

THE ARIZONA WILDLIFER

2015 Issue 3

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Summer Edition

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The President's Message

As summer is in full swing in Arizona, we are now looking forward to next winter, not just for the cooler weather but because we are in full TWS-JAM planning mode as it's our chapter's turn to plan the next JAM. The location is Flagstaff, AZ and the meeting will be held at the Little America Hotel in Flagstaff – a location adjoining the National Forest. The plenary theme has been selected "Future Management of our Public Lands", Jon Hanna is Chair of the Plenary Committee, and we



are busily getting speakers lined up for a thought provoking morning discussion regarding who should be managing our Federal public lands into the future. We are trying something different this year because we think this plenary topic may draw a bit of interest; there will be a separate admission for the plenary only of about \$10–\$20 for those who do not want to register for the entire conference but who want to attend the Plenary Session.

Some of you were among the 54 students who attended the Annual Wildlife Techniques Workshop last April, which was another successful event. This year the workshop was shortened to one-day of workshop sessions that worked very well for the number of attendees. The mobile applications class was a big hit this year, along with the net guns of course. Due to rain there was (unfortunately) no mammal trapping and no bat mist netting this year. If you have not attended this or a previous Wildlife Techniques Workshop, you might want to consider this event for next year for the camaraderie and the wildlife learning opportunities.

For me, July ushered in the completion of a three-year project involving jaguar and ocelot monitoring in Arizona and New Mexico

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Presidents Message cont...

(Continued from page 1)

which has occupied a great deal of my time over the past few years, together with a team of outstanding field biologists and our two project managers (Susan Malusa and Lisa Haynes). Of course the most notable part of the project was detecting one jaguar (Santa Rita Mountain Range) and three ocelots (Santa Rita Mountain Range and Huachuca Mountain Range) along with about 40 other wildlife species across the study area of 16 mountain ranges. But possibly the most rewarding and most educational aspect of this project, was venturing into several new areas of research when we added three additional jaguar projects to the original one - citizen science to monitor jaguars (with co-PI Randy Gimblett and grad student Emily Reynolds), jaguars in K-12 education (with grad student and educator Aletris Neils), and jaguar outreach (with professional naturalist Pinau Merlin). I know members of the community that have come in contact with Aletris' lessons or have heard Pinau's public presentations greatly benefitted. And we are fortunate to now have a very committed and skilled group of citizen scientists that are continuing to monitor trail cameras, so with the project having ended, we still have some monitoring ongoing. Look for more detailed updates on the project findings in a future issue of this newsletter.

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 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>
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Regional News:

Highlights from SW Section Representative to TWS Council

By: Carol Chambers



Happy summer – a lot of us are in the field these days and I hope your work goes smoothly and produces interesting results. Here's what's happening these days in the Southwest.

We just sent our 9th newsletter for the Section to Section members. This latest SW Section newsletter features a Director's Corner – this showcases the thoughts of one of the states in our Section and this time, Director of Arizona Game and Fish Department Larry Voyles eloquently describes what got us into the wildlife profession – a connection with nature and a desire to work with wildlife. You will also find information about the new Geospatial Advisory Committee established by New Mexicans Leland Pierce (leland.pierce@state.nm.us) and Ginny Seamster (virginia.seamster@state.nm.us). The goal is to provide resources for SW Section members to learn more about how geospatial technology (GIS, remote sensing, LiDAR, web mapping, Unmanned Aerial Systems, and spatial modeling) is being employed and applied to wildlife research and management issues. Another exciting opportunity for the Section was to support a publication of Amphibians and Reptiles of the United States-Mexico Border States / Anfibios y reptiles de los estados de la frontera México–Estados Unidos. This is a binational effort and the book is written in English and Spanish. You may recognize some of the many authors' names: Randall Babb, Thomas Brennan, James R. Dixon, William L. Farr, Lee Grismer, Bradford D. Hollingsworth, Julio A. Lemos-Espinal, Robert Lovich, Clark R. Mahrtdt, Charles W. Painter, James C. Rorabaugh, Geoffrey R. Smith, Hobart M. Smith, James N. Stuart, and Guillermo A. Woolrich-Piña. This will be an important reference for wildlife biologists and is available fall 2015 from Texas A&M Press (<http://www.tamupress.com/product/Amphibians-and-Reptiles-of-the-USMexico-Border-St.8370.aspx>).

At TWS headquarters in Washington, DC, there are some changes. Laura Bies, long time Government

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Regional News cont...

(Continued from page 2)

Affairs Director, is leaving her position but will continue to manage the Leadership Institute. She will also provide consulting to TWS as-needed. This year's Leadership Institute includes 2 from the Southwest Section. They are Sarah Fritts, Texas Tech University, and Andrew Tri, Texas A & M University-Kingsville.

Finances continue to get a lot of attention as TWS manages our funds and investments. We should end the year well ahead of the budgeted surplus of \$122,000. TWS membership is still declining, although at a slower rate. We have just under 9,000 TWS members; remember when we almost hit 11,000? In the SW Section, we've seen membership grow over the past 5 years from 239 members in 2011 to 286 in 2014, but the Section is also seeing a decline with our current 254 members. Encourage your colleagues to renew or join, or buy a membership for friend. There are about 150 Chapters, Sections, and Working Groups – a great network of wildlifers. The Wildlife Professional is a very popular source of news. For information about benefits, see <http://wildlife.org/membership-benefits/>.

Check out conference information for the 2015 annual conference in Winnipeg, Manitoba, Canada (October 17–21) at <http://wildlife.org/2015conference/>. The 2016 conference will be in Raleigh, NC, and **the 2017 conference will be in Albuquerque, September 23–27** (did I mention that already a few times?!).

More about Women of Wildlife (WOW) - In the summer edition of The Wildlife Professional, Southwest Section members contributed to a special section on professional development. New Mexico Department of Game and Fish Director Alexandra Sandoval wrote about her career and recruiting diversity in "Bringing Diversity to the Workforce". Misty Sumner and I wrote an article titled "Mentoring the Next Generation" that asks established wildlife women professionals to mentor new professional women. The Southwest Section WOW are also sponsoring a panel discussion on "Women of Wildlife at Work" at the upcoming Winnipeg conference. We hope to fundraise for a reception/mixer following the panel.

The Wildlife Society Southwest Section Chapters Hub continues to steadily climb in 'likes.' We increased from 349 to 392 since March. Please visit the site at <https://www.facebook.com/pages/The-Wildlife-Society-Southwest-Section-Chapters-Hub/205755042835210>. People seem to really like the job postings we place here. The TWS Women of Wildlife (WOW) Facebook page (<https://www.facebook.com/pages/TWS-Women-of-Wildlife/234411723382592>) also continues to grow steadily. We hit 1,000 and are now at 1,089 likes, up from 981 in March. You can also see lots of great features at the TWS Facebook page with currently over 25,000 likes.

Contact me at (carol.chambers@nau.edu) or 928-523-0014 (office) with any comments or questions.

We need articles, stories and pictures for upcoming newsletters.

The Arizona Wildlifer Deadlines

<u>Issue</u>	<u>Deadline</u>
Fall 2015	Sep 11, 2015
Winter 2015	Dec 11, 2015

Email submissions to: aztwseeditor@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...

Analysis of Wildlife Strikes at Airports in the Western United States and Seven Phoenix Area Airports

By Brett Montgomery, Arizona State University Student

At Arizona State University's Barrett, the Honors College, students have the opportunity to participate in extra-curricular research projects and even design their own senior thesis project. Currently, Logan Salaki and I are in the thick of our thesis project concerning wildlife strikes in an airport environment. I am an environmental resource management major, focusing in wildlife ecology and Logan is an aviation management major, who hopes to work as an air traffic controller and manage airports. We have taken our two skill sets and combined them for an interdisciplinary senior thesis, which is not often done.

A wildlife strike is when an aircraft hits wildlife, and it can happen while taking off, landing, or flying at the higher altitudes. The majority of them happen during the time of take-off and landing, before the aircraft reaches its inflight altitude. We have multiple questions that we are trying to answer, and we are looking at many variables that may be contributing. Factors that have been taken into consideration are seasonal variables, land use, species richness, and distance to water, among others. We have gathered data from a multitude of sources including the Federal Aviation Administration's (FAA) wildlife strike database, the Central Arizona-Phoenix Long Term Ecological Research's (CAP LTER) land use database, and the Cornell Lab of Ornithology's citizen-science based online bird checklist database. We have also used applications such as ArcGIS and ArcMAP, as well as Google Earth to collect even more data. Below the study area of the Phoenix metro area and the western United States is portrayed (Figures 1 and 2).

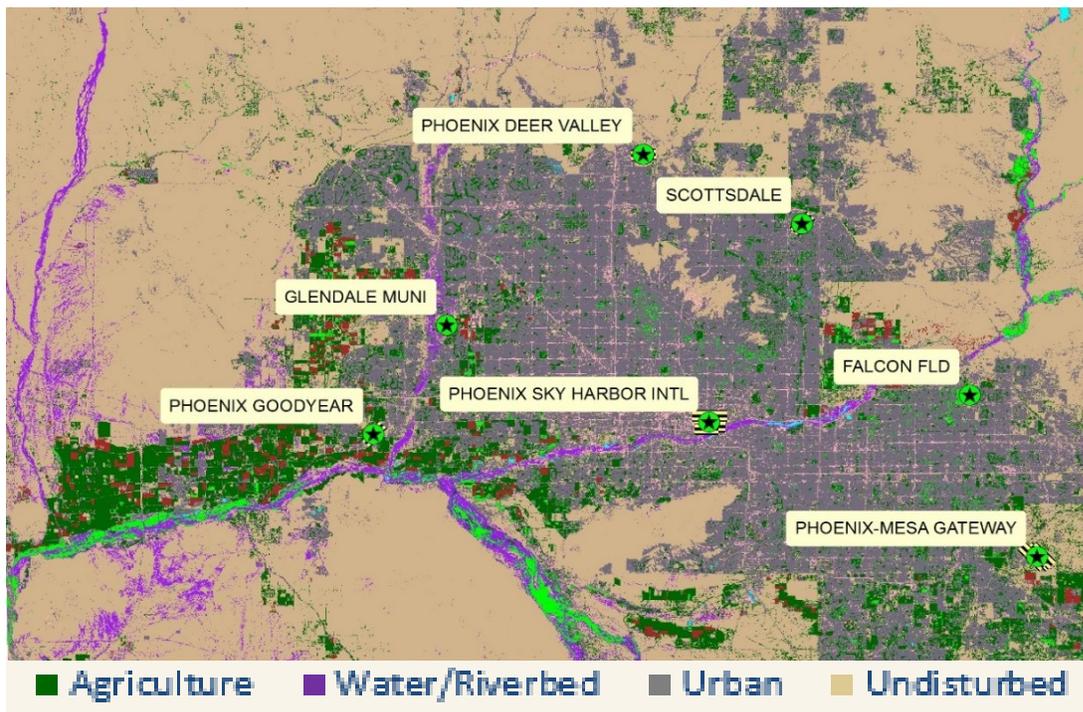


Figure 1: Map of Phoenix, Arizona airports with CAP LTER land use layer

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Airport Wildlife Strikes cont...

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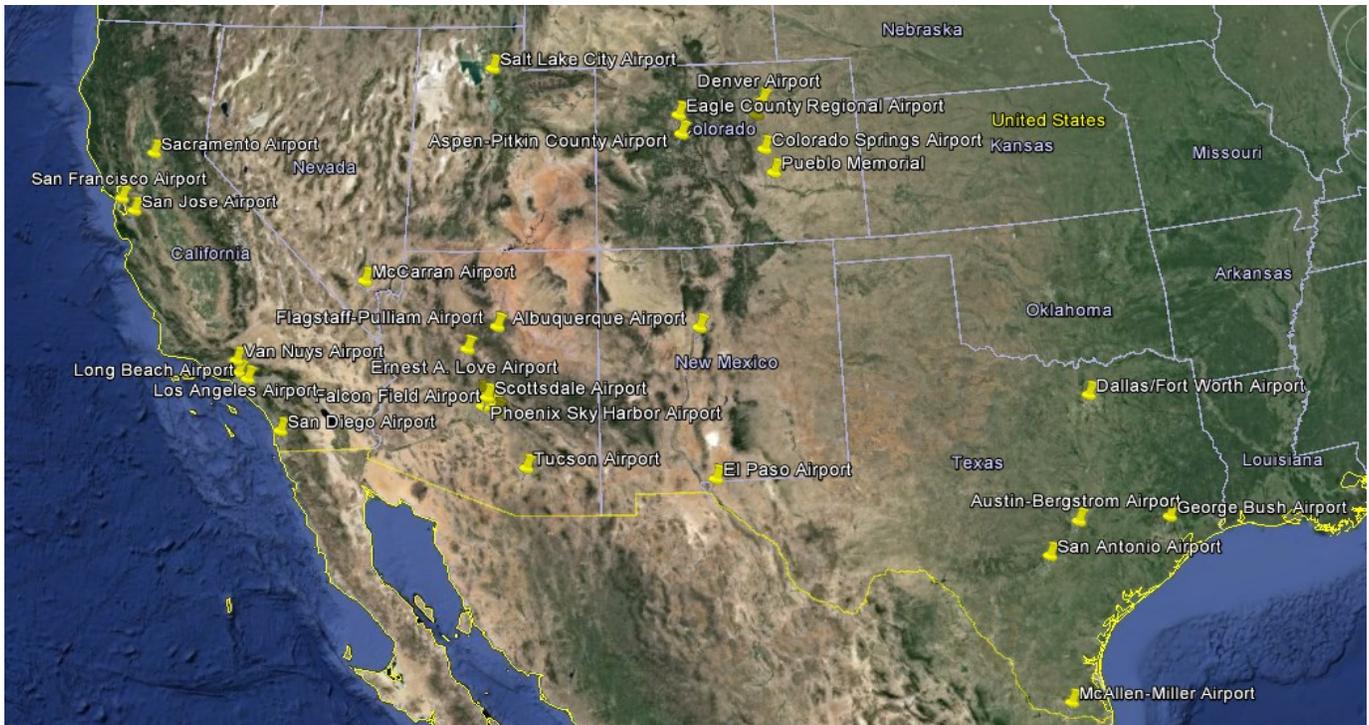


Figure 2: Map of western United States airports where data were gathered (Google earth)

In our study of the western US general aviation airports, an ANOVA statistical test revealed that there was no difference in the amount of wildlife strikes per 10,000 operations between the four seasons ($H=1.01$, $df = 3$, $p = 0.799$). The same ANOVA test revealed that there was a seasonal difference with the 25 Part-139 airports in the western US ($H=12.5$, $df = 3$, $p = 0.006$; Figure 3). Summer months had the greatest mean of 41.9 strikes with a standard error of 9.38 and winter months had the lowest mean of 16.8 strikes and a standard error of 6.22. The final ANOVA analysis revealed no seasonal difference for the seven Phoenix metro airports ($H=2.02$, $df = 3$, $p = 0.57$).

In the Phoenix metro area on average, 54.3% of the land within a 5 km radius of each airport was urban, 26.9% was undisturbed, 15.4% was agriculture, and 3.5% was water. Three variables showed a positive correlation to the amount of wildlife strikes per 10,000 operations at the Phoenix metro airports. These included the amount of fence line (Pearson Correlation=0.91, $p=0.004$; Figure 4), area of the closest body of water (Pearson Correlation=0.631, $p=0.129$), and species richness of the four nearest hotspots (Pearson Correlation=0.613, $p=0.144$). A graph is included for fence line due to it being the only statistically significant variable. The area of the closest body of water and species richness were tending towards significance, and would have been shown with more data. Other variables tested included agricultural land, urban areas, undisturbed land, distance to water, and water within 5 km of the airport. No significant relationships were produced from these other variables.

A study of the amount of wildlife strikes reported per year per airport showed an increase in both general aviation and Part-139 airports for both the Phoenix metro airports and the western US airports. An increase in the number of wildlife strikes occurred at each airports between 1997 and 2013. In the western US, Part-139 airports increased from 6.6 strikes with a standard error of 1.5 in 1997 to 32.8 strikes with a standard error of 7.5 in 2013 (Figure 5). General avia-

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Airport Wildlife Strikes cont...

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tion airports increased from 0.1 strikes with a standard error of 0.1 in 1997 to 4.6 strikes with a standard error of 1.7 in 2013. All of the wildlife strike amounts reported in this study were standardized for the number of strikes per 10,000 operations.

Throughout this project, both Logan and I have had the opportunity to learn about each other's majors and see what real world applications can be implemented to help mitigate wildlife strikes. One thing that we have both learned is that anything that humans do is linked to wildlife, and aviation is no exception. There will always need to be wildlife management due to the largely increasing human population. I am sure the wildlife think there needs to be "homo sapien management", and I may agree. If you want to know more about our project, or find out more about results please email me at brett.montgomery@asu.edu.

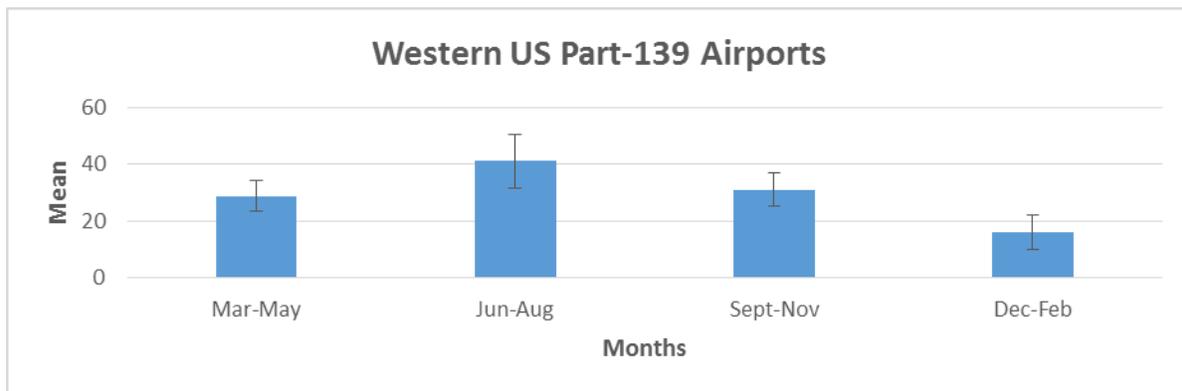


Figure 3: Average strikes per 10,000 operations with standard error for the western US 25 Part-139 airports ($H=12.5$, $df = 3$, $p = 0.006$).

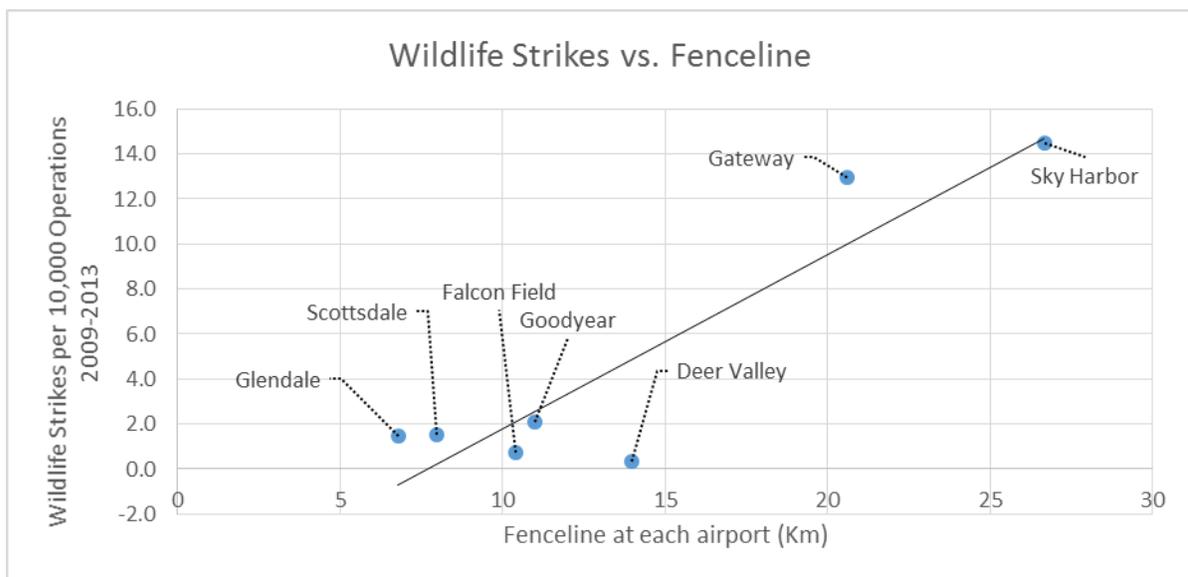


Figure 4: Number of wildlife strikes per 10,000 operations at airports in the Phoenix metro valley had a positive correlation with the amount of fence line at each airport (*Pearson Correlation*=0.91, $p=0.004$).

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Airport Wildlife Strikes cont...

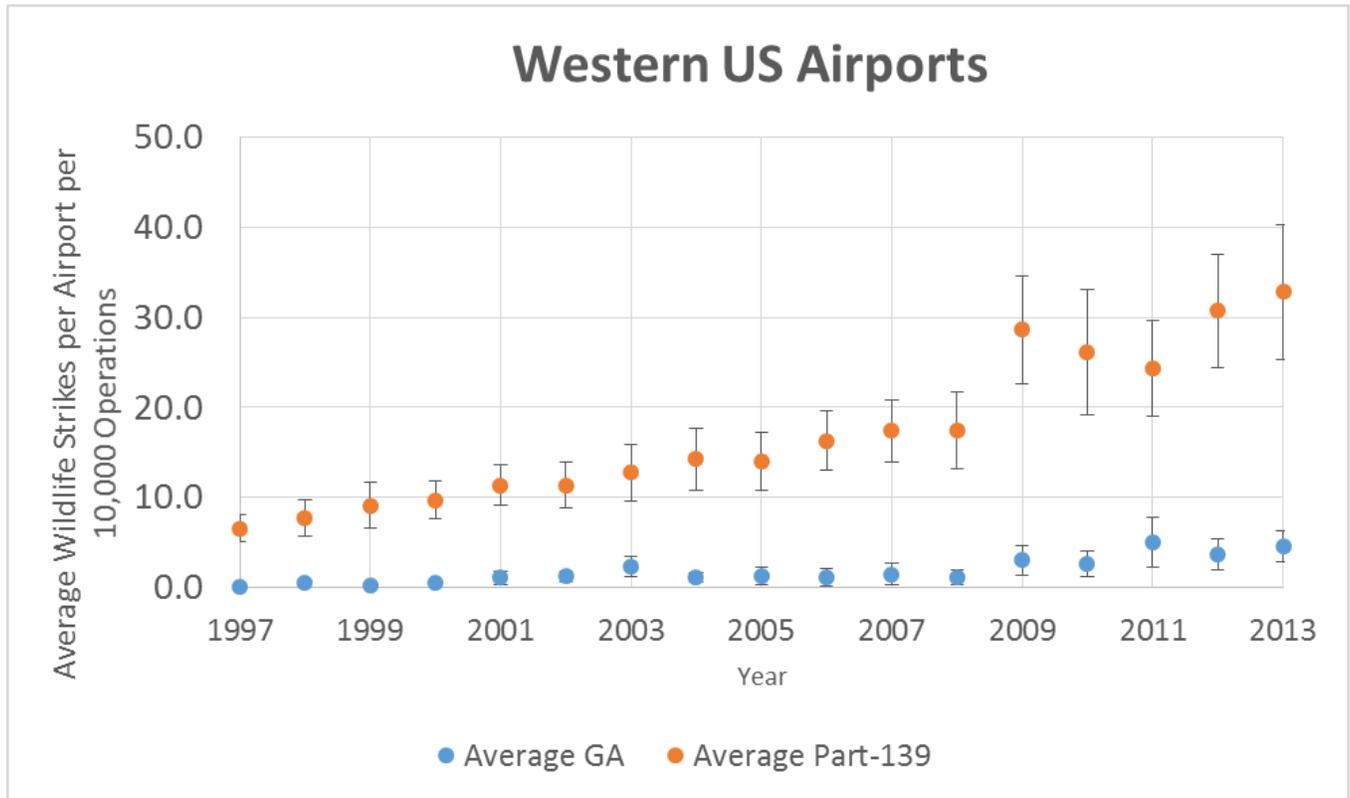


Figure 5: Graph showing a positive correlation between the average amounts of wildlife strikes reported per year per airport 1997 to 2013 at the western US airports. This study included 5 GA airports and 25 Part-139 airports.



Photos submitted by Kay Nicholson

Student Voice

Arizona State University Wildlife and Restoration Student Association Report

By Andrew Nemecek

The Wildlife and Restoration Student Association (WRSA) at Arizona State University (ASU) held elections in April 2015. Officers from the 2014/2015 school year graduated in May, so all positions are occupied by new officers. Jessica Latzko, a fisheries intern with Arizona Game and Fish Department, is the new Wildlife and Restoration Student Association President. Sky Arnett-Romero, an undergraduate research technician for Dr. Dan Allen's lab at ASU, was elected WRSA Vice President. Jacquie Evans, an intern with the Borderlands Research Institute of Sul Ross University, was elected chapter Vice President for the Society for Range Management. Heather Briggs, also an undergraduate research technician for Dr. Dan Allen's lab at ASU, is the chapter Vice President for the American Fisheries Society. Andrew Nemecek, a New Mexico Meadow Jumping Mouse Research Technician with Northern Arizona University, is the WRSA Secretary/Treasurer.

Officers have secured their gigs for the summer, but non-officer WRSA members have successfully begun their 2015 summer internship season as well. Jennifer Giao, Sarah Davis and Ashleigh Jones work as interns with Arizona Game and Fish Department. Jennifer and Sarah are searching for and mapping Gunnison's prairie dogs in the Petrified Forest, and Ashleigh is working with amphibians.

The new officers have not allowed their summer internships to prevent them from acting. In addition to abundant summer volunteer opportunities advertised and participated in by members, implementation of plans to increase WRSA recruitment and community involvement of the organization are being discussed. Local high school college/career day events are being targeted as a means of encouraging student interest in a degree in natural resources and membership in WRSA. A graduate school and career workshop is being planned during which undergraduates can have their questions answered by a panel of professors and graduate students. WRSA officers are also coordinating with Arizona Game and Fish Department and US Fish and Wildlife Service regarding the establishment of a native fish pond on the ASU Polytechnic campus. This project is considered an ideal way to educate students from other programs on conservation, and it has the potential to help in the restoration of native fish populations. Also, ASU professor Dr. Dan Allen is designing a bird survey project for WRSA during fall and spring breaks. Recreational events for the organization, such as the 2nd annual Grand Canyon camping trip during spring break 2016 and a gear swap event are also being planned.

Congratulations to the graduated and departed WRSA officers and members and to all new officers and members on their career advancement and/or newly held positions. Anyone interested in learning about or becoming involved with WRSA, contact Jessica Latzko at jlatzko33@gmail.com.

2015 JAM Summary

By Brett Montgomery, Arizona State University Student

Each year, the Wildlife and Restoration Student Association from Arizona State University's Polytechnic campus sends a group of students to the Joint Annual Meeting between the Arizona and New Mexico chapters of the Wildlife Society and American Fisheries Society. Any student that has attended the

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Student Voice, cont...

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JAM knows that it is such a beneficial event that helps promote professional development and teaches everyone something new.

This year we had 10 students attend, and 4 of us competed in the wildlife quiz bowl. The others who attended really enjoyed the workshops, specifically the resume and the reptile enforcement workshops. The variety of professional and academic presentations that we could choose from kept us on our toes as we ran from room to room trying to make all of them. Personally, I had an amazing experience at the JAM and I was able to network and build upon great relationships that I know will help me in my future endeavors. I highly encourage all students to take advantage of opportunities like the JAM and other conferences, because no matter what there is something to gain from it. As I transition out of being the President of WRSA, a new batch of officers will come in and will uphold the tradition of attending the JAM and helping students to be as successful as possible.

Arizona Chapter Conservation Affairs Committee Report

By Jon Hanna, Committee Chairperson

There is quite an onslaught of political maneuvering involving the future of our public lands. At the national level U.S. Senator Lisa Murkowski's (R-AK) amendment SA 838, which passed by a vote of 51 to 49, is now part of the Senate's nonbinding budget resolution. Only three Republicans and every Democrat voted against it. A rival bill that would stop the effort to sell public lands was prevented from coming up for a vote. The measures, supported only by the Republicans who control both houses, were symbolic, but they laid down a marker that America's public lands, long held in trust by the government for its people, may soon be up for grabs.¹

The proposal would support and fund state efforts — which many argue are unconstitutional — to seize and sell America's public lands. These include all national forests, wildlife refuges, wilderness areas, historic sites, and national monuments.

Murkowski's amendment, which would need further legislation to become law, follows a similar proposal from House Natural Resources Committee Chair Rob Bishop (R-UT) to spend \$50 million of taxpayer dollars to fund the sale or transfer of U.S. public lands to states.²

Here is an overview of what has been going on in Arizona from the website of the National Caucus of Environmental Legislators (NCEL). This site is designed for state legislators to get the most up-to-date information and messaging tools on public lands efforts within their state and across the West. In Arizona several bills concerning the transfer of federal lands to the state have already been introduced, with some of them passing. SB 1332 passed in 2012, demanding that Congress turn all public lands over to the state or it would begin taxing them in 2015. It was vetoed by Gov. Jan Brewer, who stated that it was unconstitutional and would cost the state about \$1m per acre to maintain. Proposition 120 ran in November 2012 to turn public lands over to Arizona. It was defeated 68% to 32%. County Supervisors voted in October 2014 to "develop a comprehensive report on the options

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Conservation Affairs Committee cont...

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to transfer public lands to private hands instead of receiving Payment in Lieu of Taxes to the county.” Proposition 122 passed in November 2014, allowing the state to opt out of federal laws that voters or the state legislature deem unconstitutional.

Recently Governor Doug Ducey vetoed two bills by fellow Republicans that asked the federal government to turn over public lands to the state. The GOP lawmakers said they wanted to use Arizona’s federal public lands as a new stream of revenue for the state. Ducey said he shared Republican lawmakers’ concerns about Arizona’s federal lands, but vetoed the bills anyway.

Instead, Ducey signed House Bill 2658 to establish a study committee to look into the transfer of public lands to the state.³ House Bill 2658 is sponsored by Republican Representative Brenda Barton, and it creates a committee of legislators to study impacts of a land transfer through consultations with experts and surveys of county commissioners. The cost of the study process is unspecified. One committee member from the public will be appointed by the Governor.

Let’s not forget that Senator John McCain (R-AZ) and Senator Jeff Flake (R-AZ) are also supportive of selling off federal lands. And if that doesn’t get your attention at least three republican presidential candidates Rick Santorum, Rand Paul, and Ted Cruz, think the federal government should get out of the land management business altogether.

As the Conservation Affairs Committee Chairman I will be closely monitoring HB2658 and have been in contact with the governor’s office about being considered as a member of the committee, although I have not received a response as of yet.

If you want to stay informed on the public land issue I would suggest joining the informative list serve established by Jessica Goad of Denver Colorado with the Center for Western Priorities (o: 720-565-0906 c: 720-206-4235)

¹ Will Rogers April 2, 2015 Trust for Public Land

² Claire Moser March 26, 2015 Think Progress

³ <http://azcapitoltimes.com/news/2015/04/14/gov-doug-ducey-vetoes-measures-to-take-over-federal-land>

TWS Article on John Koprowski’s Work with Squirrels

A great article on Dr. John Koprowski, AZTWS member and University of Arizona professor, and his experiences through his work with squirrels was recently published by the TWS parent organization. You can read that article here: <http://wildlife.org/tws-member-gets-up-close-and-somewhat-personal-with-squirrels/>.



THE
WILDLIFE SOCIETY
ARIZONA CHAPTER



presents

The 49th Joint Annual Meeting of the
Arizona-New Mexico Chapters of the
**American Fisheries Society and
The Wildlife Society**

FEBRUARY 4-6, 2016

LITTLE AMERICA, FLAGSTAFF, AZ

Plenary Session:

Who Will Manage the Future of Our Public Lands?

Invited speakers will include State Land Commissioner Lisa Atkins, Brenda Barton (R-Payson, AZ), Coconino Co District 4 Supervisor Mandy Metzger, NM Wildlife Federation Communications Dir Joel Gay, and representatives from the American Lands Council, Outdoor Industry Association, and USFS

Plenary and Panel Session | Workshops | Paper and Poster Presentations

~Call For Papers Coming This Fall~

For more information email Melanie Culver at
mculver@email.arizona.edu

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).