



# THE ARIZONA WILDLIFER

2016 Issue 3

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Summer Edition

## Inside this issue:

<b>Regional News</b>	2
<b>Our Neck of the Woods</b>	5
<b>Student Voice</b>	8
<b>Volunteer Opportunity</b>	9
<b>Retrospective Raptor Study</b>	10
<b>Students Chapters and the Public Lands Issue</b>	11

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## The President's Message

As we move ever closer to next year's 50th Joint Annual Meeting and our chapter's subsequent 50th anniversary, folks are beginning to consider the past, current, and future states of our professional wildlife community. And so I find myself pondering the highlights and



pitfalls of the humbling opportunity I have as a wildlife biologist to make a small contribution toward the persistence of wildlife in a time of exponential growth: population growth, infrastructure growth, technological growth, and many other growths that should be cause for concern. I could rant for a bit on population growth, but this isn't an appropriate forum for such a diatribe. As a road ecologist, I've been lucky enough to contribute to infrastructure growth accommodations, such as the wildlife structures on SR 77 discussed by Jessica Moreno in the article below. But I think that the timeliest discussion revolves around technological growth.

We find ourselves in the midst of technological advances that are constantly providing new avenues to make more informed wildlife management decisions. We have solar-powered GPS collars that can track animal movements and transmit that data to satellites, allowing for real-time adaptive management decisions. We have mobile device applications that allow us to standardize and expand data collection efforts to a point where we can even engage members of the public in massive species distribution mapping efforts. We have drones that can generate fine-scale vegetation data or even survey for wildlife.

But our technological advances have also fundamentally changed the way people interface with the world. While I don't think we need to worry about Skynet or the Matrix for at least another decade, we have arrived in the computer-assisted world of Hal, and

*(Continued on page 2)*

## Presidents Message cont...

(Continued from page 1)

the marketing division of the Sirius Cybernetics Corporation is looming ominously on the horizon. In this digital age, the sheer volume of available information has become overwhelming. Unfortunately, the ease of dissemination has led to an inordinate amount of misinformation circulating the ether. Although much of it is benign from a wildlife-conservation perspective, well-intentioned people are getting behind causes that are in opposition to the health and well-being of our natural ecosystems, in part due to the misinformation swirling around the internet. I have come to expect resistance to conservation measures from folks who do not value wildlife, and I can respect their perspective even if I don't agree with it. More frustrating to me are the would-be defenders of animals who have aligned themselves in support of invasive, feral species over the persistence of our native fauna and flora. I understand the draw and charisma of these species: horses are majestic, lovebirds are beautiful, cats have "personality," and burros, well, they're big and rather tolerant of people – I guess I'm not as in tune with what burros have going on that people rank their welfare above so many native species. Regardless, the misinformation and emotionally-charged rhetoric streaming across the ether makes it difficult for many to grasp just how devastating these invasive species can be on our already imperiled ecosystems.

What it's taking me so long to get around to is that we, as biologists – as scientists – have a responsibility, in the name of conservation and animal welfare, to offer direction to those on an errant path. So, please, the next time your Facebook friend shares a post asking for support in protecting the Salt River population of "wild" horses, please take a moment to tactfully correct him or her. They are not wildlife; they are feral. Direct your friends to The Wildlife Society position statements on Feral and Free-Ranging Domestic Cats and Feral

(Continued on page 3)

## Regional News:

### Highlights from SW Section Representative to TWS Council

By: Fidel Hernandez

Summer is upon us, and time is slowing down. The spring semesters have concluded, and the days are lengthening. I doubt there will be anyone who does not feel summer's tug for some get-away time. I know I will. But, before we venture off to our summer retreat, I want to provide you with a brief update on TWS happenings.



#### Publications

There have been quite a few changes in the publications of The Wildlife Society (TWS). Some have occurred recently, within the past year. Others are being implemented this year or will be in the near future. One of these changes is that the number of issues for *The Wildlife Professional* has increased from 4 to 6. This increase in the number of issues is due in part to the efforts of Nancy Sasavage, the Director of Publications and Communications for TWS, and her staff in reducing costs and increasing efficiency. Be sure to see the May-June Issue, which focuses on State Wildlife Action Plans.

There also have been a few changes regarding editors of TWS scientific publications. As most of you know by now, Dr. Paul Krausman and Dr. David Haukos have begun their terms as Editor-In-Chief of the *Journal of Wildlife Management* and *Wildlife Society Bulletin*, respectively. One of the things that has confused authors over the years is that they usually have doubts regarding which journal their study is most suited for. Fortunately, both editors have developed guidelines to clarify this issue. You can find their advice and guidelines for deciding where to submit your article in the *Journal of Wildlife Management* (Volume 80: 189-191) and the *Wildlife Society Bulletin* (Volume 40: 5-6). In addition, Drs. Krausman and Haukos have developed uniform au-

(Continued on page 3)

## Presidents Message cont...

*(Continued from page 2)*

Horses and Burros in North America, which offer sound science and the consensus stance of wildlife biologists across the continent.

I also encourage you to continue learning and exploring the science of our world. As part of that, please enjoy the articles in this issue of the newsletter. If you're interested in reading past issues, or in learning more about the Arizona Chapter, check out our ever-improving website at <http://aztws.com>. And please consider submitting an article to the newsletter. If you have suggestions regarding improving any aspect of the Arizona Chapter of The Wildlife Society, I welcome your comments. Please email me at [ssprague@azgfd.gov](mailto:ssprague@azgfd.gov).

Scott Sprague  
AZTWS Chapter President

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“Human beings, who are almost unique in having the ability to learn from the experience of others, are also remarkable for their apparent disinclination to do so.”

~ Douglas Adams

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## Standing Invitation!

Submit your valued co-workers and partners for one of our Chapter Awards (see criteria at <http://aztws.com>, then click on “Awards”). Let’s recognize our finest! Submit your nominations to our President Elect, Kay Nicholson ([knicholson@logansimpson.com](mailto:knicholson@logansimpson.com)).

Also: Please consider becoming active with the Chapter as an officer or board member. Again, contact Kay Nicholson ([knicholson@logansimpson.com](mailto:knicholson@logansimpson.com)) to register your interest. We’d love to have you on our board!

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## Regional News cont...

*(Continued from page 2)*

thor guidelines for both journals to facilitate the submission process!

A possible change that will be arising in the future is the topic of open access. Some funding agencies now require that publications arising from their funded research be open access. As such, TWS is having numerous conversations with Wiley Publishihng on issues such as Open Access, Open Data, and Impact Factors. Currently, TWS journals have an open access option for authors for an additional charge, but more changes may be happening over the next several years as the publishing landscape changes with open access mandates.

### General Operations

Trends in TWS membership continue to increase. Membership increased to 8,989 by April 2016. Part of this success is due to stronger renewal rates and membership growth because of the launching of an Automatic Renewal option in the online forms. As of April, approximately 35% of new members have chosen Automatic Renewal. This new feature will minimize membership lapses and make life easier for both current and new members.

Another membership improvement that is in-progress is the development of a TWS Network Online Directory. It is currently in its testing phase, but this feature soon will be available to members. In a recent TWS Membership Survey, networking was listed as one of the most important benefits of TWS. This in-progress network online directory will provide TWS members this valuable opportunity.

And, lastly, for those of you engaged in digital content and social media, you’ll be happy to know that TWS now has a social media audience of more than 100,000 people. During the recent Council meeting held in early March, TWS only had an audience of 92,500. Thus, the TWS audience has increased by 8.6% in just the last two months! Be sure to follow TWS happenings through its social media outlets.

### Upcoming Annual Conference

In closing, I’d like to remind you that the 23rd Annu-

*(Continued on page 4)*

## Regional News cont...

(Continued from page 3)

al Conference will be held in Raleigh, North Carolina during October 15–19, 2016. This year's conference will feature 4 Plenary/Keynote Sessions and more than 40 networking opportunities and 600 educational sessions. There also will be 4 field trips that highlight the natural beauty and natural history of the state. Here is a brief window into the Plenary/Keynote sessions:

- **Plenary 1:** Expanding Partnerships Vital to the Future of Wildlife
- **Plenary 2:** The Past, the Present and the Future of Invasive Species Control in North America: Achieving Success through Innovation
- **Plenary 3:** Is Sustainable Use of Wildlife Sustainable?
- **Keynote 1:** Public-Private Partnerships for Conservation

Attendance at annual conferences has been increasing in recent years. Correspondingly, TWS has continued to increase the services and value of the conference to members. TWS has expanded the capacity for concurrent sessions from 10 to 12 for this year's conference and will have a daily plenary or keynote session to kick off each morning. In addition, TWS has accepted 12 workshops, 25 symposia (5 more than last year), and three panel discussions. It is anticipated that the total number of paper and poster submissions is only second to Hawaii in the past ten years! To find out more about the conference, please visit the conference website at <http://www.twsconference.org/>.

Well, that is it for now. Enjoy your summer. Be sure to take some time off to refresh and renew, whether at the beach or on the mountains.

Until next time,

*Fidel Hernández*

Fidel Hernández  
Southwest Section Representative of TWS

## AZTWS Continuing Education Grant

Applications may be submitted at any time and will be reviewed quarterly by the Committee in January, April, July, and October. Applicants will be notified of the Committee's decision within 30 days of the Committee's review. The Continuing Education Committee evaluates applications based on your explanation of how the activity will enhance your career development, your financial need, your efforts to obtain supplemental funding, and your involvement in Chapter activities.

Total available grant amounts are limited to \$2,000 per year with the maximum individual grant capped at \$1,000. Grants are limited to Chapter members.

Grant application forms are available on the Chapter WebPages at <https://aztws.com/resources/continuinged/>, or may be obtained from the Chairman of the Continuing Education Committee, Stan Cunningham ([Stanley.Cunningham@asu.edu](mailto:Stanley.Cunningham@asu.edu)).



We need articles, stories and pictures for upcoming newsletters.

### *The Arizona Wildlifer Deadlines*

<u>Issue</u>	<u>Deadline</u>
<b>Fall 2016</b>	<b>Sep 16, 2016</b>
<b>Winter 2016</b>	<b>Dec 16, 2016</b>

Email submissions to: [aztwseditor@gmail.com](mailto:aztwseditor@gmail.com)

# Our Neck of The Woods...

## Crossing with Wildlife

By Jessica Moreno, Conservation Manager, Sky Island Alliance

My eyes swiftly swept across the straw covered embankment as I climbed, looking for the pointed toes of deer tracks. There! My hands were full of flagging and wire and I scrambled to stake yellow flags next to the clearest tracks before the crowd caught up with me. Well over one hundred people were in my wake, their conversation a low hum that blended with the sound of traffic on the newly widened Oracle Road, north of Tucson. It was a once in a lifetime opportunity for them, to see southern Arizona's first wildlife overpass before it was closed to the public and officially opened for its intended purpose. It was a culminating moment for me, to see finally the result of over 20 years of work and passion and collaboration.

### Beginnings

My entry into this project and the field of road ecology began in 2007. I was fresh out of college with a shiny new degree in Wildlife Management and Conservation from the University of Arizona. I dove into citizen sciencery, tracking wildlife using track and sign surveys and cameras as a volunteer, and then a volunteer coordinator, and was soon hired by the local nonprofit Sky Island Alliance. I was thrilled to experience seeing jaguar tracks in the Sonoran borderlands of Mexico, documenting the first evidence of ocelots breeding in the region, and the first ocelot in Arizona. My position with Sky Island Alliance was a perfect fit for my skills and personality, as the Wildlife Linkages Program Coordinator. With the job I inherited a dream and a plan that wildlife could one day move as they needed between mountain ranges, and roadkill would be a thing of the past. Specifically, connecting the Catalina and Tortolita mountains, and the Tortolita and Tucson Mountains, thus building agreenbelt of wildlife movement and open space that would, in addition to safeguarding wildlife populations, improve our quality of life and create lifeline for Saguaro National Park West.

### Coming Together

I have found that becoming a successful wildlife biologist requires working with people, even more so than working with



Jessica Moreno, second from the left, in the field with ADOT biologists and engineers

*(Continued on page 6)*

## Wildlife Crossing cont...

(Continued from page 5)

the animals we first fell in love with, or working in the outdoor nature settings we traded high-paying corporate career paths for. It is an uphill battle, requiring both patience and an open mind to understand different viewpoints. But when people together, as it did here, miraculous tasks can be accomplished. Sky Island Alliance joined the Coalition for Sonoran Desert Protection, Tucson Audubon Society, and many others, to secure voter-approved funding for wildlife crossing structures. With agency and academic partners, like the Arizona Game and Fish Department, Dr. Paul Beier, and NAU, we helped map the corridors wildlife were using and provided the data to justify where and why wildlife crossings were needed. Engineers and

transportation planners taught me about the behind-the-scenes mechanics of wildlife crossing construction, and sparked my interest in innovative design and adaptive management. We designed deer jump-out structures on napkins and discussed the conflicting issues of erosion control and deer and tortoise passage, and laughed together with the engineer's realization that wildlife must also be able to move upstream, unlike water.

Oracle Road's new wildlife overpass, the sister underpass not one mile south of it, and several miles of



Mule deer on the new wildlife bridge on Oracle Road. ©AZGFD



Coyote using the new wildlife underpass on Oracle Road. ©AZGFD

wildlife exclusion fencing and wildlife safety jump-outs, are a result of many years of community collaboration among local and state jurisdictions, elected officials, conservation groups, volunteers, and neighbors. Even more miraculous, this project is unique from others in the country in that it was funded by a countywide voter-approved excise tax of the Pima County Regional Transportation Authority – the \$11 million dollar project was paid for out of \$45 million established and set aside by voters for wildlife linkage protection. It was built by the Arizona Department of Transportation, and connects wildlife habitat and open space managed by the Arizona State Land Department, U.S. Forest Service, and Rancho Vistoso Homeowners Association. It is also uniquely placed. This is not a wildlife bridge spanning a highway in the wilder-

(Continued on page 7)

## Wildlife Crossing cont...

(Continued from page 6)

ness. These structures are right in the center of a quickly growing urban community, connecting the much-visited Catalina State Park and Coronado National Forest to the east and the Tortolita Mountains to the west. Churchgoers and horseback riders can see the wildlife crossings from the church and stable parking lots. Yet living among us here are mule deer, bighorn sheep, mountain lions, bobcats, badgers, skunks, raccoons, white-nose coati, javelinas, coyotes, desert tortoises, and many more.

### If You Build It, They Will Cross

How soon would we know that the new crossings work and the money was well spent? Usually, I must counsel patience. It can take time for animals to learn new patterns and behaviors, and for monitoring results and reduced crash statistics to publish. But last fall, Jesse Espinoza watched a Sonoran desert tortoise (*Gopherus morafkai*) make its way through the new wildlife underpass, traveling west, before it ran into Granite Construction employees working on the underpass structure on the western end. He carefully helped the tortoise complete his journey a safe distance from the construction before taking photos of the first animal to use the structure, before construction was even complete. Within weeks of Arizona Game and Fish Department staff setting up their impressive array of state-of-the-art video surveillance and still game cameras, we had evidence of herds of deer, coyotes and other animals using the crossings. At night, the headlights of oncoming traffic are visible as deer make their way across the bridge: each passing light a signal of a vehicle collision avoided. The animals were crossing.

### The Next Step

Standing on top of the wildlife bridge, I enjoyed the morning sun as I fielded questions from the crowd and shared congratulations and excitement with friends, partners and volunteers. The view of the Catalina Mountains at my back, and the deer tracks at my feet, were heartwarming. It has been almost ten years since I first became a part of this project, but I was already planning wildlife tracking surveys and a study design for monitoring species here using track plates. I was envisioning revegetation plans and how the bridge would look once native plants took root. My mind was abuzz with the next step, the next success. People were slowly shepherded away to see the nearby wildlife underpass and to enjoy the reception celebration, leaving behind only their footprints. As I picked up flagging stakes on my way down the hill, I couldn't help but smile.

See the first video of deer crossing at <https://www.youtube.com/watch?v=oLcfwGMF7Xk>.

Contribute roadkill sightings and wildlife observations at <http://www.inaturalist.org/projects/sky-island-nature-watch>.



A view from on top of the new wildlife bridge on Oracle Road.  
© Sky Island Alliance

# Student Voice

## **The Wildlife Society Arizona Chapter Annual Techniques Workshop A Student's Perspective**

**By Nicholas Riso, Prescott College Student**

This was my second time attending The Wildlife Society's (TWS) annual techniques workshop at Horseshoe Ranch, and to me it seemed like there was quite a bit more students this year. Having participated mostly for my own interest, I also attended as part of a Behavior and Conservation of Mammals upper division course at Prescott College along with three other classmates. It was great to be able to see conservation at work through technique demonstrations, online applications, and professional networking.

Although the CODA net gun is always a blast (literally), I enjoyed honing my skills with radio-telemetry. My only experience with it was last year where I worked with a classmate to find the transmitters, while taking a more observatory role. Most recently, I chose to work solo to find as many "expert" placed transmitters hidden by Jonathan Hicks and Scott Sprague. It was awesome to pay really close attention to the audio details of the unit and not get distracted by wanting to actually see the transmitter. What I found most helpful was to determine an initial direction of travel, and then situate myself in an ideal place to pick another direction. After doing this multiple times and getting some insight from the instructors, I was happy to locate three of the transmitters. Claire Reardon, a fellow classmate and prospective President for next year's Prescott College Chapter of TWS found all of the transmitters that were expertly hidden and was even awarded a T-shirt!

Activities like this are not only good fun, but also awesome opportunities to gain professional resources and skills that are helpful when pursuing a career in the field of wildlife biology. By participating for the second time, I was able to practice what I was already familiar with and strive to get the most out of workshops that were new to me such as the necropsy demonstration. A big thank you from Prescott College to The Wildlife Society, Arizona Game and Fish Department and Holly Hicks for putting on this event. I look forward to attending next year and I am sure many others do as well.

## **Arizona State University Wildlife and Restoration Student Association Report**

**By Marina Copeland**

The Wildlife and Restoration Student Association (WRSA) has recently changed officers. The new officers are Vice President of The Wildlife Society, Cheyenne Herzog; Vice President of the Society of Range Management, Jake Draper; Vice President of the American Fisheries Society, James Ecton; Secretary and Treasurer, Caitlon Hartzell; and myself, newly elected President of WRSA, Marina Copeland.

My primary goal as the new President of WRSA is to facilitate volunteer opportunities with a wide spectrum of public and private agencies. Many students, myself included, look to these experiences to help refine our education, build resumes, and expand career goals. We get a glimpse of our desired working world beyond the classroom, and we get to jump start lifelong connections with our future peers.

*(Continued on page 9)*



## Student Voice, cont...

*(Continued from page 8)*

The Joint Annual Meeting with The Wildlife Society is an exciting time for students to connect with professionals and non-professionals on their past, present, and future projects. I would like to extend my congratulations to last year's WRSA president, Jessica Latzko, and vice presidents, Sky Arnett-Romero, James Ecton, and Jacque Evans, on winning the quiz bowl traveling trophy. This year we hope to keep it in Arizona.

Lastly, in line with our goals, WRSA will be hosting a resume building and mock interview workshop with professionals from AZ Game & Fish Department, US Fish & Wildlife Service, US Forest Service, and ASU professors. Many students who participate in the workshop last year found it to be very beneficial, and I want this years to be just as successful.

## Volunteer Opportunity! 2016 Desert Tortoise Surveys at Sugarloaf

The Arizona Game and Fish Department has been monitoring tortoises at this site since the early 90's, results of which have provided information on reproduction, survivorship, and juvenile desert tortoise natural history, habitat selection, and movement. You can help continue monitoring this population through four capture-recapture surveys that will be conducted during the 2016 monsoon season. Surveys involve hiking/bouldering in search of active and inactive tortoises in shelters. With the steep terrain, the hiking can be very strenuous. You should be prepared for the potential to run into catclaw acacia and encounter rattlesnakes (e.g., black-tailed, western diamondback, and tiger rattlesnakes). Because of the difficulty of the terrain, this opportunity is limited to volunteers who are at least 18 years old.

You will need to wear sturdy hiking shoes, preferably hiking boots, and long pants. Bring a pack with water and snacks. The site is off Arizona State Route 87 (the Beeline Highway) about 15 miles North of Fountain Hills. It takes about an hour to get there from central Phoenix.

### Upcoming survey dates:

Wednesday, August 17, 2016

Friday, September 16, 2016

Friday, October 7, 2016

In August, meet at the site at 5:30am. The survey usually lasts until 10 or 11am, depending on temperatures and tortoise activity.

If you would like to participate, **send an email** with the following information to Cristina Jones ([cajones@azgfd.gov](mailto:cajones@azgfd.gov)):

- **Your full name**
- **Your phone number**
- **The date(s) you are interested in**
- If signing up multiple volunteers, send contact information for each individual and copy them on the email to Cristina.

After sending an email to register interest in volunteering, Cristina will send you a confirmation e-mail with directions to the site, a list of specific items to bring, and what to expect.



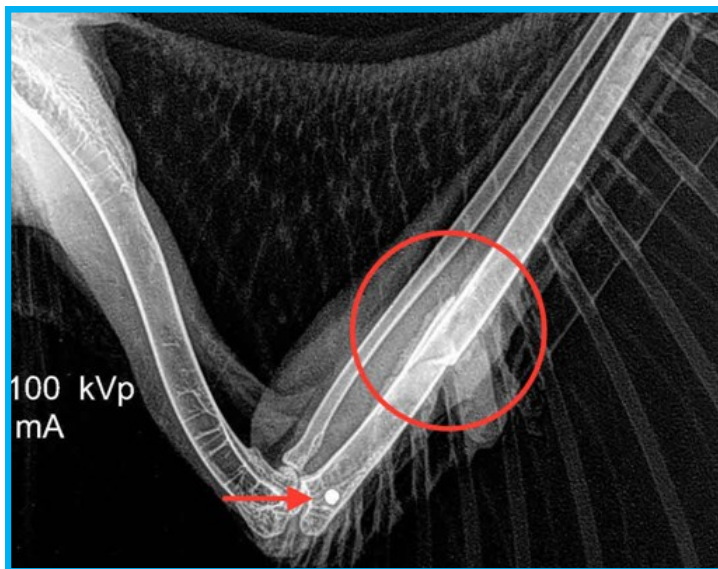
One of the study tortoises

# Retrospective Study of Raptors at a Wildlife Rehabilitation Center

## Fractures and Bullets

By Mike Sorum DVM

Liberty Wildlife Rehabilitation Center admits hundreds of raptors yearly for injuries or disease. Once admitted, if a fracture is suspected, radiographs are taken to determine the bone involved. A surgical plan and prognosis is then decided. Of those that have fractures, many have pellets or shot near the fracture or within the body. Both federal and state laws protect raptors making this a regulatory issue. Radiographs below illustrate the significance of this problem.



*(Continued on page 11)*

## Retrospective Raptor Study, cont...

(Continued from page 10)



## Student Chapters Getting Involved in the Public Lands Issue

By Jon Hanna, Chairperson, Conservation Affairs Committee

For years I have had discussions with wildlife professionals about the role of The Wildlife Society and science and politics. Most of the perspective is that we are wildlife professionals that present unbiased data to governments or politicians so they can make informed decisions on our scientific data. If we look at this argument from the perspective of climate change we can see that this strategy doesn't always work. Also if we look at the issue of managing public lands, the Wildlife Society looks at this as a political issue and not one to take a scientific policy stance. With that being the case I think the student chapters in Arizona can take up the public lands challenge and emulate students from the University of Montana (ASUM) and Montana State University (ASMSU) that passed resolutions this spring urging elected officials to maintain federal management of American public lands. The following paragraph is an excerpt from the July 5, 2016, issue of the Bozeman Daily Chronicle by guest columnist Matthew Campbell.

"Having recognized federal public lands as an essential part of Montana's heritage, a majority of Montanans, including students at UM and MSU, are appalled by the short-sighted and irresponsible agenda to transfer ownership or management of American public lands to state or private hands. Representatives within both UM's and MSU's student bodies believe that our congressional delegation, our governor, and our state representatives have a responsibility to their constituents to maintain the natural heritage of Montana by ensuring that federally-owned public lands in Montana are not transferred to state or private hands."