



Ocelot Conservation Requires Both Theory and Actions

by Daniel G. Scognamillo

The film *American Ocelot* (a PBS Nature film produced by Fin & Fur Films) has placed the species in the national spotlight and is helping maintain momentum for ocelot conservation in South Texas. To succeed in ocelot conservation, we need both theory and action. Ecological theory shows us where we should focus our efforts for ocelot populations, but actions are where we find the biggest challenges.



Ecological theory is often represented by equations. A famous example is the Lotka-Volterra predation model developed independently by Alfred Lotka and Vito Volterra in the early part of the twentieth century. While Lotka's initial thoughts came from observations of chemical reactions, it was interactions

Dr. Daniel Scognamillo is an Associate Professor of Research at CKWRI. ~

between predatory fish, prey fish, and humans that captured Volterra's interest.

An Italian zoologist, Umberto D'Ancona, studied the changes in fish numbers at a local market between 1905-1923. Intrigued by the numbers, D'Ancona, who was dating Volterra's daughter, asked his future father-in-law to analyze the fish market data. Volterra found that human interaction was the key for changes in predatory fish numbers at the market. During WWI (1914-1918) many fishermen went to war, resulting in decreased fishing intensity. This created a relatively higher number of predatory fish during the war than before and after, indicating that fishing disturbed the natural balance between prey and predator species. This effect of WWI on fish populations in the Adriatic Sea shows how events that may seem unrelated are in fact connected.

This knowledge is helping us understand how prey abundance, habitat availability, habitat connectivity, reproduction, and survival could potentially impact recovery of ocelot populations as well. Through our research we continue to engage with partners in Texas to increase the body of knowledge available to support conservation decisions and actions. One example is evaluating wildlife crossings that are designed to reduce ocelot mortalities along roads and highways and increase survival of ocelots attempting to colonize

What Do They Eat?

Pipevine Swallowtail butterfly caterpillars feed only on pipevine plants from the *Aristolochia* genus. The adults nectar on thistles, Indian blanket, lantana, Indian paintbrush, and lavender verbena, among other flowering plants. (Area Butterflies. Alamo Area Chapter, Texas Master Naturalists. <https://www.txmn.org>)

new areas. This project and others are helping us estimate density and movement patterns of ocelots in South Texas.

Ocelots in South Texas will continue to benefit from our studies in the future. However, we must recognize that, just as WWI influenced fish populations in the Adriatic Sea, apparently unrelated events could affect ocelot populations. Effective ocelot conservation requires us to identify those events as we rely on collaborations with private landowners, federal and state agencies, and NGOs to progress from theory to actions. ~

CKWRI News



Dr. Humberto Perotto



Dr. Bart Ballard

Award-Winning Scientists

Congratulations to Dr. Humberto Perotto for receiving the 2022 Outstanding Achievement in Research Award from the Society for Range Management. Dr. Perotto leads landscape ecology and drone research programs at CKWRI.

Congratulations to Dr. Bart Ballard for being named a Regents Professor by the Texas A&M University System Board of Regents. Dr. Ballard is the Chair of the Department of Rangeland and Wildlife Sciences, and he holds the C. Berdon and Rolanette Lawrence Endowed Chair in Waterfowl Research at CKWRI

Did You Know?

The Masked Bobwhite Quail (*Colinus virginianus ridgwayi*), a subspecies of the Northern Bobwhite Quail, has been listed as an endangered species since 1967. (<https://ecos.fws.gov/ecp/species/3484>)



Two New Endowments

Two new endowments have been established providing scholarship funds for CKWRI students. Many thanks to the families below for these meaningful gifts supporting the Institute and the next generation of wildlife leaders.

- Leigh and Lon Cartwright Endowment for Student Scholarships
- Hardeman Family Foundation Endowment for Student Scholarships

Boone and Crockett Club

The Boone and Crockett Club had its 135th annual meeting in Austin in 2022. Levi Heffelfinger, a past B&C Fellow at CKWRI, was inducted as a Professional Member of the Club. Calvin Ellis, the current B&C Fellow at CKWRI, attended with Dr. David Hewitt, also a Professional Member. The Boone and Crockett Club is the nation's oldest conservation organization.

2023 Deer Research Meeting

The annual CKWRI Deer Research Meeting will be held on Friday, March 3, 2023, in the Rosenberg Sky Room at the University of the Incarnate Word, San Antonio. Details and registration will be available on our website.

Hediger Chosen for Prestigious Clinic

Dr. Joe Hediger, veterinarian and MS student with the Patton Center for Deer Research, was selected to participate in a Clinic on Dynamical Approaches to Infectious Disease Data hosted by Stellenbosch University. This intensive, 1-week clinic provides an introduction to models used in the study of infectious disease dynamics. The skills obtained during this clinic will support CKWRI research projects aimed at managing wildlife diseases including CWD, anthrax, cattle fever, and COVID.

2022 is in the Books

by David G. Hewitt

Leroy G. Denman, Jr. Endowed Director
of Wildlife Research

I have the honor of reflecting back on 2022. My first thought is that I am feeling a bit of pressure to complete this letter because I am late. I started it a month ago (really!) but the time since has been every bit as busy as the rest of the year, continually pulling me away from the fun task of summarizing 2022.

The year began with a South Texas Charity Week-end that broke all expectations. Jeff Hildebrand was the honoree. Jeff, his family and friends, and others who care about the Kingsville community raised a lot of money for CKWRI and other beneficiaries. CKWRI will benefit long into the future because we used our proceeds to establish the Jeff Hildebrand Fellowship for Livestock-Wildlife Research which will support graduate student research in-perpetuity. The event was a home-run, and we are grateful.

March brought wildfires in rangelands adjacent to Kingsville and in oak forests gracing the Sand Sheet. These forests are especially important for wildlife, and they rarely burn. Their recovery will take time, but the oak sprouts coming up a couple weeks after fire showed the process has started. We are thankful for the ranch personnel and agency firefighters who kept these fires from burning structures and harming people.

The risk of fires dropped with heavy rains in May that brought great expectations for the summer when wildlife produce young and deer grow antlers. Unfortunately, June and July were dry across most of South Texas and the brushland was parched by early August. The skies finally opened up in August and September, kicking off a new round of quail nesting and turning pastures lush and green.

Although the summer was dry, it was still productive for CKWRI. Celia and Cornelius Dupre hosted their annual celebration of Caesar Kleberg in Basalt,

CO, and we had a fun evening with over 100 people who are passionate about wildlife conservation. A huge boost for CKWRI came during the summer with establishment of the Patton Center for Deer Research. Bobby and Sherri Patton endowed CKWRI's deer research program, providing the support necessary to ensure CKWRI remains one of the premier deer research centers in the nation.

The end of August brought a big change to CKWRI with the retirement of Becky Trant, a pillar at the Institute for over 30 years. Becky has always been deliberate and thoughtful in everything she does, and she laid the groundwork for a transition to make sure CKWRI will continue to thrive. Yolanda Ballard, Nancy Jennings, and Shyla Rabe stepped into leadership positions and the Institute's staff did not miss a beat, maintaining the high-standard of service for which CKWRI is known.

CKWRI is blessed. It is blessed with great students, staff, and scientists. The Institute is blessed with the privilege of working in a wildlife haven, conducting applied research to help land stewards manage and conserve the wildlife and plants that live here. CKWRI is blessed by supporters who care about wildlife as much as we do. This past year was a joy, and we look forward with great expectations to 2023. ~



Sandra Rideout-Hanzak

Live oaks in Kenedy County, Texas, that were top-killed by wildfire in March 2022 resprouted within weeks.

By The Numbers

39 Roseate Spoonbill chicks are not born with spoon-shaped bills. It takes approximately 39 days for their bills to flatten and round. (Roseate Spoonbill Overview. All About Birds, Cornell Lab of Ornithology. <https://www.allaboutbirds.org>)

Advisory Board

The Advisory Board of the Caesar Kleberg Wildlife Research Institute provides leadership in all aspects of our work. We are indebted to them for their commitment to the Institute and its mission.

Chad Auler
Gus T. Canales
T. Dan Friedkin

Jeff Hildebrand
Karen Hunke
David W. Killam (Chair)
Mason D. King

Chris Kleberg
Tio Kleberg
C. Berdon Lawrence
Tim Leach

Kenneth E. Leonard
Ellen B. Randall
Barry Coates Roberts
Stuart W. Stedman

Ben F. Vaughan, III
Bryan Wagner
Charles A. Williams

Emeriti: Henry R. Hamman, A.C. "Dick" Jones, IV and James A. McAllen

TSSRM Student Awards

CKWRI graduate students and TAMUK's Rangeland and Wildlife Sciences (RWS) Department undergraduate students brought home some fantastic honors from the 2022 Texas Section of the Society for Range Management annual meeting. We're proud of all the students who participated at TSSRM, and we congratulate the following award winners:

Plant ID Teams

- 1st Place, TAMUK, Team 1
- 3rd Place, TAMUK, Team 2

Plant ID Individuals

- 1st Place, Peter Cole, TAMUK RWS undergraduate
- 2nd Place, Joshua Allison, TAMUK RWS undergraduate

Graduate Student Oral Presentations

- 1st Place, Katie Pennartz
- 2nd Place, Lori Massey
- 3rd Place, Dakota Moberg

Graduate Student Poster Presentations

- 1st Place, Silverio Avila
- 2nd Place, Molly O'Brien
- 3rd Place, Edward Rhodes

3 Minute Thesis (3MT) Competition

- 1st Place, Forrest Fay

**It's now even easier
to make a donation
to CKWRI with this
QR code!**



TEXAS A&M
UNIVERSITY
KINGSVILLE

Caesar Kleberg Wildlife
Research Institute
700 University Boulevard
MSC 218
Kingsville, Texas 78363-8202

Editor: Sandra Rideout-Hanzak, Ph.D.

Wildlife Research is printed on recycled paper.

