

## SECOND DRAFT PROGRAM

**46<sup>th</sup> ANNUAL DESERT TORTOISE COUNCIL SYMPOSIUM (Virtual)**  
**To be held the mornings of February 9, 11, 16, 18, 23, and 25, 2021**  
**All sessions and presentations are in Pacific Standard Time**

**Note:** Speakers are the first person noted for each presentation unless \* denotes otherwise  
**Raffles and announcements shall be held at the end of each break**

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### **FEBRUARY 9, 2021, TUESDAY**

- 8:00 a.m. Business Meeting of the Desert Tortoise Council
- 8:45 a.m. Opening Remarks and Introductions of Meeting Chairs: Bruce Palmer and Ed LaRue, Members, Board of Directors of the Desert Tortoise Council  
*Ken MacDonald, Chair, Desert Tortoise Council, and NewFields, Las Vegas, NV*

### **Session 1. We Stand on the Shoulders of Giants: A Tribute to a Giant in Turtle and Tortoise Research, Conservation, and Education**

- 9:00 a.m. **A personal remembrance and memorial tribute to Peter C.H. Prichard: Friend, colleague, mentor, and kindred turtle spirit**  
*Anders G.J. Rhodin, M.D., Chairman of the Board, Turtle Conservancy; Founder and Director, Chelonian Research Foundation*

### **Session 2. High Priority Conservation and Recovery Actions for Agassiz's and Sonoran Desert Tortoises** Invited and Honored guests:

#### **Plenary Address: Sarah Thomas**

- 9:20 a.m. **Building community around desert tortoise conservation in Southwest Utah: Advocacy, outreach and stewardship with Conserve Southwest Utah**  
*Sarah Thomas, Public Lands Program Director, Conserve Southwest Utah*
- 10:00 a.m. Break
- 10:30 a.m. **The Sonoran desert tortoise's long slow journey to Endangered Species Act protection**  
*Cindi Tuell, Director, Arizona and New Mexico, Western Watersheds Project, Tucson, AZ*
- 10:50 a.m. **Advancing desert tortoise protection and recovery**  
*Ileene Anderson<sup>1</sup>, Public Lands Desert Director/Senior Scientist; Lisa Belenky<sup>2</sup>, Senior Attorney, and Patrick Donnelly<sup>3</sup>, Nevada Director:<sup>1</sup> Los Angeles, CA; <sup>2</sup>San Francisco, CA; and <sup>3</sup>Las Vegas, NV*
- 11:10 a.m. Panel with presenters and participants at the meeting

Session 3. A Tribute to Philip A. Medica, a Tortoise Biologist

- 11:35 a.m.     **A Tribute to Philip A. Medica: Herpetologist, Conservationist, Mentor, and Friend**  
*Todd C. Esque<sup>1</sup>, Kenneth E. Nussear<sup>2</sup>, K. Kristina Drake<sup>1</sup>, and R. Bruce Bury<sup>3</sup>:*  
*<sup>1</sup>U.S. Geological Survey, Henderson, NV; <sup>2</sup>University of Nevada, Reno; and <sup>3</sup>Herpetological Conservation and Biology, OR*
- 11:55 a.m.     Closing remarks for the end of February 9 Sessions
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**FEBRUARY 11, 2021, THURSDAY**

Session 4. Tribute to Dr. Margaretha Hofmyer, A Significant Tortoise Scientist and Conservationist in South Africa

- 8:00 a.m.     **Margaretha Delina Hofmeyr, In Memoriam, 1950-2020**  
*Brian T. Henen*

Session 5. Attributes of Tortoise Populations and their Habitats: Genetics, Demography, and Connectivity

- 8:15 a.m.     **Historical effective population size and geographic population structure in Mojave and Sonoran desert tortoises**  
*Greer A. Dolby<sup>1\*</sup>, Timothy H. Webster<sup>2</sup>, Hazel Byrne<sup>2</sup>, Dale F. DeNardo<sup>1</sup>, Kenro Kusumi<sup>1</sup>: <sup>1</sup>Arizona State University; and <sup>2</sup>University of Utah*
- 8:30 a.m.     **Comparative analysis of immune gene family evolution and sex-biased expression based on a de novo genome for the Sonoran desert tortoise, *Gopherus morafkai* (Student Paper)**  
*Joseph P. Orton\*, Dale F. DeNardo, Kenro Kusumi\*, and Greer A. Dolby: Arizona State University, Tempe, AZ*
- 8.45 a.m.     **Range-wide Occupancy Trends for Mojave Desert Tortoises**  
*Amanda M. Kissel<sup>1</sup>, Bryan Wallace<sup>1</sup>, Jesse Anderson, <sup>1</sup>Brett G. Dickson<sup>1</sup>, Roy Averill-Murray<sup>2</sup>, Linda Allison<sup>2</sup>, and Amy Fesnock<sup>3</sup>: <sup>1</sup>Conservation Science Partners, Truckee, CA; <sup>2</sup>U.S. Fish and Wildlife Service, Reno, NV; and <sup>3</sup>Bureau of Land Management, CA.*
- 9:00 a.m.     **“Unscrambling” the drivers of egg production in Agassiz’s desert tortoise: Climate and individual attributes predict reproductive output (Student Paper)**  
*Corey I. Mitchell<sup>1</sup>, Derek A. Friend<sup>1</sup>, Lauren T. Phillips<sup>1</sup>, Elizabeth A. Hunter<sup>2</sup>, Jeffrey E. Lovich<sup>3</sup>, Mickey Agha<sup>4</sup>, Shellie R. Puffer<sup>3</sup>, Kristy L. Cummings<sup>3</sup>, Philip A. Medica<sup>5</sup>, Todd C. Esque<sup>5</sup>, Kenneth E. Nussear<sup>1</sup>, and Kevin T. Shoemaker<sup>1</sup>: <sup>1</sup>University of Nevada, Reno, NV; <sup>2</sup>Georgia Southern University, GA; <sup>3</sup>U.S. Geological Survey, Flagstaff, AZ; <sup>4</sup>Washington Department of Fish and Wildlife, WA; and <sup>5</sup>U.S. Geological Survey, NV*

- 9:15 a.m.      **Mojave Desert grasslands: 40 years of collecting historical ecological evidence of past and present native plant community diversity**  
*Laura Cunningham: California Director, Western Watersheds Project, Beatty, NV*
- 9:30 a.m.      **Habitat characteristics of contact zones using network modeling on desert tortoise populations**  
*Kenneth E. Nussear<sup>1</sup>, T. C. Esque<sup>2</sup>, A. Modlin<sup>2,3</sup>, and B. Todd<sup>3</sup>: <sup>1</sup>University of Nevada Reno, NV; <sup>2</sup>U.S. Geological Survey, Henderson, NV; and <sup>3</sup>University of California, Davis, Davis CA*
- 9:45 a.m.      **Determining current and future drivers of habitat differentiation for the Mojave Desert Tortoise, *Gopherus agassizii*, across its range in the Mojave Desert (Student Paper)**  
*Anjana Parandhaman<sup>1\*</sup>, Nathan Byer<sup>1</sup>, Thomas Dilts<sup>1</sup>, Marjorie D. Matocq<sup>1</sup>, Doug P. Boyle<sup>1</sup>, Scott D. Bassett<sup>1</sup>, Amy G. Vandergas<sup>2</sup>, Todd C. Esque<sup>3</sup>, Jill S. Heaton<sup>1</sup>, and Kenneth E. Nussear<sup>1</sup>: <sup>1</sup>University of Nevada, Reno, NV; <sup>2</sup>U.S. Geological Survey, San Diego, CA; and <sup>3</sup>U. S. Geological Survey, Henderson, NV*
- 10:00 a.m.      Break
- 10:30 a.m.      **Intrinsic and extrinsic factors regulate dispersal in Mojave desert tortoise (Student Paper)**  
*Steven J. Hromada<sup>\*1</sup>, Todd C. Esque<sup>2</sup>, Amy G. Vandergast<sup>3</sup>, Kirsten E. Dutcher<sup>1</sup>, Kenneth E. Nussear<sup>1</sup>: <sup>1</sup>University of Nevada, Reno; <sup>2</sup>U.S. Geological Survey, Henderson, NV; <sup>3</sup>U.S. Geological Survey, San Diego, CA*
- 10:45 a.m.      **POSTER: Estimating reductions in landscape connectivity for Sonoran desert tortoises (*Gopherus morafkai*) in the United States-Mexico Border Region**  
*Sean Sutor, Nancy E. McIntyre, Kerry Griffis-Kyle: Texas Tech University, TX*
- 11:00 a.m.      Panel discussion with presenters and audience

Session 5. Ecology and Behavior of Texas and Bolson Tortoises

- 11:20 a.m.      **Characterization of Texas tortoise (*Gopherus berlandieri*) home ranges and habitat use in Cameron County, Texas (Student Paper)**  
*Daniel A. Guerra<sup>1</sup>, Joseph A. Veech<sup>1</sup>, and Todd C. Esque<sup>2</sup>: <sup>1</sup>Texas State University, San Marcos; and <sup>2</sup>U.S. Geological Survey, Henderson, NV*
- 11:35 a.m.      **Thermal ecology and activity patterns of adult and juvenile bolson tortoises (Student Paper)**  
*Julia Joos<sup>1</sup>, Christiane Wiese<sup>2</sup>, Scott Hillard<sup>2,3</sup>, and Donald B. Miles<sup>1</sup>: <sup>1</sup>Ohio University, Athens, OH; <sup>2</sup>Turner Endangered Species Fund, Caballo, NM; <sup>3</sup>University of California, Los Angeles, CA*
- 11:50 a.m.      Panel discussion with presenters and audience
- 12:05 p.m.      Closing remarks for the end of the February 11 sessions

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**FEBRUARY 16, 2021, TUESDAY**

**Session 6: Health and Disease in Turtles and Tortoise and the Potential for Spillover to Naïve Species**

**Plenary Address: Elliott Jacobson**

- 8:00 a.m.      **Health issues of chelonians: Past, present, and future**  
*Elliott Jacobson: University of Florida, Gainesville*
- 8:40 a.m.      **A novel herpesvirus detected in three different species of chelonians**  
*\*John M. Winter<sup>1,8</sup>, James F. X. Wellehan<sup>2</sup>, Kathleen Apakupakul<sup>3</sup>, Jamie Palmer<sup>3</sup>, Maris Brenn-White<sup>3</sup>, Kali Standorf<sup>4</sup>, Kristin H. Berry<sup>5</sup>, April Childress<sup>2</sup>, Pete Koplos<sup>6</sup>, Michael M. Garner<sup>7</sup>, and Sharon L. Deem<sup>3</sup>: <sup>1</sup>University of Illinois Urbana, IL; <sup>2</sup>University of Florida, Gainesville, FL; <sup>3</sup>Saint Louis Zoo, Saint Louis, MO; <sup>4</sup>THRIVE Affordable Vet Care, Jacksonville, FL; <sup>5</sup>U.S. Geological Survey, Reno, NV; <sup>6</sup>El Paso Veterinary Specialty Center, El Paso, TX; <sup>7</sup>Northwest ZooPath, Monroe, WA; <sup>8</sup>Veterinary Specialty Center of Seattle, WA*
- 8:55 a.m.      **Facing the pathogen cold-blooded**  
*Francesco Origgi: Vetsuisse Faculty, University of Bern, Bern, Switzerland*
- 9:20 a.m.      **Tracing the legacy of anthropogenic radionuclides from 20<sup>th</sup> Century nuclear testing in desert tortoises (*Gopherus agassizii*) at the Nevada Test Site**  
*Cyler Conrad<sup>1,2</sup>, Allison Wende<sup>1</sup>, Jeremy Inglis<sup>1</sup>, Travis Tenner<sup>1</sup>, Kimberly Wurth<sup>1</sup>, Benjamin Naes<sup>7</sup>, Jeanne Fair<sup>1</sup>, Shannon Gaukler<sup>1</sup>, Jeffery Whicker<sup>1</sup>, Washington Tapia Aguilera<sup>3</sup>, James Gibbs<sup>3,4</sup> and Blair Wolf<sup>2</sup>: <sup>1</sup>Los Alamos National Laboratory, Los Alamos, NM; <sup>2</sup>University of New Mexico, Albuquerque, NM; <sup>3</sup>Giant Tortoise Restoration Initiative, Galapagos Conservancy, Fairfax, VA; and <sup>4</sup>State University of New York, Syracuse, NY*
- 9:35 a.m.      **Comprehensive evaluation of immune and physiological dysregulation in Mojave desert tortoises using altered diet as a natural stressor**  
*Kristina Drake<sup>1</sup>\*, Michael Treat<sup>2</sup>, Todd Esque<sup>1</sup>, and Frank van Breukelen<sup>2</sup>: <sup>1</sup>U.S. Geological Survey, Henderson, NV; and <sup>2</sup>University of Nevada, Las Vegas*
- 9:50 a.m.      **Diet influences survival, growth, and microbiome composition in the Mojave desert tortoise**  
*Nathan W. Byer, Anjana Parandhaman, Kristina Drake, Todd Esque, Kenneth E. Nussear, Jill S. Heaton, and Marjorie D. Maocq: University of Nevada, Reno; and U.S. Geological Survey, Henderson, NV*
- 10:05 a.m.      **Break**

- 10:30 a.m.      **Borreliosis transmission from ticks to humans associated with desert tortoise burrows – examples of tick-borne relapsing fever in the Mojave Desert (Student Paper)**  
*Molly J. Bechtel<sup>1</sup>, K. Kristina Drake<sup>2</sup>, Todd C. Esque<sup>2</sup>, Mike B. Teglas<sup>3</sup>, Jeff T. Foster<sup>1</sup> and Nathan C. Nieto<sup>1</sup>: <sup>1</sup>Northern Arizona University, Flagstaff, AZ; <sup>2</sup>US Geological Survey, Western Ecological Research Center, Henderson, NV; and <sup>3</sup>University of Nevada-Reno, NV*
- 10:45 a.m.      **Analysis of captive desert tortoise health data**  
*Florence M. Deffner<sup>1</sup> and Sarah Mortimer<sup>2</sup>: <sup>1</sup>U.S. Fish and Wildlife Service, Las Vegas, NV; and <sup>2</sup> Tortoise Group, Las Vegas, NV*
- 11:05 a.m.      Panel discussion with presenters and attendees

Session 7. A View of the History of Desert Tortoise Research and Conservation

- 11:30 a.m.      **Historical perspective on the desert tortoise: Field and conservation efforts in the Late Holocene up to its listing**  
*R. Bruce Bury: Herpetological Conservation and Biology, Corvallis, OR*
- 11:45 a.m.      Questions to the speaker, followed by Closing of the February 16 sessions

**FEBRUARY 18, 2021, THURSDAY**

Session 8: Roads, Fires, and Other Anthropogenic Effects on Tortoise

**Plenary Address: Craig Stanford**

- 8:00 a.m.      **Turtles in Trouble: Tortoise and Freshwater Turtle Conservation Priorities in the 21st Century**  
*Craig Stanford, Chair: Tortoise and Freshwater Turtle Specialist Group, IUCN Species Survival Commission, and University of Southern California, Los Angeles, CA*
- 8:30 a.m.      **Desert Tortoise Transportation Ecology Workshop**  
*\*Florence M. Deffner<sup>1</sup>, Elizabeth Fairbank<sup>2</sup>, Marcel Huijser<sup>3</sup>, Rob Ament<sup>3</sup>, Nicholas Maya<sup>2,4</sup>, and Kerry Holcomb<sup>5</sup>; <sup>1</sup>U.S. Fish and Wildlife Service, Las Vegas, NV; <sup>2</sup>Center for Large Landscape Conservation, Bozeman, MT; <sup>3</sup>Montana State University, Bozeman, MT; <sup>4</sup>University of Montana, MT; and U.S. Fish and Wildlife Service, Palm Springs, CA*
- 8:50 a.m.      **Use of survey data to identify key issues and insights regarding implementation of conservation actions to address effects of roads on Mojave desert tortoise (*Gopherus agassizii*) recovery (Student Paper)**  
*\*Nicholas Maya<sup>1,2</sup>, Angelina L. Gonzalez-Aller<sup>2</sup>, Elizabeth Fairbank<sup>2</sup>, and Florence M. Deffner<sup>3</sup>: <sup>1</sup>University of Montana, MT; <sup>2</sup>Center for Large Landscape Conservation, MT; <sup>3</sup>U.S. Fish and Wildlife Service, Las Vegas, NV*

- 9:10 a.m.      **Fire Mortality within the Red Cliffs Desert Reserve**  
*Ann M. McLuckie<sup>1</sup>, Richard A. Fridell<sup>1</sup>, John O. Kellam<sup>2</sup>, Michael J. Schijf<sup>3</sup> and  
Cameron B. Rognan<sup>3</sup>: <sup>1</sup>Utah Division of Wildlife Resources, Hurricane, UT;  
<sup>2</sup>Bureau of Land Management, St. George, UT; and <sup>3</sup>Habitat Conservation  
Administration, Washington County, St. George, UT*
- 9:25 a.m.      **POSTER: Activity patterns of the spur-thighed tortoise in the central  
Mediterranean**  
*Claudia Corti and Marta Biaggini: University of Florence, Italy*
- 9:45 a.m.      Break

Session 9. Predators on Turtles and Tortoises

**Invited Speaker: Patrick D. Moldowan**

- 10:15 a.m.      **Hyperpredation of tortoises and freshwater turtles by subsidized corvids:  
Global case studies of a conservation conundrum (Student Paper)**  
*Patrick D. Moldowan: Algonquin Wildlife Research Station and University of  
Toronto, Ontario, Canada*
- 10:45 a.m.      **Three-tiered management of common raven density within California's  
Tortoise Conservation Areas**  
*Kerry Holcomb, U.S. Fish and Wildlife Service, Palm Springs, CA*
- 11:05 a.m.      **Three-D printed tortoise models used to measure predation risk by Common  
ravens**  
*\*William I. Boarman<sup>1,2</sup>, Ryan D. Boarman<sup>2</sup>, Tim Shields<sup>1</sup>, Kerry Holcomb<sup>3</sup>:  
<sup>1</sup>Hardshell Labs, Inc., Haines, AK; <sup>2</sup>Conservation Science Research and  
Consulting, Spring Valley, CA; and U.S. Fish and Wildlife Service, Palm  
Springs, CA*
- 11:20 a.m.      **Modeling and mapping predation risk to desert tortoise populations**  
*William I. Boarman<sup>1</sup>, Ryan D. Boarman<sup>2</sup>, and William B. Kristan, III<sup>3</sup>:  
<sup>1</sup>Conservation Science Research & Consulting, Spring Valley, <sup>2</sup>University of  
Cologne, Cologne, Germany; and <sup>3</sup>California State University, San Marcos, CA*
- 11:35 a.m.      **Non-invasive genetics reveals higher frequencies of canid predation on the  
Mojave desert tortoise (*Gopherus agassizii*) than estimates based on  
morphological analysis**  
*Lillian D. Parker\*<sup>1,2</sup>, Jessica D. Quinta<sup>1</sup>, Isabel Rivera<sup>1</sup>, Brian L. Cypher<sup>3</sup>, Erica  
C. Kelly<sup>3</sup>, Robert C. Fleischer<sup>1</sup>, William I. Boarman<sup>4</sup>, Ryan D. Boarman<sup>4</sup>, and  
Jesús E. Maldonado<sup>1</sup>: <sup>1</sup>Smithsonian Conservation Biology Institute, National  
Zoological Park, Washington, DC; <sup>2</sup>George Mason University, Fairfax, VA;  
<sup>3</sup>Endangered Species Recovery Program, California State University, Stanislaus;  
and <sup>4</sup>Conservation Science Research and Consultation, Spring Valley, CA*
- 11:50 a.m.      Panel with presenters and audience
- 12:05 p.m.      Closing Remarks and end of the February 18 sessions

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FEBRUARY 23, 2021, TUESDAY

Session 10. Mitigation and Recovery of Desert Tortoise Populations Using Augmentation

**Plenary Address: Bryan Wallace**

- 8:00 a.m.      **Multi-year, comprehensive monitoring of tortoise translocations in the Ivanpah Valley: Lessons learned for research, management, and conservation**  
*Bryan P. Wallace<sup>1</sup>, Brett G. Dickson<sup>1</sup>, Rick Scherer<sup>1</sup>, Miranda Gray<sup>1</sup>, Amanda Kissel<sup>1</sup>, Jesse Anderson<sup>1</sup>, Brian Cohn<sup>2</sup>, Amanda Scheib<sup>3</sup>, Bruce Weise<sup>4</sup>:  
<sup>1</sup>Conservation Science Partners, Truckee, CA; <sup>2</sup>Upwelling, Inc., Ventura, CA;  
<sup>3</sup>Scheib Biological LLC, Henderson, NV; and <sup>4</sup>Southwestern Ecological Research Company, Tucson, AZ*
- 8:30 a.m.      **Factors affecting survival of adult desert tortoises during the 10 years following long-distance translocation**  
*Kristin H. Berry<sup>1,2</sup> and Jeremy S. Mack<sup>1,2,3</sup>: U.S. Geological Survey, Riverside<sup>1</sup>, CA, and Reno<sup>2</sup>, NV; <sup>3</sup>Lehigh University, Bethlehem, PA*
- 8:50 a.m.      **Translocation and headstart advances of the Marine Corps Air Ground Combat Center (Combat Center)**  
*Brian T. Henen; Marine Air Ground Task Force Training Command Marine Corps Air Ground Combat Center, Twentynine Palms, CA*

**Plenary Address: Brian Todd**

- 9:10 a.m.      **The value of head-starting in desert tortoise conservation and recovery**  
*Brian D. Todd<sup>1</sup>, Tracey D. Tuberville<sup>2</sup>, Kurt A. Buhlman<sup>2</sup>, and J. Mark Peaden<sup>3</sup>:<sup>1</sup>University of California Davis, Davis, CA; <sup>2</sup>University of Georgia's Savannah River Ecology Lab, PO Aiken, SC; and <sup>3</sup>Rogers State University, Claremore, OK*
- 9:40 a.m.      **The role of physiological stress in head-starting success for Mojave desert tortoises (Student Paper)**  
*\*Carmen M. Candal<sup>1,2</sup>, Kurt A. Buhlmann<sup>2</sup>, Brian D. Todd<sup>3</sup>, Kristen J. Navara<sup>1</sup>, Clinton T. Moore<sup>4</sup>, Pearson A. McGovern<sup>1,2,6</sup>, Nicole I. Stacy (tentative)<sup>5</sup>, and Tracey D. Tuberville<sup>2</sup>:<sup>1</sup>University of Georgia, Athens, GA; <sup>2</sup>Savannah River Ecology Lab, University of Georgia, Aiken, SC; <sup>3</sup>University of California, Davis, Davis, CA; <sup>4</sup>U.S. Geological Survey, Georgia Cooperative Fish and Wildlife Research Unit, University of Georgia; <sup>5</sup>Current affiliation: African Chelonian Institute, Ngazobil, Senegal; <sup>6</sup>University of Florida, Gainesville, FL*
- 9:55 a.m.      Break
- 10:25 a.m.      **Developing a population augmentation strategy for the Mojave desert tortoise**  
*Linda J. Allison and Roy Averill-Murray: U.S. Fish and Wildlife Service, Reno, NV*

- 10:40 a.m. Panel of presenters and participants
- 11:00 a.m. **Honoring the Life of Phillip C. Rosen (1955-2020)**  
*Mercy Vaughn*
- 11:15 a.m. Closing Remarks and end of the February 23 Sessions
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**FEBRUARY 25, 2021, THURSDAY**

Session 11. Government and Non-profit Actions to Address Recovery of the Desert Tortoise

- 8:00 a.m. **U.S. Fish and Wildlife Service update on the desert tortoise recovery activities**  
*Roy C. Averill-Murray: U.S. Fish and Wildlife Service, Reno, NV*
- 8:15 a.m. **Management of desert tortoise habitat on Bureau of Land Management lands in California**  
*Mark Massar; U.S. Bureau of Land Management, Desert District, Palm Springs, CA*
- 8:30 a.m. **Clark County Multiple Species Habitat Conservation Plan update**  
*Scott Cambrin: Clark County Desert Conservation Program, Las Vegas, NV*
- 8:45 a.m. **Desert tortoise public outreach: Desert Tortoise Week 2019-2020**  
*Vincent P. James, U.S. Fish and Wildlife Service, Palm Springs, CA*
- 9:00 a.m. **Desert Tortoise management and research in Joshua Tree National Park**  
*Michael Vamstad, Wildlife Ecologist: Joshua Tree National Park, Twentynine Palms, CA*
- 9:00 a.m. **Innovative Partnerships & Stakeholder Outreach Opportunities Facilitating Desert Tortoise Conservation During COVID-19**  
*Alejandrina R. Ocañas, James Danoff-Burg, and Sarah Greely: The Living Desert Zoo and Gardens, Palm Desert, CA*
- 9:15 a.m. Panel of presenters and questions from the audience
- 9:30 a.m. **Film: Desert Tortoises: Protecting a Threatened Species**  
*Katerina Koytcheva, Student, University of Nevada, Las Vegas*
- 10:00 a.m. Break

Session 12. The Egyptian Tortoise: An Invited Presentation

**Invited Speaker: Omar Attum**

- 10:30 a.m.     **Lessons learned from twenty years of Egyptian tortoise conservation and research in Egypt**  
*Omar Attum<sup>1</sup>, Basem Rabia<sup>2</sup>, Sherif Baha El Din<sup>3</sup>:<sup>1</sup>Indiana University Southeast, IN; <sup>2</sup>Zaranik Protected Area, North Sinai, Egypt; and <sup>3</sup>Nature Conservation Egypt, Cairo, Egypt*

**Announcements of Awards**

- 11:00 a.m.     **Winners of the Photographic Contest**
- 11:15 a.m.     **Best Student Paper Award**
- 11:25 a.m.     **Winner of the David J. Morafka Memorial Research Award**
- 11:35 a.m.     **Desert Tortoise Council Awards**
- 12:00 p.m.     Closing Remarks and end of the 46<sup>th</sup> Annual Symposium
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