



# CHELONIAN CONSERVATION NEWS

NEWSLETTER OF THE IUCN SSC TORTOISE AND FRESHWATER TURTLE SPECIALIST GROUP

ISSUE NUMBER 1 – DECEMBER 2023

*Editors: Craig B. Stanford (stanford@usc.edu) & Anders G.J. Rhodin (rhodincrf@aol.com)*

From the Chair...

Greetings everyone! I've compiled some 2023 news about progress in turtle conservation in this newly launched TFTSG newsletter. During a first full year following the COVID-19 pandemic, the TFTSG and its members took strides forward on multiple conservation fronts. Here are some updates to keep all of you in the loop about our activities, thanks to those of you who contributed.

We invite you to continue to send in news items of interest to the group and we will publish newsletters on an intermittent as-needed basis. We will also archive all published newsletters on our website at [www.iucn-tftsg.org/newsletters/](http://www.iucn-tftsg.org/newsletters/), where all earlier issues of the previous iterations of our newsletter can also be found.

## **Red Listing Workshops**

**Mexico City.** In June, the TFTSG held a 3-day IUCN SSC Red Listing workshop in Mexico City. Vivian Páez, our Red List Coordinator, organized and led the workshop superbly, and it was a success. Together with about 15 Mexican and Latin American colleagues, plus Executive Vice Chair Anders Rhodin and Deputy Chair Peter Paul van Dijk, plus myself and 3 other US members of the TFTSG, we assessed 29 taxa of Mexican and Central American turtles. We were all impressed by the number of outstanding younger turtle conservation biologists in Mexico, which bodes well for the future of turtle conservation there. If you've never been involved in a Red List workshop, the assessment process is multistep and lengthy, starting with drafts prepared according to IUCN guidelines, species assessed according to a formula of criteria for threat status, and submitted by invited participants who are experts on particular species or taxa. The assessments are read and revised by several reviewers, then (usually) presented at a workshop, and then further updated by the assessor(s), and when finalized, submitted to IUCN for eventual posting on the IUCN Red List webpages. Many thanks to all involved.



TFTSG Red Listing Workshop organizers, Mexico City, July 2023: Vivian Páez, Brian Bock, Peter Paul van Dijk, Craig Stanford, and Anders Rhodin.



Some of the TFTSG Red Listing Workshop participants, Mexico City, July 2023. Participants included, in addition to the organizers: German Forero-Medina, Eduardo Reyes Grajales, Luis Díaz Gamboa, Marco López Luna, Gamaliel Castañeda Gaytán, Rafael Lara, Guillermo Woolrich Piña, Brian Folt, Salima Machkour-M´Rabet, John Iverson, Stephanie Espinosa, Yosuki Villegas, Rodrigo Macip Ríos, and Hesiquio Benítez.

**Charleston, South Carolina.** At the annual TSA meeting in August, which was held this year in Charleston, South Carolina in the U.S., we held another TFTSG workshop devoted to assessing US species and led by the same US members of the TFTSG. About 23 participants presented their assessments of 12 species, and those draft assessments are now in stages of review and revision. Again, thanks to all those who gave their time and energy to make this workshop happen: Anders Rhodin, Peter Paul van Dijk, Craig Stanford, John Iverson, Ken Dodd, Peter Lindeman, Peter Scott, Joe Jenkins, Jim Godwin, Michael Dreslik, John Carr, Andrew Walde,

Travis Thomas, Will Selman, Cody Godwin, Chris Lechowicz, Eric Munscher, Arron Tuggle, Jeremy Geiger, Johnathan Mays, James Liu, Jerry Johnston, and Jordan Gray.

**Cochabamba, Bolivia.** Our third TFTSG Red List workshop of the year took place in October in Cochabamba, Bolivia, once again led by Vivian Páez and attended by Anders Rhodin, Peter Paul van Dijk, Russ Mittermeier, John Carr, and myself from the US. It was an inspiring meeting, with 31 participants from Argentina, Bolivia, Brazil, Colombia, Uruguay, the US, and Venezuela met for 3 days to discuss and assess 37 South American turtles and tortoises. The meeting was successful, enjoyable and enlightening, and TFTSG is grateful for the assessment work of so many outstanding turtle conservationists in Latin America.



TFTSG Red Listing Workshop participants (26 on-site participants of 31 total—others attended by Zoom), Cochabamba, Bolivia, October 2023: Aline Santos, Anders Rhodin, Andres Estrades, Brian Bock, Camila Ferrara, Claudia Ceballos, Craig Stanford, Elizângela Brito, Erika Kubisch, Fabio Cunha, Fernando Rojas-Runjaic, Fabio Maffei, Gilson Rivas, Gustavo Rey-Ortiz, John Carr, Natalia Gallego-García, Pamela Carvajal, Paulo Andrade, Peter Paul van Dijk, Priscila Miorando, Russ Mittermeier, Sandra Acebey, Shirley Famelli, Thiago Marques, Thiago Portelinha, Tibisay Escalona, and Vivian Páez. Participants by Zoom: German Forero-Medina, Katherine Young-Valencia, Leandro Alcalde, and Stephan Ettmar.

The results of these 3 workshops, once all assessments have been finalized and posted, will bring the total number of assessments the specialist group has completed in the past five years

to about 150, nearly half of all global chelonian species. With the hard work of our current and recent past Red List Coordinators Vivian Páez and Carla Eisemberg, we've been able to accomplish much, and with a level of depth and detail that Anders, Peter Paul, and I have insisted on.

### **Turtle Conservation Awards**

**Behler Award.** The Behler Turtle Conservation Award ([www.iucn-tftsg/behler/](http://www.iucn-tftsg/behler/)) is a major annual international award honoring excellence and outstanding contributions in the field of tortoise and freshwater turtle conservation and biology, and leadership in the international chelonian conservation and biology community. It is considered the “Nobel Prize” of turtle conservation and biology and is co-presented by the IUCN SSC Tortoise and Freshwater Turtle Specialist Group, Turtle Survival Alliance, Turtle Conservancy, and Turtle Conservation Fund, the four organizations most closely tied to the turtle conservation legacy of John Behler. Additional supporters of the award this year were Re:wild, Andrew Sabin Family Foundation, Surprise Spring Foundation, Chelonian Research Foundation, George Meyer & Maria Semple, Brett Stearns, and Deborah Behler. The award is based on open community nominations and final selection by the large and diverse Behler Award Committee, co-chaired by Anders Rhodin and Rick Hudson, with vice-chairs Vivian Páez, Peter Paul van Dijk, and Andrew Walde.

Congratulations to Kurt Buhlmann who was honored with the 18th Behler Turtle Conservation Award at the 21st Annual TSA / TFTSG Symposium on the Conservation of Tortoises and Freshwater Turtles in Charleston, South Carolina in August.



**Kurt Buhlmann** was a founding leader of Turtle Survival Alliance (TSA) who worked with Russ Mittermeier at Conservation International and was the original Co-Chair of the TSA with Rick Hudson when it was an official Task Force of the IUCN Tortoise and Freshwater Turtle Specialist Group (TFTSG), before becoming its own stand-alone NGO. In addition, he has been a member of the TFTSG for over 30 years, and has also served on the Executive Board of the Turtle Conservation Fund (TCF) since its founding. He was the senior lead author with Hudson and Anders Rhodin on *A Global Action Plan for Conservation of Tortoises and Freshwater Turtles: Strategy and Funding Prospectus 2002-2007* that helped launch and fund the TCF. Kurt has a Ph.D. in Ecology from the University of Georgia, M.S. in Wildlife Sciences from Virginia Tech, and

B.S. in Environmental Studies from Stockton State College in New Jersey. He is currently a conservation ecologist and Senior Research Associate at the University of Georgia's Savannah River Ecology Laboratory in South Carolina. His research interests include life history and evolutionary ecology with application for conservation and management of amphibians and reptiles, and he has pursued focused field studies on Chicken Turtles, Jamaican Sliders, and Gopher Tortoises, among other species. He has worked with Partners in Amphibian and Reptile Conservation (PARC), state natural heritage programs, Longleaf Alliance, and other non-profit, state, and federal agencies on habitat management projects for amphibians and reptiles, including the use of prescribed fire management and

wetlands restoration. He has collaborated in international and national turtle conservation efforts, and along with his wife and colleague Tracey Tuberville, is actively focused on recovery, reintroduction, and head-starting projects for tortoises and freshwater turtles in North America. He authored the book *Turtles of the Southeast* with Tuberville and his longtime mentor Whit Gibbons. Kurt's personal mission has been to conduct relevant conservation science, but more importantly, to apply it on the ground to benefit and improve conditions for specific and defined populations of rare and threatened species. He is a well-respected and well-liked leader in our global community and highly deserving of the Behler Turtle Conservation Award, and we were most pleased to finally honor him this year.

**Pritchard Awards.** The Pritchard Turtle Conservation Lifetime Achievement Awards (also at [www.iucn-tfts.org/behler/](http://www.iucn-tfts.org/behler/)) honor older or retired later-career individuals who have made major and significant contributions to the turtle conservation and biology community. These awards are also based on open community nominations and final selection by the Behler Award Committee.

Congratulations to Ken Dodd, Bruce Bury, Earl Possardt, and Elmar Meier who were honored with the 15th–18th Turtle Conservation Lifetime Achievement Awards at the 21st Annual TSA / TFTSG Symposium on the Conservation of Tortoises and Freshwater Turtles in Charleston, South Carolina in August.



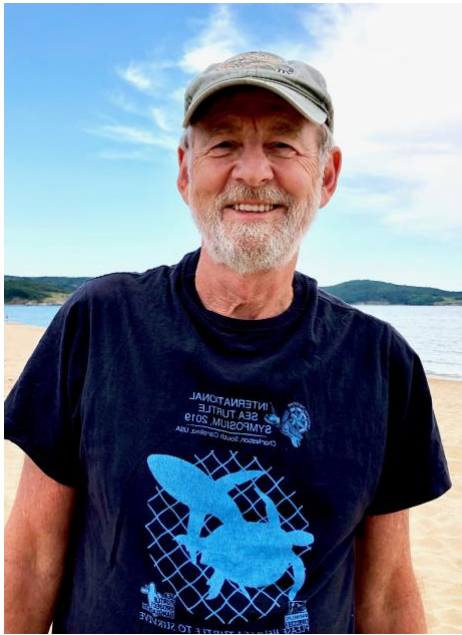
**Ken Dodd** worked for the U.S. Department of the Interior as Herpetologist in the Office of Endangered Species and as Research Zoologist with the U.S. Geological Survey in Gainesville, Florida. He was also Courtesy Associate Curator of Herpetology at the Florida Museum of Natural History and Courtesy Associate Professor in the

University of Florida Department of Wildlife Ecology and Conservation. At OES, Ken was the listing author for the Desert Tortoise, Plymouth Red-bellied Turtle, Central American River Turtle, and Bolson Tortoise, as well as for Critical Habitat designations for Hawksbills and Leatherbacks. He played a significant role in excluding farmed Green Turtle products from U.S. markets and in the acquisition of Sandy Point in the U.S. Virgin Islands for nesting Leatherbacks. He has conducted research on Loggerhead Sea Turtles, Flattened Musk Turtles (leading to federal protection), and Florida Box Turtles. His books include *The Natural History of North American Box Turtles* and *Reptile Ecology and Conservation*. Ken is past President of The Herpetologists' League and a longtime member of the TFTSG. He maintains a lasting commitment to chelonian research and conservation and an abiding appreciation of those who have dedicated their careers to maintaining turtle diversity, often against incredible odds.



**Bruce Bury** has studied chelonians for many decades with an emphasis on species in western North America. He has served as the editor for two volumes on North American tortoises, as well as authored a monograph on the Bolson Tortoise and a recent book on the Western Pond Turtle. His field studies have included research on Blanding's Turtles in Nebraska, Painted Turtles in Washington, Desert and Bolson Tortoises in Mexico, and Berlandier's Tortoise in Texas. In 1972, he was hired as the first full-time Herpetologist in the U.S. Fish and Wildlife Service and served in Washington DC at the National Museum of Natural History. He subsequently transferred to duty stations in Colorado and Oregon to be more directly involved in field

studies. His research has examined impacts of off-road vehicles on desert ecosystems, logging on northwestern forests, and many projects on threatened species. Although retired, he continues to write and edit studies on chelonians and other taxa. He is



**Earl Possardt** worked for the U.S. Fish and Wildlife Service for 44 years and for the last 30 years was dedicated and focused on turtle conservation, initially within the southeastern U.S. and then primarily internationally. He was instrumental in establishing the Archie Carr Sea Turtle NWR to protect some of the highest density

Editor-in-Chief of *Herpetological Conservation and Biology*, which started in 2006 to increase outlets serving natural history and field ecology and conservation efforts, especially descriptive investigations and management studies.

Loggerhead Sea Turtle nesting beaches in the world. He led efforts within the USFWS and collaborated with friends and colleagues to secure Congressional authorization for the creation of the Marine Turtle Conservation Act (MTCA) Fund to institutionalize and internalize a marine turtle conservation program within the USFWS with dedicated funding. He administered this program during the last 20 years of his career which grew to support about 45–50 projects in over 35 countries each year, with a strong focus on building conservation capacity within countries and regions. In 2019, working with the TFTSG, his vision to include tortoises and freshwater turtles within the MTCA Fund was finally realized with passage of Congressional amendments to the MTCA, expanding the program to an additional 10-12 MTCA projects each year focused on tortoise and freshwater turtle conservation projects in Asia, Central and South America, and Africa.



**Elmar Meier** from Münster, Germany, is a private herpetoculturist who has specialized in the captive care and breeding of highly endangered freshwater turtles, notably various species of Asian Box Turtles of the genus *Cuora*. In 1997, he proposed a captive breeding project to be carried out in

conjunction with the German NGO Zoologische Gesellschaft für Arten- und Populationsschutz (ZGAP) and the Münster Allwetter Zoo. He committed his private stock of Asian turtles to the project for 20 years and to caring for the animals at the Zoo free of charge on a voluntary basis. The resultant International Center for Turtle Conservation opened at the Zoo in 2003 and the Turtle Conservation Fund with its leaders from the TSA and TFTSG held one of its first funding meetings there shortly thereafter. Elmar's efforts have led to more than 700 turtles being hatched from 17 species and subspecies of critically endangered turtles, and these offspring have been transferred to 94 zoos and private keepers to establish new breeding groups. His most important contribution has been the breeding and prevention of extinction of *Cuora zhoui*, a species perilously close to extinction, with no wild populations known.

### **In other 2023 news...**

**Australia.** Congratulations to Ricky Spencer of Western Sydney University, whose 1 Million Turtles Community Conservation Program won the Eureka Prize, a prestigious Australian science award, for his efforts in promoting turtle conservation nation-wide. Read the article here: [https://www.westernsydney.edu.au/newscentre/news\\_centre/more\\_news\\_stories/turtle\\_conservation\\_program\\_wins\\_eureka\\_prize](https://www.westernsydney.edu.au/newscentre/news_centre/more_news_stories/turtle_conservation_program_wins_eureka_prize)

**Belize.** New publications from the BFREE team in Belize:  
Quantifying Turtle Species Diversity, Richness, and Abundance in Southern Belize  
[https://www.researchgate.net/publication/374505035\\_Quantifying\\_Turtle\\_Species\\_Diversity\\_Richness\\_and\\_Abundance\\_in\\_Southern\\_Belize](https://www.researchgate.net/publication/374505035_Quantifying_Turtle_Species_Diversity_Richness_and_Abundance_in_Southern_Belize)

Observations of four species of hatchling freshwater turtle habitat utilization in southern Belize  
[https://www.researchgate.net/publication/373768034\\_Observations\\_of\\_four\\_species\\_of\\_hatchling\\_freshwater\\_turtle\\_habitat\\_utilization\\_in\\_southern\\_Belize](https://www.researchgate.net/publication/373768034_Observations_of_four_species_of_hatchling_freshwater_turtle_habitat_utilization_in_southern_Belize)

**Canada.** Jackie Litzgus' research group published papers on several turtle topics of conservation interest. Check them out:



Delay, S.J., O. Urquhart, and J.D. Litzgus. 2023. Wind farm and wildfire: Spatial ecology of an endangered freshwater turtle in a recovering landscape. Canadian Journal of Zoology <https://doi.org/10.1139/cjz-2023-0100>.

Mullin, D.I., R.C. White, J.L. Mullen, A.M. Lentini, R.J. Brooks, and J.D. Litzgus. 2023. Headstarting turtles to larger body sizes for multiple years increases survivorship but with diminishing returns. Journal of Wildlife Management 87(4): e22390 (<https://doi.org/10.1002/jwmg.22390>).

Wijewardena, T., N.E. Mandrak, J.E. Paterson, C.M. Davy, C.B. Edge, A.M. Lentini, and J.D. Litzgus. 2023. Effects of release method on the survival, somatic growth, and body condition of headstarted turtles. Journal of Wildlife Management e22505 (<https://doi.org/10.1002/jwmg.22505>).

**Central America.** New study by Uwe Fritz and colleagues: Central American Trachemys revisited: New sampling questions current understanding of taxonomy and distribution (Testudines: Emydidae) [https://www.researchgate.net/publication/371072456\\_Central\\_American\\_Trachemys\\_revisited\\_New\\_sampling\\_questions\\_current\\_understanding\\_of\\_taxonomy\\_and\\_distribution\\_Testudines\\_Emydidae](https://www.researchgate.net/publication/371072456_Central_American_Trachemys_revisited_New_sampling_questions_current_understanding_of_taxonomy_and_distribution_Testudines_Emydidae)

**France.** The Refuge des Tortues, a turtle rehabilitation center in southwestern France, has been working on conservation of both *Mauremys leprosa* and *Emys orbicularis*, and has started a reintroduction program for *M. l. leprosa*. This includes a captive breeding facility and surveys to identify appropriate reintroduction sites. Group members Simon Rouot and Jérôme Maran have been involved in the project.

**France.** New group member Sebastien Caron co-authored one of a series of papers about the rescue and recovery of *Testudo hermanni* populations in southeastern France after wildfires: [https://www.researchgate.net/publication/373302682\\_Feedback\\_Rescue\\_care\\_and\\_study\\_of\\_Hermann's\\_tortoises\\_after\\_the\\_Gonfaron\\_fire\\_2021\\_Pleine\\_et\\_Massif\\_des\\_Maures\\_France](https://www.researchgate.net/publication/373302682_Feedback_Rescue_care_and_study_of_Hermann's_tortoises_after_the_Gonfaron_fire_2021_Pleine_et_Massif_des_Maures_France)

**Indonesia.** *Cuora* expert Torsten Blanck and colleagues recently published a paper revising the taxonomy of the widely distributed *C. amboinensis*. They argue for the elevation of two current subspecies to full species status, and describe two new species and one new subspecies from the *C. amboinensis* complex as well. Citation here: [https://www.researchgate.net/publication/375683378\\_A\\_Taxonomic\\_Hide\\_and\\_Seek\\_Phylogenetic\\_and\\_Phylogeographic\\_Relationships\\_in\\_the\\_Southeast\\_Asian\\_Box\\_Turtle\\_Cuora\\_amboinensis\\_Riche\\_in\\_Daudin\\_1801](https://www.researchgate.net/publication/375683378_A_Taxonomic_Hide_and_Seek_Phylogenetic_and_Phylogeographic_Relationships_in_the_Southeast_Asian_Box_Turtle_Cuora_amboinensis_Riche_in_Daudin_1801)

**Indonesia.** And a new paper in *Diversity* by Vincent Nijman and Chris Shepherd analyzing the trade in *C. amboinensis* in Southeast Asia: <https://www.mdpi.com/1424-2818/14/11/970>

**Indonesia.** A new paper on the Sulawesi Forest Turtle:

Preliminary Insights on the Spatial Ecology, Population Demography, and Sexual Dimorphism of the Critically Endangered Sulawesi Forest Turtle (*Leucocephalon yuwonoi*)  
<https://bioone.org/journals/journal-of-herpetology/volume-56/issue-4/20-113/Preliminary-Insights-on-the-Spatial-Ecology-Population-Demography-and-Sexual/10.1670/20-113.short>  
depressa 37361

**Mexico.** Peter Praschag/Turtle Island succeeded in receiving enough donations to establish a breeding center for the critically endangered *K. vogti* at the university campus at CUC in Puerto Vallarta. Thanks to a major Swiss donor, and to several European zoos for funds for the interior of the containers. The breeding facility will be operating before the next breeding season. Check it out: <https://turtle-island.org/the-vallarta-mud-turtle/>

**Mexico.** Implications of an induced fire on the population ecology of freshwater turtles: an case study on the Coast of Chiapas, Mexico:  
[https://www.researchgate.net/publication/374271616\\_Implications\\_of\\_an\\_induced\\_fire\\_on\\_the\\_population\\_ecology\\_of\\_freshwater\\_turtles\\_an\\_case\\_study\\_on\\_the\\_Coast\\_of\\_Chiapas\\_Mexico](https://www.researchgate.net/publication/374271616_Implications_of_an_induced_fire_on_the_population_ecology_of_freshwater_turtles_an_case_study_on_the_Coast_of_Chiapas_Mexico)

**Japan.** *Geoemyda japonica* is on the Red List as Endangered and is found in the Ryukyu archipelago of southern Japan (Okinawa Island, Kume Island, and Tokashiki Island). The Japanese government designated them as a National Natural Monument in 1975, which has restricted research efforts. Currently there is only one field study permitted by the Japanese Ministry of the Environment. Mr. Tsutomu Otani began the study more than 20 years ago, and there are hundreds of individuals identified. In 2020, Aya Narukiyo and Zach Bell founded the Okinawa Kame Centre, a nonprofit organization focused on protecting and conserving *Geoemyda japonica* and their habitat on Okinawa Island. Otani is now training Aya and Zach in the fieldwork. Their training is further bolstered by Mrs. Toyama, a former student of Mr. Otani, who maintains the study's database. The Okinawa Kame Centre has become a beacon of hope for this species' survival in the wild.

**South America.** New paper by Natalia Gallego and colleagues on population status of South American Mesoclemmys:  
Where to set the bar? Recent descriptions inflate species number in South American toad-headed turtles (Mesoclemmys)  
[https://www.researchgate.net/publication/369926540\\_Where\\_to\\_set\\_the\\_bar\\_Recent\\_descriptions\\_inflate\\_species\\_number\\_in\\_South\\_American\\_toad-headed\\_turtles\\_Mesoclemmys#fullTextFileContent](https://www.researchgate.net/publication/369926540_Where_to_set_the_bar_Recent_descriptions_inflate_species_number_in_South_American_toad-headed_turtles_Mesoclemmys#fullTextFileContent)

**South Sudan/Nigeria.** Human density impacts Nubian Flapshell turtle survival in Sub-Saharan Africa: Future conservation strategies:  
<https://www.sciencedirect.com/science/article/abs/pii/S0140196323000988>

**and more Africa.** Knowledge gaps and conservation priorities for west African chelonians  
[https://brill.com/view/journals/amre/44/2/article-p121\\_1.xml?language=en](https://brill.com/view/journals/amre/44/2/article-p121_1.xml?language=en)

Trophic Resource Use by Sympatric vs. Allopatric Pelomedusid Turtles in West African Forest Waterbodies

<https://www.mdpi.com/2079-7737/12/8/1054>

**United States.** John Carr, Ethan Kessler and Jerry Johnston co-edited a special issue of *Southeastern Naturalist* dedicated to the biology and conservation of Alligator Snapping Turtles, *Macrochelys*. Check it out, many new papers from TFTSG members within:

<https://bioone.org/journals/southeastern-naturalist/volume-22/issue-sp12>.

**United States.** Somatic Growth and Maturity for Four Species of River Cooter Including *Pseudemys concinna suwanniensis*, *P. nelsoni*, *P. peninsularis*, and *P. texana*:

[https://www.researchgate.net/publication/372204138\\_Somatic\\_Growth\\_and\\_Maturity\\_for\\_Four\\_Species\\_of\\_River\\_Cooter\\_Including\\_Pseudemys\\_concinna\\_suwanniensis\\_P\\_nelsoni\\_P\\_peninsularis\\_and\\_P\\_texana](https://www.researchgate.net/publication/372204138_Somatic_Growth_and_Maturity_for_Four_Species_of_River_Cooter_Including_Pseudemys_concinna_suwanniensis_P_nelsoni_P_peninsularis_and_P_texana)

**United States.** March 25, 2023, marked the 50<sup>th</sup> Anniversary since the U.S. Department of the Interior's Bureau of Land Management established a Desert Tortoise Preserve at the request of Kristin H. Berry. In the following 7 years, the Natural Area was gradually expanded by the combined efforts of the Bureau of Land Management, the Desert Tortoise Preserve Committee (a new grass roots organization), the California Department of Fish and Game, The Nature Conservancy, and many donors. In 1980, the Preserve was formalized as the Desert Tortoise Research Natural Area. More than 150 people attended on this beautiful spring day with speakers from the Bureau of Land Management, U.S. Fish and Wildlife Service, Desert Tortoise Preserve Committee, Desert Tortoise Council, and Mayor of the nearby California City.

Several manuscripts were published in 2023 on a wide variety of subjects ranging from restoration of damaged Mojave and Sonoran desert lands (Abella et al. 2023) to survival climate-related behaviors of head-started juvenile and immature tortoises 9 years after release (Berry et al. 2023), Another paper on augmentation of depleted populations was survival of adult desert tortoises 10.5 years after a long-distance, mitigation-driven translocation (Mack and Berry 2023).

Abella, S.R., K.H. Berry, S. Ferrazzano. 2023. Techniques for restoring damaged Mojave and western Sonoran habitats, including those or threatened desert tortoises and Joshua trees. *Desert Plants* 38(2):4-52.

Berry, K.H., J.S. Mack, and K.M. Anderson. 2023. Variations in climate drive behavior and survival of small desert tortoises. *Frontiers in Ecology and Evolution*. DOI 10.3389/fevo.2023.1164050

Mack, J.S., and K.H. Berry 2023. Drivers of survival of translocated tortoises. *Journal of Wildlife Management* 2023;87:e22352. <https://doi.org?10.1002/jwmg.22352>.

**Vietnam.** In 2023, Save Vietnam's Wildlife, a Vietnamese NGO, collaborated with Pu Mat National Park to reintroduce 121 Big-headed Turtles (*Platysternon megacephalum*). The logistics of keeping this species alive and healthy in captivity while awaiting release are challenging, so congrats to Pham Van Thong and everyone in the NGO for their work.

#### **Vietnam.**

Previously Unrecorded Invasive Species and the Unsatisfying Knowledge of Turtle Communities in Northern Vietnam

<https://www.mdpi.com/2673-7159/3/1/1>

An Assessment of Turtle Communities in Bach Ma National Park, Vietnam

<https://ncr-journal.bear-land.org/article/410>

A preliminary assessment of chelonian diversity in the montane forests of two areas in northern Vietnam

[https://www.researchgate.net/publication/371219324\\_A\\_preliminary\\_assessment\\_of\\_chelonian\\_diversity\\_in\\_the\\_montane\\_forests\\_of\\_two\\_areas\\_in\\_northern\\_Vietnam](https://www.researchgate.net/publication/371219324_A_preliminary_assessment_of_chelonian_diversity_in_the_montane_forests_of_two_areas_in_northern_Vietnam)

**Global.** Patrick Moldowan has a forthcoming monograph on subsidized corvids as predators of freshwater turtles and tortoises. Patrick brought together global case studies to showcase the scale of this underappreciated threat. The forthcoming monograph reviews published and unpublished case studies of corvids as predators of chelonians, examines regional population trends of corvids relative to the status of co-occurring chelonian species, and evaluates our current understanding of subsidized corvids as threats to chelonians. In press in *Herpetological Monographs*.

**Global.** Scott Trageser's The Biodiversity Group, in collaboration with Sony Electronics, has developed live animal 3D scanning. Researchers can conduct taxonomic research without euthanizing animals, and document species by simply scanning the individuals, taking noninvasive DNA samples, and releasing them unharmed. Check it out:

<https://www.youtube.com/watch?v=H79sNrDy4F0>

**Global.** Using the sequential growth of Chelonian shell scute keratin, Conrad et al. analyzed 20th century records of anthropogenic uranium contamination in turtles, tortoises and sea turtles from locations with past nuclear histories (check it out: <https://academic.oup.com/pnasnexus/article/2/8/pgad241/7244772>). Their measurement of uranium-235 and uranium-236 isotopes in a green sea turtle from the Republic of the Marshall Islands, a desert tortoise from southwestern Utah, river cooter from South Carolina and box turtle from Tennessee matched the legacy, historical record of nuclear activities in those locations - specifically fallout from above-ground nuclear testing and contamination from nuclear production activities. This work was covered by a variety of news organizations worldwide, including at Scientific American (<https://www.smithsonianmag.com/smart->

[news/turtle-shells-keep-a-record-of-humans-nuclear-history-180982805/](https://www.sciencefriday.com/news/turtle-shells-keep-a-record-of-humans-nuclear-history-180982805/)) and on Science Friday (<https://www.sciencefriday.com/segments/animals-indicators-nuclear-fallout/>).

Wishing all of you much success and health for the end of 2023 and the start of a New Year...

Craig Stanford