After almost 20 years we are now in a position to close up this circle that we started then and this is the second fundamental great thing about this award. The money that I received with this award will be

invested in sequencing the genome of the herpesvirus that we found in desert tortoises. During these past 20 years, we learned a lot about tortoise herpesviruses and now we can capitalize on this information to understand the meaning of the desert tortoise herpesvirus (*Testudinid herpesvirus 2*) in the desert tortoise disease ecology. This money will be critical for this.

The amazing coincidence of winning this award is that the same person, Dave Morafka, initially as a scientist and now as an inspiration, has been the two ends of this research circle that we are going to tie up with the results that we will obtain with this investigation.

I’d like to take the opportunity to thank also Kristin Berry,



Francesco Origgi, winner of the 2019 David Morafka Memorial Research Award

Josephine Brown and Bruce Rideout, and the entire Desert Tortoise Council Award Committee who helped to make this happen.

Corey Mitchell

I received a Bachelor of Science degree from the University of Wisconsin, Madison, with majors in Zoology and Biological Aspects of Conservation in 2006. Shortly after graduation, I began my first field job and spent a year studying social learning in white-faced capuchin monkeys in Costa Rica. It quickly became clear that field biology was my passion but I

was unsure about where and what to study. I continued working with primates and went on to study blue monkeys in Kenya, and eventually, chimpanzees in Uganda. A break between primate jobs in 2008 lead me to the Mojave Desert, and what I thought would be a temporary job ended up being exactly what I was looking for. I fell in love with the desert.

Coming from the tropics where life is so diverse and robust, I assumed the desert would be empty and lifeless. I was pleasantly surprised, and after my first season I was left with a desire to learn more about the intricacies of this incredible ecosystem. I have since spent the last decade working in the Mojave with the Mojave Desert Tortoise as well as other desert flora and fauna.



Corey Mitchell, winner of the 2019 David Morafka Memorial Research Award

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Winners of the 2019 Morafka Award and the 2019 Lockheed Martin Diversity Grant (Continued)

This past fall I joined the Department of Geography at the University of Nevada, Reno, as a graduate student. I continue to work for UNR with desert tortoises as part of the Conservation Corridors for Desert Tortoises Project. For this project, we are monitoring tortoise movement and study-

ing population parameters at 10 plots in the Ivanpah Valley. Grant funds will be used to purchase and deploy additional GPS loggers to increase sample sizes as well as to fund multiple trips to the field sites. The goal of this research is to develop a spatially based model for estimating desert tortoise

population parameters by integrating fine-scale movement data with survey data. It has the potential to enhance the efficacy of long-term monitoring of population trends used to inform recovery efforts. It is an honor to receive an award in the name of David J. Morafka and to join the class

of researchers who have also been presented this award. Thank you to the Desert Tortoise Council and Sylvia Morafka. I look forward to sharing my research at an upcoming symposium.

Anuja Mital

During my Bachelors in Botany and Zoology from St. Xavier's College, Mumbai, I caught my first wild turtle in the rain forests of Agumbe in Karnataka while doing a project on frogs. This further nurtured my love for herpetofauna and I soon realised that freshwater turtle research in India was sorely neglected. Despite having a rich chelonian diversity, little ecological information had been put out in the last two decades. Through my Masters in Wildlife Biology from AVC University, I focused on studying the community ecology of freshwater turtles in tributaries of the Ganga River for my thesis. Soon after, I joined the Wildlife Institute of India on a government pro-

ject on the biodiversity conservation of the entire Ganga River, where I documented the freshwater turtle diversity across its 2500 km stretch. My research goals are now to understand turtle diversity patterns across the entire Ganges Brahmaputra basin hotspot, but to start I needed to document baseline information on all species first.



Anuja Mital, winner of the 2019 Lockheed Martin Diversity Grant

The Black Softshell is the only turtle declared as “Extinct in the Wild” by IUCN, and the Lockheed Martin Diversity grant for focused research efforts on such imperilled species is vital. I am grateful that the Desert Tortoise Council has provided me with an opportunity to conduct dedicated ecological research on this species which has recently been rediscovered in the wild. This project will assess the current status of wild populations and map their distribution in the Brahmaputra basin in protected areas of Nameri and Orang National Parks of Assam. I plan on developing a robust morphological key to easily identify the Black Softshell which is often misidentified, and train field staff of Assam Forest Departments to ensure long-term conservation

efforts.

On the side, I also run the [Freshwater Turtles and Tortoises of India \(FTTI\)](#) group on the [India Biodiversity Portal](#) website; a citizen science initiative to aggregate biodiversity information across India. Through these initiatives supported by the Desert Tortoise Council, we now have over 225 observations of turtles and tortoises, and dedicated species information pages on all 28 species in India. I hope to continue working towards generating educational outreach material and helping the general public get excited and aware about the turtles and tortoises of India.

How to Apply

The Desert Tortoise Council is currently accepting applications for the 2019 David J. Morafka Memorial Research Award, the 2019 Lockheed Martin Diversity Grant, and

the 2019 Glenn R. Stewart Student Travel Fund. Each grant and award has different requirements for submittal and qualification. The Student Travel Fund applications are

due in mid-November while the Morafka and Lockheed grant applications are due in early December. Please visit the [Desert Tortoise Council website](#) for full information

about the award, final due dates as they approach, and application requirements. We look forward to hearing about your research!

Course & Workshop Announcements

2019 Health Assessment Procedures for Translocations of the Mojave Desert Tortoise (HAT) Training Course: Recap

By *Cristina Jones, DTC Advanced Workshop Coordinator*

The Health Assessment Procedures for Translocations of the Mojave Desert Tortoise (HAT) training courses began in 2011 as a collaboration of FWS, San Diego Zoo Global, Arizona Exotic Animal Hospital, Nevada Department of Wildlife, and USFWS. There have been 12 HAT courses, with a total of 134 participants. Of these, 92 (69%) are now certified by FWS to conduct health assessments. The Desert Tortoise Council, Arizona Game and Fish Department (AGFD), and Clark County (NV) got involved in 2015, and have assisted in facilitating 4 courses for 62 participants, as well as one supervised practice session for 10 students from previous courses. This spring the course was held at the AGFD in Phoenix, where over 80 captive desert tortoises were available through their Tortoise Adoption Program. Twenty participants representing State, Federal, County, and consulting biol-

ogists, enrolled in the course. Two students emerged fully certified, and the rest need varying levels of supervised practice in one or more categories that were evaluated. Because this is an advanced training that requires biologists to have handled, weighed, and measured a number of desert tortoises – and introduces biologists to rigorous standards of biosecurity, in addition to tissue sample collection and rehydration techniques – it is common for students to need additional supervised practice following the course.

For more information, or if you are interested in attending a future HAT Training Course or any of the Council's other advanced workshops, please see the [Desert Tortoise Council website](#). Supervised practice, supplemental to the HAT Training Course, is likely to take place this fall.



Cristina Jones draws blood from a tortoise during a practical exam



Jay Johnson, HAT Training Course Instructor



David Carr measures a tortoise during a practical exam



Peri Wolff, HAT Training Course Instructor

Recent Publications

- Buchholz, Richard, John D. Banusiewicz, Stephanie Burgess, Sarah Crocker-Buta, Lauren Eveland, and Lauren Fuller. 2019. "Behavioural Research Priorities for the Study of Animal Response to Climate Change." *Animal Behaviour* 150 (April). Elsevier BV: 127–37. doi:10.1016/j.anbehav.2019.02.005.
- Coppennoll-Houston, Dana, and Christopher Potter. 2018. "Field Measurements and Satellite Remote Sensing of Daily Soil Surface Temperature Variations in the Lower Colorado Desert of California." *Climate* 6 (4). MDPI AG: 94. doi:10.3390/cli6040094.
- Daly, Jacob A, Kurt A Buhlmann, Brian D Todd, Clinton T Moore, J. Mark Peaden, and Tracey D Tuberville. 2018. "Comparing Growth and Body Condition of Indoor-Reared, Outdoor-Reared, and Direct-Released Juvenile Mojave Desert Tortoises." *Herpetological Conservation and Biology* 13 (3): 622–33.
- Dickson, Brett G., Rick D. Scherer, Amanda M. Kissel, Bryan P. Wallace, Kathryn M. Langin, Miranda E. Gray, Amanda F. Scheib, and Bruce Weise. 2019. "Multiyear Monitoring of Survival Following Mitigation-driven Translocation of a Long-lived Threatened Reptile." *Conservation Biology*, April. Wiley. doi:10.1111/cobi.13301
- Drake, K. Kristina, Christina M. Aiello, Lizabeth Bowen, Rebecca L. Lewison, Todd C. Esque, Kenneth E. Nussear, Shannon C. Waters, and Peter J. Hudson. 2019. "Complex Immune Responses and Molecular Reactions to Pathogens and Disease in a Desert Reptile (*Gopherus agassizii*)." *Ecology and Evolution* 9 (5). Wiley: 2516–34. doi:10.1002/ece3.4897
- Esker, Donald A., Steve L. Forman, and Dava K. Butler. 2019. "Reconstructing the Mass and Thermal Ecology of North American Pleistocene Tortoises." *Paleobiology* 45 (2). Cambridge University Press (CUP): 363–77. doi:10.1017/pab.2019.6.
- Evans, Michael J, Adam J Eichenwald, and Jacob W Malcom. 2019. "30 Years of Satellite Data Show Imperiled Species Are Most Vulnerable to Habitat Loss on Private Lands." Cold Spring Harbor Laboratory. doi:10.1101/556241
- Grubert, Emily. 2018. "Relational Values in Environmental Assessment: The Social Context of Environmental Impact." *Current Opinion in Environmental Sustainability* 35 (December). Elsevier BV: 100–107. doi:10.1016/j.cosust.2018.10.020.
- Lee, LingSze, Eugenia E. Montiel, Beatriz M. Navarro-Domínguez, and Nicole Valenzuela. 2019. "Chromosomal Rearrangements during Turtle Evolution Altered the Synteny of Genes Involved in Vertebrate Sex Determination." *Cytogenetic and Genome Research* 157 (1–2). S. Karger AG: 77–88. doi:10.1159/000497302
- Lovich, Jeffrey E., and J. Whitfield Gibbons. "Where Has Turtle Ecology Been, and Where Is It Going?" *Herpetologica* 75, no. 1 (March 2019): 4-20. doi:10.1655/0018-0831-075.1.4
- Lovich, Jeffrey E., Mickey Agha, Joshua R. Ennen, Terence R. Arundel, and Meaghan Austin. 2018. "Agassiz's Desert Tortoise (*Gopherus agassizii*) Activity Areas Are Little Changed after Wind Turbine Induced Fires in California." *International Journal of Wildland Fire* 27 (12). CSIRO Publishing: 851. doi:10.1071/wf18147
- Falcón, Wilfredo. 2018. "Seed Dispersal by Chelonians: From Individuals to Communities." University of Zurich. doi:10.5167/uzh-157486.
- Parker, Sophie S., Brian S. Cohen, and James Moore. 2018. "Impact of Solar and Wind Development on Conservation Values in the Mojave Desert." Edited by Vanesa Magar. *PLOS ONE* 13 (12). Public Library of Science (PLoS): e0207678. doi:10.1371/journal.pone.0207678.
- Petersen, Christopher E, Robert E Lovich, and Sarah Stallings. 2018. "Amphibians and Reptiles of United States Department of Defense Installations." *Herpetological Conservation and Biology* 13 (3): 652–61
- Staerk, Johanna, A. Rita da Silva, Lionel Jouvét, Peter Paul van Dijk, Beate Pfau, Ioanna Alexiadou, and Dalia A Conde. 2018. "Manual for the Differentiation of Captive-Produced and Wild-Caught Turtles and Tortoises (Testudines)." *Species360 Conservation Science Alliance*.

Course & Workshop Announcements (Continued)

2019 Introduction to Desert Tortoises and Field Techniques

By Maggie Fusari, DTC Introductory Workshop Coordinator

The Desert Tortoise Council is offering the course Introduction to Desert Tortoises and Field Techniques.

Dates: Saturday-Sunday November 2-3, 2019

Location: Pinnacles Room at the Kerr McGee Center, 100 W California Ave., Ridgecrest, CA

NOTE: Lower fees for early registration!

Introduction to Desert Tortoises and Field Techniques is a two-day beginners course including information on ecology, habitat preferences, life history, health, physiology, and threats; applicable state and federal laws and required permits, and field sessions on surveys and identification of tortoises and tortoise sign. This two-day course is a comprehensive introduction to Agassiz's or the Mojave Desert Tortoise (*Gopherus agassizii*) designed for wildlife biologists, zoologists, natural resource specialists, wildlife managers, land managers, recreation specialists, persons dealing with the public, teachers, and the general public.

This course is recommended for entry-level field biologists looking to prepare themselves for the job of locating tortoises and sign in the field, and for seeking authorizations to do tortoise fieldwork. An understanding of basic vertebrate biology and ecology is helpful.

The course includes:

- Hands-on exercises in monitoring and surveying techniques for desert tortoises
- Authorized demonstrations of egg handling and burrow construction
- Presentations about the desert tortoise and threats to its survival

To receive a letter affirming completion of this course you must attend the entire course including the field portion, turn in a completed field survey form, and complete the online test that will be available in the week following the course and due in mid December.

Authorization Facts

Desert Tortoise Council's Introduction to Desert Tortoises and Field Techniques courses

are recognized by the U.S. Fish and Wildlife Service, **BUT a certificate of attendance does not guarantee any USFWS authorization or permit.** However, completion of the course should help with the authorization/permitting processes.

Details

Watch the DTC website for details and links to registration which will begin by July 8.

Registration covers the course plus two breakfasts and one lunch. Other meals, transportation and lodging are your own cost.

Early Registration will be \$295 (\$195 for a currently registered college student) up to Saturday September 21st.

Thereafter, Regular Registration will be \$345 (\$245 for a

currently registered college student).

You will be charged regular registration unless you pay in full by the early registration date.

Special accommodation will be made for agencies wishing to pay for unspecified attendees and for government agencies with budget restrictions.

After you complete the course you will receive a complimentary one-year membership in the Desert Tortoise Council (unless you elect not to accept it).

There is a special opportunity for teachers in the general Ridgecrest area to audit the course for \$25 (no testing or certificate). To apply in July email to: intro-course@deserttortoise.org and describe your situation to request a link to the special registration option.

Speakers will include Kristin Berry, Peter Woodman, Becky Jones, Alice Karl, and Ed Larue of the DTC, Carolyn Woods (BLM), and Ray Bransfield (USFWS).

Updated information will be available on the [DTC website](http://DTC.website) by late June. For questions email: intro-course@deserttortoise.org



Pete Woodman, DTC Board Member and Introductory Course Instructor, sits in the middle of a group of people at the workshop.

Board of Directors Spotlight

Larry LaPré

Larry LaPré is retired from the Bureau of Land Management, where he served for 18 years as the California Desert District wildlife biologist. Prior to the federal job, Larry owned a biological consulting firm working in California and Arizona. Born and raised in southern California, he received his PhD in biology from the University of California, Riverside campus. His thesis was on ecophysiology of Mojave yucca and research was conducted at the Boyd Deep Canyon Desert Research Center in Palm Desert. After graduation and a year of post-doc research with spider mite pests of strawberries, Larry returned to his first love: birds. He is cur-

rently doing field research on the raven predation problem with hatchling and juvenile tortoises.

The solar energy building boom in California and Nevada caused Larry to focus on desert tortoises as part of his job with BLM. He directed and participated in presence/absence and clearance surveys, authored biological assessments and provided input into biological opinions, and worked with the companies to provide mitigation and land acquisition compensation measures. During the construction phases, Larry monitored progress of the desert tortoise rescues and made hundreds of friends with tortoise biologists. He supervised for the agen-



cy translocation, tracking of transmitterd tortoises and health assessments. One result of his work at BLM was becoming familiar with the Desert Tortoise Council. Larry is able to provide the agency perspec-

tive at the Council's Introductory Course and at its Annual Symposiums. A Board member since August 2016, Larry serves on the Awards Committee and assists in reviewing grant applications.

Mari Quillman

Mari Quillman is a Principal Biological Resources Program Manager with ECORP Consulting, Inc. in Santa Ana, California and Santa Fe, New Mexico where she manages large, multidisciplinary projects related to flood control, mining, and habitat restoration. In 1989, she started as a wildlife biologist conducting wildlife surveys and focused surveys for listed

species of birds. Her current role at ECORP focuses on developing mitigation strategies, negotiating endangered species permits, and providing litigation support.

Mari was raised in Tustin, California, where she was an avid softball player and dog lover. She taught puppy kindergarten, dog obedience, and therapy dog classes for the cities of Tustin and Lake Forest for 39 years. She fell in love with desert tortoises as a kid because her family had several as pets. While going to college and working at a veterinary office, Mari adopted many sick tortoises turned in by owners who didn't want to take the time or spend the money to treat them.



Mari's love for the desert started in college during mammalogy and herpetology field trips conducted by her favorite professor, Dr. Glenn Stewart. Dr. Stewart's influence put Mari on the course to becoming a wildlife biologist. In 1979, at the encouragement of Dr. Stewart, Mari attended her first Desert Tortoise Council Symposium and she made desert tortoises the subject of her senior seminar.

Mari received her Bachelor of Science in Zoology from California State Polytechnic University, Pomona and her Master of Science in Environmental Studies from California State University, Fullerton. Mari's Master's thesis was titled "The Ef-

fects of Tamarisk Removal on Avian Species Richness and Abundance at Camp Cady in the Mojave Desert."

Mari has been the Membership Coordinator since joining the Board of the Desert Tortoise Council in 2013. Since 2014, she has also been responsible for organizing the raffles and auctions at the annual symposia. Mari is dedicated to the conservation of tortoises and feels that by serving on the Board, she can help to make a difference for the desert tortoise.

Back Page Announcements

New Membership Levels: Organization/ Corporation and Senior

The Desert Tortoise Council is now offering a new membership level, senior (65 and older) membership, and has implemented additional benefits for organizations with

an organizational/corporate membership. The Council's hope in offering these new membership levels is to encourage our diverse membership to select an option that

best suits their unique needs.

You can find out more about membership rates and benefits by visiting [the membership page of our website](#).

If you have suggestions or questions about Desert Tortoise Council membership, our Membership Coordinator can be reached at membership@deserttortoise.org.

2020 Annual Symposium Announced

Please plan to join us and put the date on your calendar for early 2020! The Desert Tortoise Council recently announced plans for the 45th Annual Meeting and Symposium to be held at the Excalibur Hotel & Casino in Las Vegas,

Nevada. It will take place from Thursday, February 20th through Sunday, February 23rd. Keep an eye out for the call for papers which can be found on the [Desert Tortoise Council website](#) closer to the event. We expect a better-than-

ever program of interest to our membership!

More information about the Annual Symposium, including registration and hotel information, may be found on the [Desert Tortoise Council website](#) later this year.



Photo taken by Ken MacDonald at the 2019 Symposium fieldtrip.

Follow the Desert Tortoise Council:



Council Mission

The Desert Tortoise Council was established in 1975 to promote conservation of the desert tortoise in the deserts of the southwestern United States and Mexico. The Council is a private, non-profit organization comprised of hundreds of professionals and laypersons who share a common concern for desert tortoises in the wild and a commitment to advancing the public's understanding of the species. For the purposes of the Council, desert tortoise includes the species complex in the southwestern United States and in Mexico, currently referred to as Gopherus agassizii, Gopherus morafkai, and Gopherus evgoodei.

Board of Directors & Staff

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Ken MacDonald, *Chairperson Elect*
Joe Probst, *Treasurer*
Ed LaRue, *Recording Secretary*
Becky Jones, *Corresponding Secretary*
Mari Quillman, *Membership Coordinator*

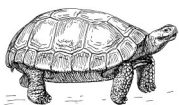
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Margaret Fusari
Peter Woodman
Bruce Palmer
Cristina Jones
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Judy Hohman

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