



THE ARIZONA WILDLIFER

2016 Issue I

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Winter Edition

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The President's Message

It is hard to believe that I am already closing out my year as AZ TWS president. It truly has gone by fast, and has been a very rewarding year for me. I have made new contacts with fellow wildlife professionals and students, strengthened old relationships, have learned the challenges of running an excellent chapter such as this one, and become educated on the ins and outs of planning an annual professional meeting.

As I finish up my year, I would like to thank all the officers on my board for their outstanding and dedicated service this past year. I would not have accomplished anything without them, it has been a pleasure working with them, and they have been invaluable to me during my year as president. Finally, I would like to thank all of you as members who go above and beyond your normal call of duty to wildlife, and to the society, and who strive to be the best wildlife professionals you can be.

And since the majority of this past year has been spent preparing for this upcoming AZ NM Joint Annual Meeting, I feel it important to recognize all my hardworking committee chairs who have helped with the planning, and whose help has been invaluable. They are: Melanie Bucci, Christopher Carrillo, Jon Hanna, Holly Hicks, Christina Kondrat-Smith, Brett Montgomery, Kay Nicholson, Audrey Owens, Sarah Rinkevich, Ryan Revells, Natalie Robb, Scott Sprague, Chase Voirin, and Dana Warnecke. In addition I would like to thank two incredibly helpful and experienced AFS and TWS individuals who are not committee chairs but have been involved all along the way – thank you Sharon Lashway and Tom Hildebrandt. The 2016 AZ NM JAM would not have been



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Presidents Message cont...

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organized without all these dedicated professionals.

As I reflect on what issues we are facing as wildlife professionals, many of them are the result of facing so much change. Change in environmental conditions, change in biodiversity (including disease and exotics), change in technologies we use (that we need to keep apprised of), change in policies, change in governments, change in funding availability, even change in our own agencies. How can we best deal with all the change we are faced with?

The same way the wildlife does, adapt to and learn to keep up with the pace of change. We as wildlife professionals need to be flexible, strive to learn new techniques, and then apply these techniques to wildlife management challenges. Whether the management challenges you face are with game species, non-game species, habitat-related, or at the boundary where the values of managing one species competes with the values of managing another species, there are new ideas and methods out there to help you. At the upcoming AZ NM JAM in Flagstaff there will be many great learning opportunities to help with many of the issues you are facing in your professional life. I cannot guarantee we will address all your wildlife problems, but in particular, we have workshops on Interviewing and Resume Building; Conservation Advocacy and Becoming a Compelling Communicator; New Technologies for Wildlife; Piscicide Applications; Venomous Reptile Handling; and Climate Change Issues Relevant to Wildlife – not to mention more than 100 technical talks about numerous aspects of fish and wildlife habitat, ecology and management – plus a thought provoking Plenary Session on “Who will manage the future of our public lands.” I look forward to seeing you at the educational workshops and plenary session in addition to the rest of the JAM.

Enjoy the articles in this issue of the Newsletter and if you are interested in reading past issues, or in learning more about the Arizona Chapter, check out the ever improving website

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Regional News:

Highlights from SW Section Representative to TWS Council

By: Fidel Hernández



Welcome

Hello Fellow Chapter and SW Section Members,

This is my inaugural newsletter article as your Southwest Section Representative. I recently assumed this role at the 22nd Annual Conference of The Wildlife Society (TWS) in Winnipeg, Manitoba in October. As you know, Carol Chambers was our representative for the past 6 years and did an outstanding job. I was able to attend the Council meetings prior to the beginning of the conference, and it was a great experience to shadow Carol during these few days and learn gems of wisdom from her 6-year tenure as the SW Section representative. She has been a tremendous help getting me up-to-speed on the workings of the Section and TWS Council. Her wealth of experience has been invaluable during this transition, and I sincerely appreciate her willingness to help. Thank you, Carol.

I look forward to serving as your TWS Council representative for the next 3 years. My goal is to build on Carol's success during the past 2 terms and cultivate the energy, enthusiasm, and excitement that currently surrounds the Section and our parent Society.

In a Nutshell

Below is a concise synopsis of the latest happenings at the national level based on our recent TWS Council meetings in Winnipeg. You may find additional information in the respective sections following these bulleted highlights.

After a recent decline in TWS membership, this member loss rate has been curbed and efforts now are focused on growing the numbers through recruitment and retention. Current membership is about 9,400 members.

Financially, 2013 was the turn-around year for TWS. TWS currently is exhibiting financial growth and is

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Presidents Message cont...

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at <http://aztws.com>. Also, please consider submitting your interesting articles to the newsletter. And if you have suggestions regarding improving any aspect of the Arizona Chapter of The Wildlife Society, I welcome your comments and please email me at culver@ag.arizona.edu.

Melanie Culver, AZTWS Chapter President

Facebook: <https://www.facebook.com/AZTWS>

Twitter: <https://twitter.com/aztws>

Regional News cont...

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experiencing accelerated progress in financial equity.

The 22nd Annual Conference of TWS in Winnipeg, Manitoba was a tremendous success. It met or exceeded all performance indicators and had more than 1,500 attendees.

Many exciting new changes have been or will be implemented during the coming months to better serve TWS membership and increase the value of membership. For example, The Wildlife Professional (TWP) has increased its offering from 4 to 6 issues per year. In addition, a new partnership with American Public University (APU) allows TWS members to enroll in courses at a reduced cost. This is an important new change given that APU has restructured its curriculum and now offers courses that apply towards wildlife certification should members be lacking in particular courses.

Our new President, Gary Potts, has outlined his presidency goals and is focusing his sights on increasing and facilitating TWS engagement with state, provincial, and federal agencies. He is working closely with the Association of Fish and Wildlife Agencies (AFWA) to strengthen these ties.

Membership

TWS membership has stabilized after a recent decline. Current membership is at 9,403. This is only 84 members down from last year, and TWS membership shows evidence that the steep downward trend has been arrested. Part of the reason for this stabilizing trend reflects focused work on improving benefits to members such as a new website, conference enhancements, and service to Sections and Chapters. The current member composition is 55% regular members, 26% students, 9% new professionals, and 9% retirees. The greatest gains in membership were in the student category; the greatest losses were in the professional category. A recent analysis of TWS membership indicated that the greatest loss occurred during the first year of membership and that improvements in retention of first-year members needed to involve better communication of membership benefits. TWS also noted upcoming changes to increase benefits to current members including greater frequency of The Wildlife Professional, updating the Member Directory, launching a conference presentation archive and a policy database, and offering a 5% discount on courses taken from American Public University.

Finances

The financial status and outlook for TWS has improved greatly in recent years. In reviewing the operational budget for July 2014 – June 2015, actual revenues (\$2,446,079) were higher than expected rev-

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Regional News cont...

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venues (\$2,329,912), and actual expenses (\$2,255,900) were lower than expected expenses (\$2,282,477). This resulted in a surplus (\$237,888) that was nearly twice the anticipated surplus (\$122,435) in the budget. In addition, the total equity position for TWS increased dramatically over the year, with a growth in equity of \$190,368 or 21%. This represented a remarkable improvement in the financial situation of TWS. One reason for this improvement was significant growth in the Contributions category. TWS has invested in development positions and has experienced subsequent success in attracting outside financial support. One of its new initiatives was The 1,000, a program started in June 2014 by TWS Chief Operating Officer Ed Thompson and former President Bruce Leopold. The goal of the initiative is to unify 1,000 members through annual donations ranging from \$100 to \$1,000 in support of TWS Strategic Plan Initiatives. The 1,000 exceeded expectations (~\$50,000) and generated \$104,000 in its first year.

Annual Conference

The 22nd Annual Conference in Winnipeg, Manitoba was a tremendous success. Conference registration exceeded 1,500 attendees and placed Winnipeg in the top 3 of the last 9 conferences. The conference revenue goal of \$220,000 was exceeded, and there was evidence of increased member engagement including sold-out fieldtrips and increased workshop registration. Student participation was high, comprising 46% of registrants. The Southwest Section shined at the annual conference, with several Chapter members of the Section winning national awards:

Excellence in Wildlife Education: Nova J. Silvy, Texas A&M University

Ethnic and Gender Diversity Award: Diana Dona-Crider, Texas A&M University

TWS Outstanding Book: Wildlife Science: Connecting Research and Management by Joseph P. Sands, Stephen J. DeMaso, Matthew J. Schnupp, and Leonard A. Brennan, Texas A&M University-Kingsville

Student Chapter of The Wildlife Society: Texas A&M University-Kingsville

TWS Fellow: David G. Hewitt (Texas A&M University-Kingsville), Jim Ramakka (Retired)

In addition, TWS approved interim status for two new student chapters: Student Chapter of TWS at University of Arizona- Yuma and the Student Chapter of TWS at Texas Christian University. We look forward to supporting and engaging with these new student chapters as they work towards achieving permanent status.

Please mark your calendar for the 23rd Annual Conference, which will be held in Raleigh, North Carolina during October 15–19, 2016. Also, note that the annual conference will come home to where it all started, the Southwest, for 2017. The 24th Annual Conference will be held in Albuquerque, New Mexico during September 23-27, 2017. Quentin Hays, President of the New Mexico Chapter of TWS, is chairing the Local Arrangements committee and is leading the charge for the conference. The NM Chapter has begun the planning process for the 2017 annual conference. Quentin will be identifying the strategic needs during the coming months, so stay tuned for future details. As the details unfold, we look forward to helping Quentin and the NM Chapter of TWS in making the conference a success.

Presidential Agenda for Incoming TWS President Gary Potts

President Potts announced his theme for his TWS presidency: Expanding the Partnership. President

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Potts will use the recent survey on TWS members as a foundation for strengthening linkages with state, provincial, and federal agencies. His personal attention will focus on AFWA and strengthening the TWS-AFWA partnership. President Potts has noted that AFWA and its constituent agencies depend on societies like TWS for the latest science, continuing education, certification, and innovative thinking. He shared examples including online access of TWS journals for state and provincial agencies and a forum for addressing science and issues concerning lead (Pb) in the environment, the latter of which resulted in a new Lead Science Website for AFWA members. President Potts also noted progress in communicating work of the state and provincial wildlife agencies through The Wildlife Professional. He identified ongoing science needs including pre-listing species conservation; landscape-scale habitat analysis; drought, fire, and climate analyses; and data information and management. He noted that new and emerging technologies, training, certification, and continuing education are another area where TWS could be of great service to states and provinces. States highly value certification, with about 15-20 states identifying certification as important in recruitment. President Potts also challenged Section Representatives to outreach to State and Student Chapters to increase local involvement. President Potts will have an article featured in The Wildlife Professional describing his goal of expanding the partnership. In addition, next year's annual conference in Raleigh will have an opening plenary on this theme.

There are numerous exciting changes occurring at the national level. I encourage you to remain involved. Thank you for this wonderful opportunity to represent our SW Section. If I can be of any help, please do not hesitate to contact me via e-mail (fidel.hernandez@tamuk.edu) or phone (361-593-3926).

Until next time,

Fidel Hernández

Fidel Hernández

We need articles, stories and pictures for upcoming newsletters.

The Arizona Wildlifer Deadlines

<u>Issue</u>	<u>Deadline</u>
Spring 2016	Mar 11, 2016
Summer 2016	June 11, 2016

Email submissions to: aztwseditor@gmail.com

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, Scott Sprague (ssprague@azgfd.gov).

Also: Please consider becoming active with the Chapter as an officer or board member. Again, contact Scott Sprague (ssprague@azgfd.gov) to register your interest. We'd love to have you on our board!

Our Neck of The Woods...

Wildlife and Habitat Restoration in the Chiricahuas: Bringing Back the Water

By Jan Schipper, Post-doctoral Fellow, Arizona State University and the Phoenix Zoo

In arid regions, surface water plays an incredibly important role in shaping the animal communities that occupy an area – for many species it's the only means they have for accessing this limiting resource. Large bodied mammals have particularly high water needs. Unlike many of the smaller desert adapted mammals who can get water from their food, larger animals need access to surface water to survive. But this does not mean that simply adding water is the solution.

In arid regions where humans have settled, surface water is also one of the first resources to disappear, or to be diverted into channels and moved elsewhere. A long history of human occupation in Arizona has left many of it's rivers dry – many perennial rivers have become intermittent or even ephemeral. Early accounts of trappers were attracted to Arizona by the vast numbers of beaver, if that's any indication of how different things are now. So to say that humans have changed the availability of water on the landscape in Arizona is an understatement – and in so doing we have reshaped the communities of animals that rely on surface water.



Beaver (*Castor canadensis*), a landscape engineer who specializes in retaining surface water, was among the first to disappear in Arizona – but not because of water shortage. Beaver were an abundant resource that brought some of the first settlers to the desert southwest. In “Man and Wildlife in Arizona”, Goode Davis explains how early trappers describe the Gila River, between its confluence with the Salt River (Phoenix) to the Colorado River (Yuma) as: “200 yards wide, with heavily timbered bottoms”. Today no water remains in that river section, just as no water from Arizona is able to reach the sea.



Southern Arizona's river systems – and the narrow bands of riparian forest they support – were once natural corridors which promoted the seasonal and annual movement and life cycles of wildlife across an otherwise inhospitable desert terrain. Grizzly bears and wolf packs would follow these threads of green from the Colorado Plateau southward through the Sky Islands and into the Sierra Madre Mountains – a journey that today would be nearly impossible given the almost complete lack of perennial water along the way.

Not just corridors, however, these narrow green strips also support entire ecosystems of plants and animals found nowhere else. But as surface water disappears, so do the cottonwoods, willows and the willow flycatchers they support. Driving across Arizona today it is nearly impossible to imagine

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ited and limiting resource. Attempts have been made to restore surface water for large vertebrates, namely so called “wildlife water”. However, time and time again we have learned that it is not just as simple as putting water tanks out in the desert

To evaluate the impact watershed restoration has had on large vertebrates, we used camera traps to conduct wildlife surveys across paired watersheds in the western Chiricahua Mountains – Turkey and Rock Creek. Turkey Creek has a 30-year history of watershed restoration in some of its reaches, and provides an excellent example of a free flowing perennial creek (Turkey Pen). Not ironically, watershed restoration is really just mimicking what beaver used to do for us – only using rocks. So for the past 30 years Valer and Josiah Austin, together with countless volunteers, built loose rock structures by the thousands – to slow water down as it came down the western flanks of the Chiricahuas. Slowing the water builds up soil, which acts like a sponge and stores water – slowly releasing it and creating a new riparian microhabitat.

Rock Creek, immediately to the north, has not been restored; however, it is similar to Turkey Creek in many other ways – thus allowing us to make some interesting comparisons. In theory, we have an opportunity to test some assumptions about water restoration projects and wildlife communities in two proximate watersheds with very different surface water availability. However there are many other factors besides water, including fire and grazing histories, which can impact wildlife – so we attempted to balance as many covariates as possible with a robust sample size. Landscapes do not easily comply with our notion of replication in science.

Camera-traps offer a good opportunity to evaluate wildlife species in a given area – and increasingly analytical tools are available to help sort, manage and summarize photographic data. However, this tool is not without its challenges – although camera-traps are rapidly becoming a “go-to” tool for resource and land managers, researchers, and hobbyists to document wildlife – getting an adequate sample size means having a lot of cameras over a large area. This can be expensive and logistically challenging, especially when working outside of protected areas where there can be many land owners. During this study we used approximately 50 cameras in a 1km grid to saturate the available study area.

Immediately, a spatial constraint we faced was needing to limit the study area to avoid designated Wilderness Areas, where the use of such technology can be interpreted to violate the construct of the Wilderness Act of 1964. This limited our access to high-elevation areas and, thus, our ability to look at wildlife use of these habitats seasonally, but it did not influence the

that rivers and streams (and not just linear irrigation canals) once meandered across the desert connecting the mountains to the sea. But no longer – today we see a different picture. Surface water is almost entirely under the direction of mankind – we channelize it, fence it off and make it nearly inaccessible to nature. Rivers that start in the mountains slowly disappear into the sand to recharge aquifers, depleted by increasingly deep wells, among other things.

Understanding this historical context is critical to thinking about the issues of surface water in the Southwest today, and especially as we continue to try and restore and protect what remains of this limited

and limiting resource. Attempts have been made to restore surface water for large vertebrates, namely so called “wildlife water”. However, time and time again we have learned that it is not just as simple as putting water tanks out in the desert



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Habitat Restoration cont...

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ability to balance the design between restored and unrestored watershed.

In the course of 2 years of sampling, we obtained over 2 million photographs from these watersheds. This incredibly high volume of pictures (predominantly of grass, to give away the ending) is due to several factors, both related to the environment and to the equipment. First, our study design calls for a semi-random camera grid, in a rough and broken terrain dominated by grasses (at lower elevations) and with sparse means of attachment. To maintain the integrity of the design we often had to place the camera in sub optimal conditions – where even a weed wacker was just a temporary solution.

Although the final results may take some time to get to, the lessons learned and initial observations are clear. Animal communities are not stagnant but change seasonally and over time depending on more factors than we can measure – however, setting up a study design over roughly 20 square miles (50 square kilometers) to test this theory can be daunting. With every compromise is a change in capture probability and, thus, a change in integrity of the data – in other words something to be avoided. But if a picture is worth a thousand words then we are well on our way...

The single most valuable tool for the longevity of almost any site was a weed wacker. It is simply not possible to find areas that do not have grass that would otherwise not bias the sample. This may seem unlikely – but this is a function of the mechanics of the tool being a poor match for the habitat. Whereas camera-traps are a fantastic tool in closed forests where their “heat-in-motion” detectors will almost always be triggered just by warm bodied animals, grasses have a tendency to heat up in the sun and be blown around by the wind. This of course triggers the camera, which can take 3 pictures every 10 seconds. On a sunny windy day, grass and branches alone can take 12,000 images, and in less than a week the memory card will be full and batteries dead. Thus a tool which we would normally expect to yield 6 months of data is reduced to 6 days – and almost as much time to sort through the now meaningless data.

The underappreciated limiting resource for doing such projects is time – sure, it takes a few weeks every few months to keep batteries and memory cards working – but sorting through all of the data is an entirely different monster. A normal human, using some techniques we have developed to accelerate sorting – can go through and sort about 1,000 images an hour (with some practice). Thus 2 million images requires about 2,000 people hours to manage. That's about 50 weeks – or one year of doing nothing else...40 hours a week. Because of this shortfall we raised money to create the Wildlife Research Assistantship at the Phoenix Zoo – both to hire seasonal field assistants but also to get a small team of people focused on sorting images.

Overall this study was designed to look at the differences between wildlife communities in restored versus unrestored watersheds – yet what we have learned about the complexities of this species relationship with water is astounding. It's easy for us to quantify water as “resource necessary for survival”; however, it's really much more. We have countless images of black bears playing with floating logs, rolling in the mud and using water as much more than just a drink.

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Habitat Restoration cont...

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Although the verdict is still out on the difference between restored and unrestored watershed in terms of numbers of species, seasonality, activity patterns, etc. – the obvious is clear. When the water is gone, so are the majority of the species. But it is also not that simple; cameras only detect animals within a limited area, thus it is easy to say waterholes are not visited when they are empty – we did not need a 2-year project to find that out. We still do not know a lot of things that the cameras cannot tell us – where do bears go in the winter? How does a constantly changing mammal community structure (in response to water availability) shape other resource use?

From research done at maintained wildlife watering stations, we know that the addition of such a resource has a dark side – it can increase predation, competition, and disease transmission. These results come from water, which is at a point source, much like relic water holes in an intermittent stream.

However, in restored watersheds with perennial flows – water is a linear resource, which releases it from the problems of aggregating animals. Thus, we can think of the effects on communities as being very seasonal – during the driest times of the year when water is limited to point sources, animal communities will be increasingly stressed and take more risks but also work more cooperatively.

Water also has an afterlife in the mud left behind after it is gone, as there is an almost complete shift in species use before and after a water hole dries up. Thus, a waterhole wallowed in by bears, scrapped open by bears and dabbled in by skunks becomes a “cement mixer” for nest building birds, or a cache for a squirrel’s nut stash. Each waterhole has its own character – derived from its position in the hydroscape, basement material, slope, etc. – some dry up early, others can retain water all year. Observation of bear images from this study also suggests that individual bears have a vast knowledge of when and where water exists on the landscape – in many cases a skill probably passed down from one generation to another. However, to properly evaluate this we would need a different set of tools – radio collars. Thus, an important follow up to our research would be to follow individuals from a suite of species for multiple seasons to see how space is used, and in many cases shared.

Large-scale research projects are increasingly important as large-scale processes need to be evaluated at the scale at which they operate. We used 50 cameras in this study; however, considering the amount of possible explanatory variables on the landscape, 500 cameras would have been a more robust sample size. However, we are, interestingly, at yet another stage in the development of this important wildlife tool. A tool that 20 years ago we built from scratch with spare parts, 15 years ago used “rolls” of film limited to 36 exposures, and only 10 years ago became fully commercially available in the form we see today. Our current limitation is no longer about the size of the memory card or the longevity of the batteries – humans are now the limiting factor. We need to replace the process of sorting images manually with something faster, something automated. But at what cost? How many animals will it miss, how many animals do we miss after 6 hours of sorting? Over the next few years our challenge is not to get less photos, but to remove the limitations of the human mind from the sorting process.



Student Voice

Student Travel Grant Report: Annual Conference of TWS, 2015

**By Jonathan Derbridge, Ph.D. candidate
Wildlife Conservation and Management, University of Arizona**

Another year, another great Annual Conference, and it was particularly special to have it in Canada this time. I arrived just in time to meet this year's Leadership Institute class at their reception and share LI-related experiences (anyone thinking about applying should do it!).

My formal tasks this year included two talks; one on my dissertation research, and also an Ignite talk. In the research talk, I presented results on effects of experimental removals of introduced Abert's squirrels on the endangered Mount Graham red squirrel. Here I used stable isotope analysis of diets to determine impacts through food competition. I also discussed some results from use of remote cameras to investigate cache pilferage by Abert's squirrels at red squirrel middens.

This was the second year for TWS to hold an Ignite session, and I was invited to share the stage with six other speakers. In this 5-minute talk format, you have exactly 20 slides (no animations) automatically advancing every 15 seconds (<http://www.ignitetalks.io/>). Speakers were asked simply to prepare something thought provoking and novel. I used the current news about discoveries on Mars to contrast with urgent conservation needs here on Earth and called my talk "Re-wilding Mars!". It took a lot of preparation, but it was really worth it, and it seemed like the packed room of attendees enjoyed the session.

The University of Arizona held an alumni reception for the second year running. This year at least 50 attended to enjoy some fine food and drink, and discuss Arizona wildlife work past and present. I also attended the annual meeting of the International Wildlife Management Working Group, and am excited to be working more actively with this group in the next few years.

Thanks to the AZTWS Chapter contribution to my travel costs this was my 8th consecutive Annual Meeting of TWS, and I'm looking forward to the 9th already.

ASU Wildlife and Restoration Student Association Report

By Jennifer White

Coming back to school for the fall semester was bittersweet. It meant the end of an awesome summer, but the continuation of my academic path, bringing me closer to my dreams. I was privileged to be chosen as an intern for the Arizona Game and Fish Department (AZGFD). Along with AZGFD, federal agencies including the Forest Service, Natural Resources Conservation Service (NRCS), and U.S Fish and Wildlife Service offer students exclusive, paid internships for those of us following an eligible academic track (usually Biology) aligned with these careers. If you talk to any number of us fortunate intern alums, you'll get an overwhelmingly similar opinion, we had the time of our lives getting amazing hands-on experience.

In the time leading up to the application deadlines last April, I was nervous to put my resume out there for consideration by highly respected individuals for whom I wanted so desperately to work. Fueled by the excitement of my fellow peers who had already become seasoned interns in past summers, I chose

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Student Voice, cont...

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my top five options for AZGFD and submitted my application to the Department, as well as some NRCS and Forest Service positions. Then we all crossed our fingers. The waiting period seemed so long. Did they get my cover letter and resume? Do they like what they see? Will I get a call to set up an interview? Then it happened, I got the call I was waiting for! Someone wanted me!

The first two weeks of my internship, I could only rub my eyes every morning and think, "This just can't be real", and "how did I get so lucky?" We were put through training, which included the normal policy and procedural stuff, but then there was ATV, UTV and 4x4 training, among others. It was a blast, but in all seriousness, we were given extensive safety training with the equipment we would be operating all summer; it came in handy more than a few times.



Soon enough, we were out there doing field work. My supervisor had two interns for the summer. Sarah and I traveled all over the state in our work truck looking for prairie dogs. During the month of June, we worked in conjunction with the National Park Service in the Petrified Forest. Park Management is motivated to bring the black-footed ferret back into the area, but need to have enough prairie dogs to sustain a ferret population. They granted us access to the newly acquired extension property,

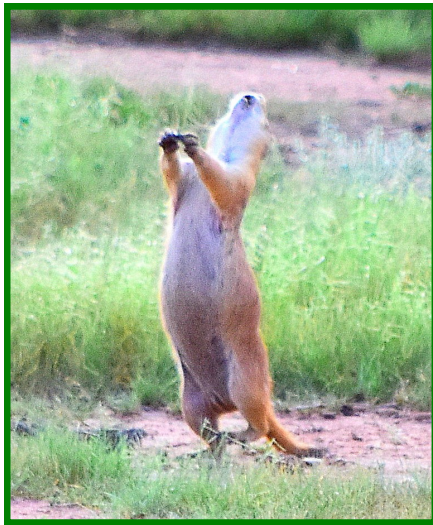


which is closed to the general public. Sarah and I walked as much of the 19,000 acres as we could while mapping our steps with GPS units. While there, we applied the 4x4 and ATV training to maneuver the backroads. We can also say that we never got our truck stuck in a muddy wash, but we were the rescuers for another crew! In July, we were invited to be part of a small mammal trapping project in the Three Forks area of Big Lake, near Greer, which gave us the opportunity to maneuver creeks and streams in waders while looking for New Mexico meadow jumping mice along creek banks. We were also privileged to assist

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Student Voice, cont...

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the AZGFD Black-footed Ferret program with prairie dog trapping in order to track the effectiveness of SPV laden bait. However, not all of our work was in the glorious field. Sometimes we were in our cubicle at the Phoenix headquarters writing summary reports and entering information from our data sheets. We worked in the areas of Phoenix, Seligman/Williams, Tucson (Las Cienegas), Pinetop, and Flagstaff. Our nightly accommodations ranged from a weekly apartment in the Petrified Forest, to tents, the truck camper shell, and a bunkhouse in Sipe Wildlife Area. We went home on the weekends to shower, do laundry and see loved ones but were ready to get on the road again every week and head off to our next adventure. The weather treated us to the typical Arizona heat, but also surprised us with hail storms and monsoon rain. By the end of summer we were prepared for anything. I still check my radar app every day.

Would I do it again? You bet! Nothing beats a summer of getting this kind of experience and meeting new friends. I'm graduating in May and am planning on going back to an AZGFD internship if they'll have me. Each agency has different internship employment requirements such as GPA (usually pretty lenient), if you will be a student for the next academic year, and if you were a student in the past semester. They all offer great opportunities to students so take advantage of it!

Tips for students considering an internship or a future career:

Volunteer!

Go to The Wildlife Society's Joint Annual Meeting (JAM); Not only did I meet the person that eventually became my supervisor, but I also had my resume critiqued and I learned a lot from the different classes. Plus, I got to know my peers even better after staying in a hotel with them for a few days.

Have your friends review your resume. Resumes for positions in these fields look way different than what we have been taught in English class.

Talk to your professors and those students who have been interns.

Visit Sipe Wildlife Area, it's beautiful. Take your camera.

Educate yourself about the positions when they become available, email and ask questions if you have them.

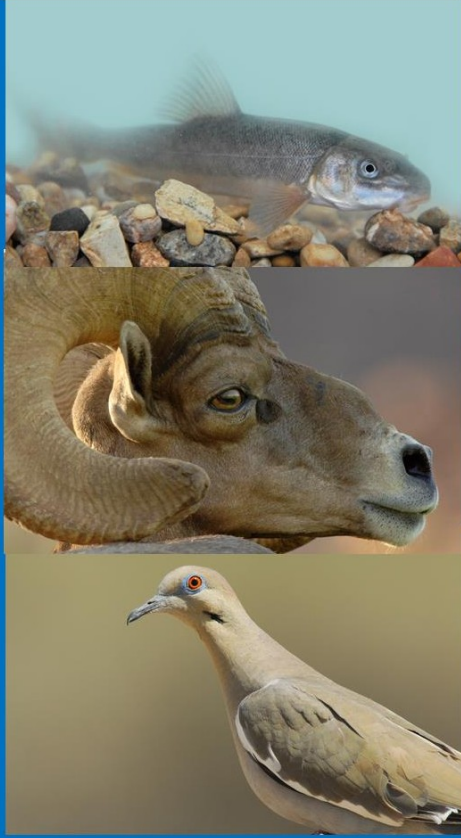
Create a USAjobs.gov profile to keep tabs on federal internships and jobs.

Have the AZGFD internship page bookmarked and be on the lookout for the posting in the spring.





THE

WILDLIFE SOCIETY
ARIZONA CHAPTER

49th JOINT ANNUAL MEETING

Little America, Flagstaff, Arizona
February 4-6, 2016

To register for the JAM, please visit the
registration website:

[https://www.regonline.com/JAM2016_AZ-
NMChapters_AFS_TWS](https://www.regonline.com/JAM2016_AZ-NMChapters_AFS_TWS)

Check the AZTWS website for JAM updates:

<https://aztws.com/event/the-49th-joint-annual-meeting/>

AZTWS Continuing Education Grants

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 <http://aztws.com>, or may be obtained from the Chairman of the Continuing Education Committee, Mike Sorum (hossdoc007@yahoo.com).