

# Arizona Wildlife News Fall 2015



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## ARIZONA WILDLIFE NEWS

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### AWF MISSION STATEMENT

AWF is a non-profit organization dedicated to educating, inspiring and assisting individuals to value, conserve, enhance, manage and protect wildlife and wildlife habitat.

The front cover photo was taken by Curt Fonger. It is a curious spotted whip tail lizard atop a 200 million year old Lava rock at Utery Regional Park, Mesa, AZ. A special thanks to Ryan Kreuzer for the design & layout of the cover.

Photo by Linda Dightmon taken in Mark Hullinger's hand. Triops longicaudatus also called longtail tadpole shrimp and looks like a miniature horseshoe crab. We found them in a stock tank near Heber. This little guy is considered a living fossil because they have been around unchanged for about 70 million years. A new species for us!

If you have a photo you would like to submit for our cover, please contact Kimberlee at [awf@azwildlife.org](mailto:awf@azwildlife.org)

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# President's Corner

By Brad Powell



**I**n June of this year, Tom Mackin immediate past president handed the gavel to me as the president of the AWF. The transition occurred on the Sipe Wildlife area in the shadow of Escudilla Mountain, surrounded by lush green meadows, sounds from Rudd Creek filling the air, elk meandering through the meadows and songbirds serenading us. I couldn't help but reflect on the AWF, the integral role that it has played in the states wildlife management history and the importance that fish and wildlife plays in our ever more urbanized State.

As a beginning, let me introduce myself. I have been involved with the AWF for nearly 10 years. I have served as a Board member, Chair of the Conservation Committee, Vice President of Conservation and Operations. My wife Ana and I live in Scottsdale. We have kids scattered from Arizona to Aguas Caliente, Mexico and are now reaping the benefits of grand kids. I first came to Arizona in 1969, living in Young, Arizona where I worked as a helicopter fire fighter for the US Forest Service. After graduating from college with a Forestry degree I went to work in Young, Az. for the Forest Service. Over 30 years and multiple stations later, I retired. During those years I served as a fire fighter, Silviculturist, Resource staff

officer, District Ranger, National Monument Manager, Forest Supervisor and Regional Forester. I have worked with Trout Unlimited for the last 9 years and currently I am the Southwest Region Director.

From the time I was a kid, I have been fascinated by the outdoors. I have spent a career working on natural resource issues. I am convinced that the experiences I had as a child, and then as a young man are at risk for future generations. The risks come from multiple sources, urbanization, population growth, public land divesture, technology, climate issues and maybe most of all apathy.

That's why I am so excited to be a part of the AWF. For nearly 90 years the AWF has played a key role in the management of Arizona's wildlife resources. The Board and our membership are composed of a diverse set of people that represent differing perspectives on wildlife management issues in the State. The AWF, unlike many other organizations, is driven by science not by politics. Now more than ever, the AWF must step up and ensure that Arizona's wildlife treasures are well managed for future generations.

I am proud and honored to have been selected as President. Tom Mackin and Ryna Rock before him did a great job as President. They strengthened the

AWF's relevance in the state and revitalized the Board. My thanks go out to them, to the Board of Directors and all the members that have worked to protect Arizona's wildlife heritage.

Arizona's fish and wildlife populations are sure to face many challenges in the future. Our Board of Directors and members can be counted on to face those challenges head on. We will ensure our children have the opportunity to create their own outdoor legacy.

## Letters to the Editor

Keep your communications short and to the point. All must be signed. If you send us questions, we will seek answers and print them here. There may be times mail volume may prevent us from publishing every letter we receive, but we will do our best to print as many as possible.

### Send your 'snail mail' to:

AWF Mail Pouch  
Arizona Wildlife Federation  
PO Box 51510, Mesa, AZ 85208

### Send your e-mail to:

[editor@azwildlife.org](mailto:editor@azwildlife.org)

# REGIONAL ROUNDUP



## Region I - Bob Vahle Regional Director

Region I is a designated management area in the White Mountains of Arizona which is administered by the Arizona Game and Fish Department (AGFD). It is comprised of Game Management Units (1,2A, 2B, 2C, 3A, 3B, 3C, 4A, and 4B). The largest portion of key habitats for both terrestrial and aquatic wildlife and fish species in Region I is found within the 2.1 million acres of the Apache-Sitgreaves National Forests (ASNF) administered by the U.S. Forest Service (USFS). Consequently, proposed and ongoing land management projects and public recreational activities within the ASNF can have significant impacts either positive or negative on habitat suitability for wildlife and fish species in terms of its quality, quantity, and connectivity. Currently, there are a number of proposed and ongoing land management activities in Region I which the Arizona Wildlife Federation (AWF) is tracking.

The USFS which administers the ASNF is currently in the process of developing and implementing both land management plans and projects that may either beneficially or adversely affect wildlife or fish habitats within Region I. Of key importance and concern of the AWF are the completion and implementation of two forest wide management plans. They are the revised ASNF Forest Plan and the ASNF Travel Management Plan that are on currently on hold. Implementation of these plans will have major implications in relation to the conservation, restoration, and enhancement of wildlife and fish populations and habitats on the ASNF. In respect to land management projects that are currently active, there are a total of 12 task orders to complete forest restoration thinning projects across the ASNF covering a total of 9,296 acres through either stewardship contracts, salvage operations, or the Four Forest Restoration Initiative (4FRI) program. In addition, a total of 16 forest thinning restoration projects totaling 25,174 acres have been analyzed and approved to be advertised for either marking contracts or

treatment bids. Finally, the ASNF is currently analyzing and developing plans for a number of additional land management activities including: 1) Upper Rocky Arroyo Forest Restoration Project – mechanically thin 23,000 acres near Pinetop-Lakeside, AZ; 2) Larson Lake Forest Restoration Project – 30,000 acres; 3) Livestock grazing allotment analysis to determine re-issuance of a term grazing permits on the Heber Allotment and Wildbunch Allotment; 4) Show Low South and Camp Tatiyee Land Exchanges; and 5) Management Plan for the Heber “Wild Horse” Territory. For more specific information regarding these proposed and ongoing lands management activities on the ASNF, please see the following link on the ASNF web site: [http://www.fs.usda.gov/detail/asnf/land-management/projects/?cid=fsbdev7\\_012572](http://www.fs.usda.gov/detail/asnf/land-management/projects/?cid=fsbdev7_012572)

The AGFD in Region I fully utilize the Arizona “Habitat Partnership Committee” (HPC) program which was developed by the AGFD to collaborate with various federal/state agency and public partners to improve habitats for game species and other wildlife. The HPC habitat improvement projects that can benefit a multitude of wildlife species that have been recently funded and approved for implementation include the following activities: 1) Bigler and Rattlesnake Catchment Redevelopment; 2) Sunset Block C Prescribed Burn; 3) Hi Point and Ellsworth Water System Maintenance; 4) McCleaver Block Prescribed Burn; 5) Mineral Grassland Restoration; 6) George Gesler Water Storage Tank Replacement; 7) White Mountain Grasslands Wildlife Area Prescribed Burn; and 8) Rocky Mountain Bighorn Sheep Mineral Supplement program.

For more specific information on these projects and others, the HPC program, and the agencies and public partners developing and funding these projects please see the following link on the AGFD web site: <http://azgfdportal.az.gov/wildlife/hpc>

## Region II - Tom Mackin Regional Director



May 19 – With another volunteer, traveled to the Pat Springs Pipeline(PSP) and continued to fill various storage tanks and drinkers

May 20 – With another Arizona Watchable Wildlife Experience (AWWE) volunteer we went to Picture Canyon , one of the 30 AWWE sites, and made plans to remove approximately ½ mile of old barbed wire fencing that poses a hazard to wildlife

May 21 – Returned to PSP and continued with water distribution efforts in GMU7E

May 22 – With several volunteers from the Friends of Northern Arizona(FoNAF) we modified 1.2 miles of existing allotment fences in GMU7E to make them more pronghorn friendly, aiding their ability to travel between feeding and watering areas

May 23 – With another volunteer from AWWE, we presented an informative program at the Kachina Wetlands south of Flagstaff, another AWWE site, discussing various birds we observed and the importance of suitable open space, even in a rural area

May 24 – With several Forest Service(FS) representatives and two FoNAF volunteers we conducted a trail orientation meeting at the Humphrey's Summit trailhead in order to hopefully avoid any search and rescue missions on the trail and to increase hiker awareness regarding proper preparation for hiking this difficult trail

May 25 – With another FoNAF volunteer we visited several aspen exclosures near Priest Draw SE of Flagstaff and made repairs to the fencing where there was damage from Spring runoff

May 26 – With several FoNAF volunteers and FS representatives we visited an aspen exclosure SE of Flagstaff and removed a downed tree that had damaged the exclosure fence. Once the tree was removed we made all needed repairs

May 26 – Attended an Arizona Sportsmen for Wildlife Cinservation(AZSFWC) meeting at AZGFD Headquarters where we received an update from AZGFD personnel regarding the wolf reintroduction program, the upcoming Hunt Guideline meetings and several other issues. AZSFWC approved 8 grants totaling over \$40K from the Sportsmen License Plate program

May 27 – Attended a Four Forest Restoration Initiative(4FRI) retreat and planning session at TNC Hart Prairie Preserve, discussing plans for the second analysis area

May 28 – With another volunteer we returned to the PSP and continued to distribute water for wildlife

May 29 – Returned to PSP for additional water distribution activities

May 30,31 – With several other FoNAF volunteers we traveled

to 2 aspen exclosures in GMU5A, making needed repairs and planning for an additional new exclosure for wetland protection adjacent to Buck Springs

June 1-4 – With 7 other volunteers from Arizona Elk Society(AES) and FoNAF, we traveled to the North Kaibab Ranger District in GMU 12A and made repairs to 14 wildlife trick tanks in dire need of repair. These drinkers were identified by the FS Wildlife Biologist and the AZGFD Wildlife Manager(WM) as high priority locations

June 6-7 – Attended the Arizona Wildlife Federation (AWF) Annual meeting and election of officers, held at the AZGFD Sipe Wildlife Area in AZGFD Region 1

June 8 – Attended a Forest Service Wildland Fire Sawyer class, S-212, held at the FS Williams ranger District, working towards a higher FS sawyer certification level

June 9 – Assisted AZGFD Region II with a youth summer camp at the Flagstaff Athletic Club, tutoring 120 youngsters in archery and casting a fishing rod

June 10 – With an AES volunteer we traveled to GMU9 and made repairs to several trick tanks damaged by cold temperatures and some vandalism

June 11 – Volunteered at the AZGFD Region II office, preparing the area for an upcoming Fire-Wise Inspection

June 12 – Met another FoNAF volunteer and loaded two FS trucks in preparation for a work project on the Mogollon Rim Ranger District in GMU5A

June 13-14 – With several FoNAF volunteers we met over 50 AES volunteers and FS employees for a work weekend near Buck Springs, building a new wet meadow exclosure, repairing several aspen exclosures, thinning encroaching pine seedlings and several other tasks

June 16 – Met with a representative of the Sierra Club and toured the Tusyan Ranger District, providing a first hand look at some of the areas in the proposed Grand Canyon Watershed National Monument (GCWNM), supported by the Sierra Club and opposed by the AWF and many other Arizona sportsmen's organizations and the AZGFD

June 17 – Met with Coconino County Board of Supervisors Chair Art Babbott to discuss the GCWNM proposal as well as the controversial Transfer of public Lands effort supported by several Western conservative legislators

June 18 – With several FoNAF volunteers and FS assistance we went to Broiler Park SE of Flagstaff and built a new log worm fence to keep vehicles out of a meadow that has been treated for invasive leafy spurge



June 19 – With 3 other volunteers from FoNAF and two FS employees we went to Maxwell Spring and installed approximately 70 10' T-posts in preparation for building two new aspen exclosures the following day

June 20 – With three FS employees and 12 volunteers we completed construction of a new aspen exclosure and completed 80% of a second one near Maxwell Spring in GMU7W

June 21 – Led a guided nature hike at The Nature Conservancy Hart Prairie Preserve

June 22 – Led two tours of the Arboretum at Flagstaff gardens, discussing the history of the property, importance of ponderosa pine forests, the establishment of 4FRI, the decline of aspen in the Rocky Mountain West and other similar topics.

June 23 – Met with AZGFD Volunteer Coordinator at Headquarters. Also participated in testing software for the Sportman's Values Mapping Project.

June 25 – With another AZGFD volunteer we traveled to GMU9 near Tusayan and made repairs to two wildlife drinkers

June 28 – With another volunteer we hauled water to a wildlife drinker near a planned dove banding capture location

June 30 – With another volunteer we checked 12 wildlife waters in GMU7E, making sure that water was available and the catchments were working properly

July 1 – Started capturing doves for banding to assist with population studies

July 2 – Continued dove banding activities with a goal to band 100 doves in AZGFD Region II

July 2 – Removed and recycled scrap barbed wire found during the building of a new aspen exclosure near Wing Mountain in GMU7W

July 3 – 6 Dove Banding

July 7 – Visited a AZGFD trick tank in GMU9 to measure for a new 40 mm. liner in preparation for rebuilding/repairs. Also visited the site of a lightning caused wildfire that damaged a section of a pipeline that carries water to several wildlife drinkers

July 8 – Working with the AZGFD Development crew, we made repairs to two AZGFD trick tanks in GMU5BN

July 9 – Assisted with a summer camp for youngsters in grades 1-3 at Northern Arizona University, teaching archery and fishing skills

July 10 – With other volunteers from FoNAF, we installed 75 10' T-posts for a new aspen exclosure near Mormon Lake

July 11 – Assisted with conducting an AZGFD On-Line Hunter Ed Field day exercise

July 12 – Returned to GMU9 and repaired the water pipeline damaged in a wildfire

July 13 – Met with AZGFD representatives to discuss the proposal for a new National Conservation Area adjacent to Walnut Canyon N.M. near Flagstaff

July 14 – Returned to Mormon Lake area and completed build of two new aspen protection exclosures

July 16 – With the Wildlife Manager for GMU9, we visited two AZGFD trick tanks and made repairs to one that was caused by feral horses and one that needed plumbing repairs

July 17 – With other FoNAF volunteers, traveled to the Coconino National Forest Mogollon Rim Ranger District and made repairs to a wet meadow exclosure when a tree fell on the fence. We also located and evaluated 5 additional exclosures in the area

July 18 – Working with volunteers from the Arizona Elk Society, assisted in cutting junipers and small pines that were encroaching on an important grassland adjacent to recent wildlife corridor enhancements in GMU7E

July 18 – Assisted with a wildlife watching event near Mormon Lake as part of the Arizona Watchable Wildlife Experience Summer viewing program

July 21 – With other FoNAF volunteers, we removed ½ mile of old barbed wire fence and T-posts near a new wildlife viewing area caled Picture Canyon near Flagstaff

July 22 – Attending the monthly 4FRI Stakeholder Group meeting, discussing the plans for the second Planning area in Eastern Arizona on the Apache-Sitgreaves NF

July 23 – With several HS age volunteers and representatives from AZGFD, we made repairs to a FS trick tank in GMU6B in the Secret Canyon Wilderness area

July 24 – Assembled archery target stands for the new archery venue at the AZGFD Northern Arizona Shooting Range south of Winona

July 25 – Attended the Summer Habitat Partnership Committee meeting in Pinetop and assisted with the presentation of several AWF Trophy Book Committee Annual Awards

July 26 – Led a nature hike at the Nature Conservancy Hart Prairie Preserve, highlighting the Bebb's Willow Community at that location

July 27 – Monitored the Pat Springs water pipeline in GMU7E, making several minor repairs and filling varios storage tanks and drinkers.



**Drinker #3B on the Pat Springs Pipeline**

July 28 – Hauled 1,000 gallons of water to a new aspen propagation site where 375 new aspen sprouts had been planted the day before

July 29 – With another volunteer, we hauled 2000 gallons of water to an AZGFD wildlife trick tank that had gone dry

July 31 – With 5 other volunteers we traveled to the area of Buck Springs on the Mogollon Rim Ranger District to complete the construction of a new wet meadow exclosure we started last month

Aug. 1 – We stayed at the Rim overnight and worked on an existing aspen exclosure that was in need of repair but we determined the infrastructure was too far gone and the aspen regeneration was minimal so we discussed the possibility of building a new exclosure in an adjacent aspen stand, once the old exclosure was dismantled and hauled away

Aug. 2 – Led two tours of the gardens at the Arboretum of Flagstaff, discussing the plant and tree communities of the Colorado Plateau

Aug. 3 – With several other volunteers we provided some

maintenance and clean-up at the AZGFD Raymond Wildlife Area

Aug. 4 – Visited several trick tanks in GMU7E, making repairs to float valves and other items as needed

Aug. 6-9 – As a Chief Instructor, I assisted other AZGFD Volunteer Instructors with conducting a Hunter Education class for 69 students

Aug 10 –With another volunteer we started repairs on a trick tank that was damaged by freezing temperatures in GMU7E, reported to me by the Wildlife Manager Supervisor

Aug 11 – Served as a panelist at a discussion organized by the Sonoran Institute regarding the importance of maintaining open spaces adjacent to various military installations in AZ

Aug 12 – With another volunteer we visited 5 AZGFD and Forest Service trick tanks in GMU7E, monitoring water levels and identifying wildlife usage patterns

Aug 13 – With other partner representatives we met for an hour with Congresswoman Kirkpatrick's staff to discuss the Lee's Ferry Fisheries proposal, the need to pass the Federal budget and avoid sequester and the importance of reauthorizing the LWCF

Aug 14 – Continued work on a trick tank in GMU7E that sustained freeze damage and damage from falling trees

Aug 15 – With two AZGFD representatives, I spent the day at the Northern Arizona Shooting Range hosting an archery 3D Fun Shoot as apart of an effort to provide another venue for the Range, in this case archery

Aug 16 – Led a tour for approximately 20 guests at TNC Hart

Prairie Preserve, discussing the Peaks, the homestead which dates back to the 1870's and the changes to the Bebb's Willow community that runs through Hart Prairie

Aug 17 – With another volunteer we moved water on the Pat Springs Pipeline to distribute water for wildlife throughout the pipeline's 40 mile length

Aug 18 - Returned to the Pat Springs Pipeline and continued distribution activities

Aug 19 – Returned to Pat Springs Pipeline and completed water distribution activities required at this time



**Hochdoffer Trick Tank**

## **Region III- Loyd Barnett Regional Director**



**Burros are present throughout much of Region III,  
especially numerous in the Black Mountains**

**Burros** - As reported in the last AWN, the problem of burros continues unabated. This is especially true in the Black Mountains, which are one of the most important areas for desert bighorn sheep in Arizona. Currently there are in excess of 2,000 burros in the Black Mountains, more than four times the Appropriate Management Level of 478 for the Black Mountain Herd Management Area established by the Bureau of Land Management (BLM) in 1996. This is a higher density of burros than of the native bighorn sheep, according to Zen Mocariski of the Arizona Game & Fish Department's Kingman

Regional Office. In addition to outnumbering the native bighorn sheep, the burros are larger, require more forage, have a much longer life span, and appear to be less vulnerable to predation. Their population can increase at 20 percent per year. In addition to creating vegetation and soil impacts, the burros have been documented preventing bighorn coming in to traditional water holes.

At one time the BLM used periodic roundups to remove excess burros (which were made available for adoption) and reduce the competition with native wildlife and the damage to soil and vegetation. Currently the BLM proposes two small bait and trap removals in and adjacent to the urban areas of Bullhead City and north Lake Havasu (30 and 50 burros, respectively) as they are considered "nuisance" and are creating traffic and safety problems. However, there do not appear to be any publicly announced plans to reduce the problems in the Black Mountains.

A much more in depth report on this situation will appear in a future AWN.

**Prescott Forest Plan** - The Prescott National Forest has issued their long awaited revised Forest Management Plan. The 29 page Record of Decision summarizes the long and extremely detailed planning process, the very extensive public participation and how it affected the decision, the alternatives considered, and the rationale for the decision. Changes from



the Draft Plan issued in August 2012 included reducing the amount of recommended new wilderness acreage from 43,000 acres to 26,000 acres. There are eight areas recommended, all contiguous with existing wilderness. However, congressional designation would be necessary for them to be added to the existing wilderness.

Desired conditions are based on ecosystems and are described by vegetative type. The presence of current and predicted climate change is recognized and there is an emphasis on developing and/or maintaining resiliency in order to withstand expected changes and disturbances – in addition to warmer conditions, more extremes of droughts, floods, risk of large fires, et al.

For wildlife habitat the primary emphasis items include (in addition to maintaining habitat for threatened, endangered, and sensitive species):

-Pronghorn habitat, including restoration/maintenance of grassland areas, water developments and fence retrofitting in key areas.

-Maintenance and/or restoration of aquatic habitat suitable for native fish.

-The existing travel management plan would continue. Big game retrieval would be the same as for portions of the Coconino and Kaibab National Forests adjacent to the PNF –up to one mile for elk.

Full details of the Revised Plan, the Final Environmental Impact Statement and supporting documentation can be found at the Prescott National Forest's website under "2015 Prescott NF Forest Plan". The direct url is

<http://www.fs.usda.gov/main/prescott/landmanagement/planning>



## Region IV - Valerie Morrill Regional Director

### Arizona Wildlife Federation (AWF) duties

I participated in the AWF annual meeting and board meeting in June at Sipe White Mountain Wildlife Area, serving as both Secretary and Region IV Director.

**Military Mission and Public Lands Benefits in Arizona** The Sonoran Institute (SI) continued efforts to safeguard Arizona's military mission following the successful campaign for Prop 119, adopted by Arizona voters in 2012. This proposition allows remediation of incompatible uses encroaching upon military bases through the trade of state trust land for federally owned land. This summer, SI issued a comprehensive report that proposes a framework local communities can use to anticipate potential impacts and work with federal, state and local land planners to make sure military uses are protected. I assisted SI in securing expert testimony for U.S. Senate hearings on the issue and through participation in a forum in Yuma briefing the community on the program. A copy of the report is available for download at:

<http://www.sonoraninstitute.org/where-we-work/southwest/military-mission-preservation.html>.

### Nongame Wildlife Constituency Forum

I participated in the second meeting of the forum in the Phoenix

area in August. The forum is hosted by Audubon AZ and AGFD Non-Game Branch to strengthen conservation partnerships with organizations that have often seemed marginalized by AGFD and its perceived focus on game and sportsmen. AGFD staff gave presentations on citizen science opportunities and an update on AZ reptiles and amphibians. The group continued its discussion on various concerns and opportunities to cooperate.

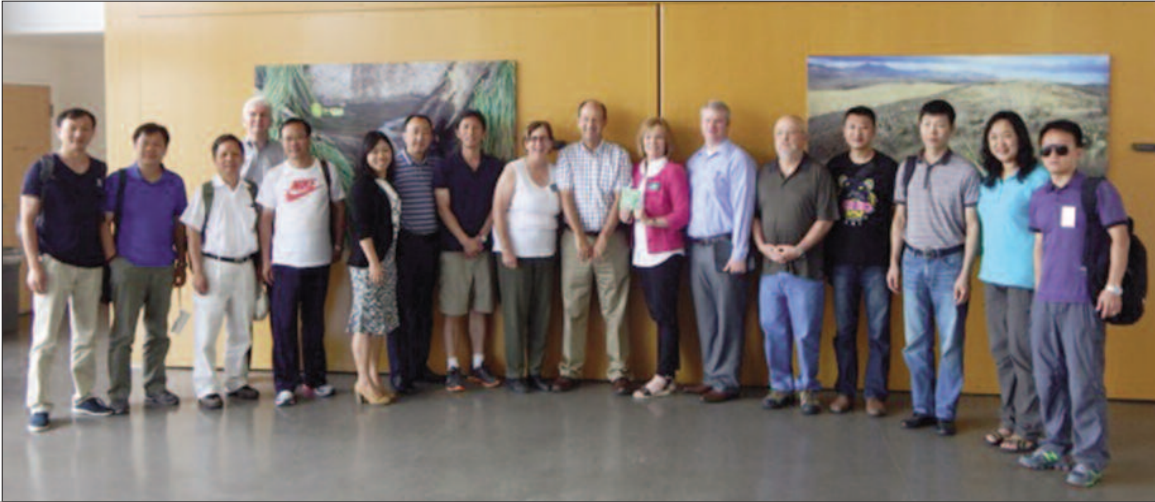
### Wild Horse and Burro

I met with AGFD Region IV personnel regarding the escalating problems arising from feral horses and burros populations exceeding the Appropriate Management Level (AML). All herds in the state are currently in excess of AML. Native plants and wildlife as well as fragile desert surfaces are suffering as a result. I shared AWF position statements and our current efforts in response to the threat. There is a need to encourage other organizations to step in and work together to educate the public and to promote science-based solutions to manage these herds as mandated in the Wild and Free Roaming Horse and Burro Act.

### Becoming an Outdoors Woman (BOW)

I participated as an instructor in the September BOW program teaching about Arizona's wild edible plants.





## International Conservation Ideas

By Brad Powell

**W**hat do Panda Bears and Mexican Grey Wolves have in common? Endangered species and cooperators engagement in Wildlife management were part of a discussion held on July 24 with Board members of the Arizona Wildlife Federation, other conservation partners and a delegation of Chinese conservation experts.

As a part of the State Departments program to provide opportunities for experts from foreign countries to exchange ideas and learn from their US counterparts the Arizona Wildlife Federation was chosen to speak to the group about citizen engagement in Wildlife management in the US. This two-week visit to the US featured meetings and tours ranging across the country.

The AWF with the help of the Audubon Society, Trout Unlimited and the Western Rivers Action Network hosted the group at the Nina Mason Pulliam Educational Center in



Visitors taking a tour of the educational center

Phoenix. We discussed a variety of topics related to wildlife management in Arizona and how non-profit groups productively interact with Federal/State wildlife and land management agencies. Discussion topics included the North American Conservation Model, the Game and Fish Commission system, Federal/State legislation and wildlife advocacy. A couple of interesting questions after the discussion included “Are Bald Eagles really bald”? And “How can wildlife advocate groups like AWF support hunting of wildlife”

Jim Walker of Trout Unlimited and Tice Supplee with Audubon joined AWF board members Sarah Luna, Thom Hulén, Ben Altener and Brad Powell for the presentation. After the discussion the Audubon staff led a tour of the Center.

### Message from: James Lifton, Global Ties Arizona

The Arizona Council for International Visitors hosts around 250 visitors from about 95 different countries each year. These visitors come from all professions, and many have gone on to become political, business, or community leaders in their home countries. Their success has been due, in part, to visits like the one AWF facilitated. These visits with local people and organizations give the visitors a personal understanding of American life and culture through the people they meet with. They also provide visitors with information about how their professional counterparts function in this country, and many visitors have utilized this information to make changes at home. The invaluable experiences our visitors have would not be possible without the AWF’s participation and support.

# Feral, Wild or Exotic?



By Glen Dickens, AWF Vice President of Conservation

A recent piece printed by the Arizona Republic on August 8, 2015 entitled: **Horses; What should happen to them?** Included opinions by two local authors. One in favor of keeping the feral population and one opposed. It brought to the forefront an issue that both the National and Arizona Wildlife Federation have been involved in for decades. Both opinions are printed here and our position(s) and discussion follow.

## REMOVE THEM AND SPARE OUR LANDS

By Thom Hulen, Tempe, advocate for natural and cultural resources:

*“The horses must be removed to protect the riparian ecosystem.*

*The recruitment of broad-leaf deciduous riparian trees such as Fremont cottonwood and Gooding’s willow have suffered considerably from the activities of these trespassing horses. These trees and other native plants provide habitats for native animals, including fish that depend on the shade they provide and stable stream banks to prevent erosion.*

*As the current cottonwood and trees succumb to age, fire and disease, they will not be replaced as needed by new cottonwood and willow trees. Many stream sides will have no growth while others will be crowded with the invasive salt cedar tree.*

*Our willful complicity or complacency in allowing these feral horses to remain in the area where they will continue to negatively affect the riparian ecology is unforgivable if we insist on protecting these horses.*

*Many of the horse supporters claim they have evidence that these horses descended from horses brought by early Spanish explorers, missionaries and settlers. Please show the world your evidence. I do not believe this evidence exists.*

*The Forest Service failed the American people and the public land Americans hold so dear. They should have removed the horses a long time ago to protect the asset they are responsible for, the Tonto National Forest.*

*So when you cannot find a southwestern willow flycatcher or a yellow billed cuckoo or even the common riparian birds in the cottonwood and willow trees along the Salt and Verde Rivers, thank the Forest Service, and the people who value the feral horses more than native wildlife and habitat.*

*I sure will.*

## LEAVE THESE WESTERN ICONS ALONE

By Simone Netherlands, founder of the Salt River Wild Horse Management Group

*“The Salt River wild horses are living pieces of history. They have aesthetic value, fill an important ecological niche (reducing fire danger, spreading native seeds, keeping the river flowing by reducing eel grass) and promote ecotourism resources, drawing local visitors and tourists from all over the world.*

*The Forest Service will commit a colossal, historic and irreversible mistake if it destroys these beloved horses. We hope it will choose a different path, and we stand ready to work with the Forest Service on win-win solutions to protect the horses and the public, and to preserve these amazing horses as an irreplaceable historic, cultural and natural resource.*

*Solutions proposed to the Forest Service include:*

— *Working together on a habitat stewardship program that includes removal of environmental and safety hazards like the miles of old downed barbed wire fencing, as well as cleanup of litter in the Tonto National Forest.*

— *Humane dartible birth control PZP.*

*It is available, effective and humane, and does not impact wild horse behavior, as it works outside of the reproductive hormonal system. The board members of the Salt River Wild Horse Management Group are certified to deliver the vaccine.*

*We have documented the herd’s true growth rate (birth rate minus death rate) at 6 percent per year, a far cry from government claims of 25 percent annual growth rate for wild horse populations.*

— *We have already worked with the Department of Transportation and carefully placed “watch for horses” signs at all horse crossings on Bush Highway. There is still room for improvement by adding motion-sensored flashing lights that will go off when the horses near the crossing.”*



Both the National Wildlife Federation (NWF) which is has nearly 6 million members and the Arizona Wildlife Federation that is affiliated with NWF took updated positions regarding this important resource issue in 2010 as follows. You will note strong similarities in both resolutions as your Arizona Federation was a key contributor to the National Wildlife Federations final adopted position.

**Arizona  
Wildlife Federation 2010  
amended resolution  
number (17):**

**Relative to Management of Feral Horses and Burros**

*“The Arizona Wildlife Federation, with support from the National Wildlife Federation urges Congress to appropriate adequate funds for the federal agencies with jurisdictional responsibilities in Arizona to implement management plans that address the multitude of habitat degradation impacts associated with the presence of feral horses and burros in Arizona, particularly in habitats occupied by desert bighorn sheep and mule deer, and that these plans shall include:*

*(a) a complete survey of feral horse and burro populations on public lands in Arizona; (b) an immediate effort to reduce feral horse and burro populations to the low range of appropriate management levels; (c) managing all herds of captive unadoptable feral horses and burros to be non-reproducing; and (d) the use of multiple population control methods endorsed by professional wildlife managers on feral horse and burro herds to reduce populations to manageable levels; and e) that the appropriate federal agencies be required to document and file a bi-annual report to Congress on the impacts and damage on public lands and wildlife caused by feral horses and burros. (#9-1978, amended 2010)”*

**National Wildlife Federation 2010 resolution number  
2010-05:**

**Management of Feral Horses and Burros**

*“WHEREAS, the provisions of the Free-Roaming Horse and Burro Act of 1971, its amendments, and conditions imposed on yearly appropriations by Congress have resulted in excessive numbers of feral horses and burros on western rangelands; and*

*WHEREAS, a large portion of these rangelands have experienced wildfire, drought or near drought conditions in the recent years and climate forecasts offer little hope for relief; and*

*WHEREAS, wildlife numbers have decreased because of poor range conditions; and*

*WHEREAS, the population of feral horses and burros has increased far above appropriate management levels causing serious damage to riparian areas in particular and an increased rate of deterioration of rangeland health in general;*

*NOW, THEREFORE, BE IT RESOLVED that the National Wildlife Federation, at its annual meeting assembled April 8-10, 2010, in Houston, Texas, hereby urges Congress to appropriate adequate funds for the federal agencies with responsibilities of public land management to implement plans that address the problem outlined above; and that these plans shall include: (a) a complete survey of feral horse and burro populations on public lands; (b) an immediate effort to reduce feral horse and burro populations to the low range of appropriate management levels; (c) managing all herds of captive unadoptable feral horses and burros to be non-reproducing; and (d) the use of multiple population control methods endorsed by professional wildlife managers on feral horse and burro herds to reduce populations to manageable levels; and*

*BE IT FURTHER RESOLVED that the appropriate federal agencies be required to document and file a bi-annual report to Congress on the impacts and damage on public lands and wildlife caused by feral horses and burros.”*

As you can see, we favor both control and removal as necessary of “feral” populations of horses and burros. Many if not most advocates for these feral populations use emotion based arguments and simply refuse to see the animals for what they are, an introduced exotic species in direct and harmful conflict with our native species and their required habitats.

With regards to this most recent example of the conflict between a recently introduced feral horse population and a critical riparian zone, I for one concur very strongly with Thom Hulen’s stated position. That being that our native southwestern willow flycatcher, yellow billed cuckoo and the common riparian birds in the cottonwood and willow trees on our public lands deserve the higher priority.

# Citizen Science Research

*The benefits of crowd sourcing the assessment of nonlead ammunition*

by Loren Chase Ph.D.



## CALIFORNIA CONDORS AND LEAD

The California Condor population significantly declined to a point where in 1982 only 23 individuals remained in the wild. Because of the eminent threat to the species, biologists captured the entire wild population in 1987 and initiated a captive breeding program to recover the birds. In the ensuing decade, the captive breeding program produced sufficient numbers of birds to reintroduce populations in several areas of California, Mexico, and Arizona. However, a growing amount of research indicates lead from hunters' spent ammunition is affecting the California Condors at the population level.

Lead is a neurotoxin that has been documented to affect California Condors negatively and hinders the recovery of their population<sup>1</sup>. That is why the Arizona Game and Fish Department provides vouchers for free nonlead ammunition to

hunters selected to hunt within the distribution of California Condors. The Department sends these vouchers to reduce the amount of lead-laden gut piles available to California Condors. However, one of the major obstacles for hunters to switch to nonlead ammunition stems from a concern that it does not perform as well as traditional lead bullets<sup>2</sup>.

## DOES NONLEAD AMMUNITION EVEN WORK?

As a hunter, I completely understand this concern. The hunts that overlap California Condor distributions are some of the most desirable hunts in Arizona. When you have to wait several years to be drawn, you would not want to gamble having your premium hunt altered by switching ammunitions a few months before the hunt. When hunting, you want dependable ammunition to give you the best chance of



harvesting an animal. For one, every ethical hunter hates to see an animal suffer; to do so purposely is to disrespect the nobility of the animal you are killing. Secondly, everybody wants to see meat in the freezer. Therefore, changing ammunitions can be scary and a few hunters have concerns that nonlead ammunition might not perform as well as traditional ammunition. Further, it may be expensive buying many different kinds of nonlead ammunition to verify which may work with your specific gun.

### PUTTING NONLEAD AMMUNITION TO THE TEST

To examine this issue, we invited hunters to be a part of the solution. On March 28<sup>th</sup> and again on April 18<sup>th</sup> 2015, we invited the leadership of hunting and sporting organizations to shoot both lead and nonlead ammunition. The purpose was to verify how lead and nonlead ammunition compared in performance as well as estimate the number of brands a hunter would need to try before finding ammunition that performed with their rifle. To achieve this purpose, each shooter brought their own gun to see how each ammunition type performed under authentic circumstances. The range of guns ran the gamut of my pre-1964 model 70 in .30-06 caliber (loaned to a shooter) to [LaykeTactical.com](http://LaykeTactical.com)'s .308 that is absolute poetry in aerospace-precision machinery.

The research was done in a double-blind design; meaning neither the shooter nor the researcher measuring the spread of the group knew which type of bullet they were shooting or measuring. Each shooter took 3 shots of 5 different ammunition types from a rest or bipod. Shot groupings could have been reduced by using fixed mounts for the rifles, however the intention was to replicate hunting conditions. The order of bullets (in terms of brand, content, etc.) was random, and different for each shooter. To reduce effects of barrel temperature, several minutes of were allowed between each round of shooting to allow the barrel to cool. Additionally, the order of the bullets were random, so any serial effect (from shooting order, shooter fatigue, environmental factors, etc.) was negated. All measuring was done in the open, and the process known to all shooters. The analysis was also done on a large monitor, and completely transparent to all participants.

### WHAT WE FOUND

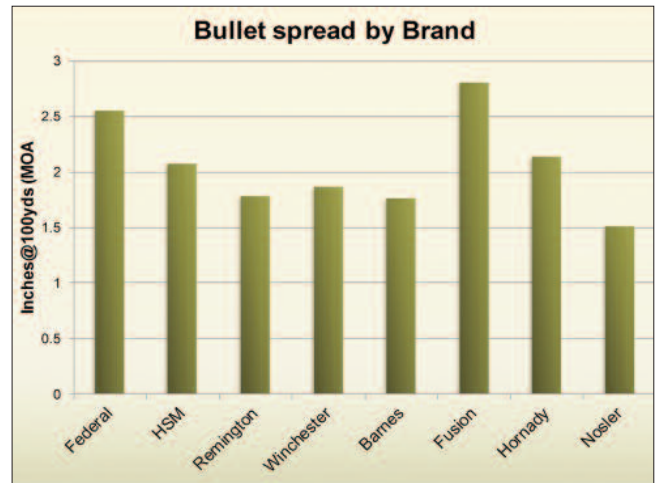
In this study, lead and nonlead ammunition perform equally well. More exactly, nonlead ammunition shot slightly tighter groups, but not statistically significantly tighter. While ignoring all other factors (i.e. caliber, brand, shooter) nonlead shot 1.93-inch groups and lead shot 2.09-inch groups; only .16 inches difference at 100 yards.

Calibers performed differently in that .308's shot the tightest groups and .30-06's shot the groups with the largest spread. Finally, in this research, Fusion, Federal, and Hornaday shot the worst and Nosler, Barnes, and Remington shot the best.

It is important to note that the measurement of accuracy is spread, NOT distance to the bullseye. Lead and nonlead ammunition had very different impact points, so once a shooter finds a bullet type that suits their rifle, the different impact point must be accounted for.

Yes, nonlead ammunition might shoot as tight of groups as lead ammunition in this research. However, what about the knockdown power of the bullet? To test this, .270 lead and nonlead bullet as well as a .308 lead and nonlead bullet were

fired into two blocks of ballistics gel (to mimic tissue). For both calibers, nonlead ammunition penetrated the ballistics gel deeper by a few inches (about 33 inches vs about 30 inches). However, the hydrostatic shock of the nonlead bullet was visually more destructive to the ballistics gel when compared to the lead bullet. Bullet weight retention was also significantly higher for the nonlead bullet when compared to the lead bullet.



### OUTREACH

An additional beneficial aspect of this citizen science research is that because the shooters were somewhat dubious, it lends credibility to the study, particularly with those that are doubtful as to the performance of nonlead ammunition. The citizen scientists returned to their respective organizations as reluctant witnesses to spread the news that nonlead ammunition performed equally to the lead ammunition counterparts. In fact, Christopher Lutz of Arizona Elk Society published an excellent piece summarizing the research findings in the organization's quarterly magazine "The Tracker" (Pages 22-26 in [http://issuu.com/aes\\_trackers/docs/tracker\\_q1\\_2015\\_web](http://issuu.com/aes_trackers/docs/tracker_q1_2015_web)). Additionally, Don McDowell of [ShakeRattleandTroll.com](http://ShakeRattleandTroll.com) was kind enough to have Allen Zufelt and me on his radio show on June 14<sup>th</sup>, 2015 to converse with his listenership of 90 thousand outdoor enthusiasts, which can be listened to as a webcast at <https://vimeo.com/131345364>. In addition, this citizen science approach was received extremely well at the annual Western Association of Fish and Wildlife Agencies conference, so much so that several colleagues from neighboring states asked for more information of how to replicate this process in their states. Further, this process was so engaging, Arizona Game and Fish Department is preparing a manuscript for publication in a peer-reviewed scientific journal. This is not the first time that the Wildlife Federation has considered conservation issues with the citizen scientist approach. Please see the National Wildlife Federation's website <https://www.nwf.org/Wildlife/Wildlife-Conservation/Citizen-Science.aspx> discussing several other research projects and ways to get involved.

### SO HOW CAN I HELP?

The Arizona Game and Fish Department and the Arizona Wildlife Federation firmly believe that voluntary measures are the best solution to this multifaceted problem. Even though the large majority of big game hunters (91%) participate in the lead reduction program, there is still room for improvement, so here

are a few steps that you can take:

**Join the effort** - The Arizona Game & Fish Department, the Arizona Deer Association, Arizona Elk Society, Arizona Antelope Foundation, Arizona Desert Bighorn Sheep Society, Arizona chapter of the National Wild Turkey Federation, and Arizona Wildlife Federation, ask you to be a part of the solution by using nonlead ammunition when hunting in condor country. (Game Management Units 9, 10, 12, and 13).

**Aid Conservation** – Hunters are the original conservationists – we hunt because we love nature. Many wildlife species would not exist if it were not for hunters' contributions to conservation funds. Carry on our proud heritage by conserving California Condors by using nonlead ammunition and encouraging others to evaluate it for themselves. Nonlead ammunition technology has advanced significantly in the last few years, so encourage a reevaluation if necessary. Nonlead ammunition may not be for everybody; if that is the case for you, you can still participate in sound conservation by packing out the gut pile (and be entered into a raffle for some great prizes).

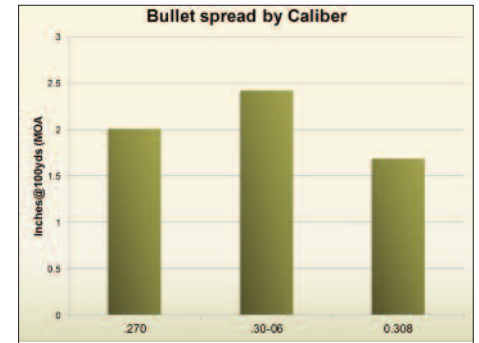
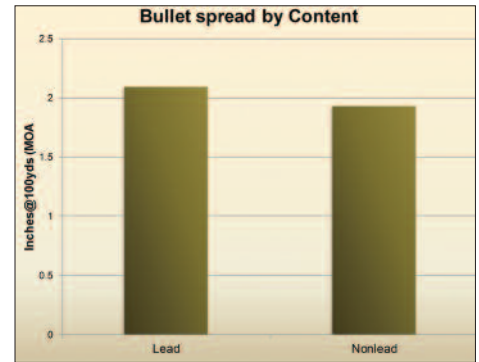
**Be the solution** - Nothing will silence the detractors like taking care of the problem ourselves. Prove to the critics that this conservation issue can be resolved without overly restrictive federal mandates.

### THANKS TO

Special thanks go to all participants who took their time on a weekend to assist in this citizen science research. In addition, acknowledgement goes to Arizona Game and Fish Department for providing ammunition for evaluation, the Arizona Wildlife Federation for providing incentives, and the Peregrine Fund for providing meals to participants.

\*use of trade names does not imply endorsement by any governmental or nongovernmental organization.

Dr. Chase is the Human Dimensions Program Manager at Arizona Game and Fish Department, Director-at-Large for the Arizona Wildlife Federation, and Chair of The Wildlife Society's Human Dimensions Working Group. He is a member of the Foundation for North American Wild Sheep, Trout Unlimited, National Sporting Clays Association, and International Federation of Fly Fishers. He is a reviewer for seven scholarly journals centered on the interactions between humans and wildlife. In his spare time he watches football, fly fishes, hunts, builds furniture, tutors math, coaches soccer, spends time with his three children and is CEO of one family business and a CFO of another. As such, he knows first-hand that shooting is a perishable a skill.



1 Finkelstein et al. (2012) Lead poisoning and the deceptive recovery of the critically endangered California condor. *Proceedings of the National Academy of Sciences*, 109:11449–11454.

2 Chase & Rabe 2015. Reducing Lead on the Landscape: Anticipating Hunter Behavior in Absence of a Free Nonlead Ammunition Program. *PLoS ONE* 10(6): e0128355. doi:10.1371/journal.pone.0128355

### WHADDA' YA' KNOW (answers on page 19)

1. What is the highest point in the Santa Catalina Mountains?
2. What type of rock is found at the bottom of the Grand Canyon?
3. What type of rock is found at the upper rim of the Grand Canyon?
4. What is Arizona's official state fossil?
5. Name the 2 largest manmade lakes in the nation.



Join the AWF on  
Facebook!

[www.facebook.com/azwildlife](http://www.facebook.com/azwildlife)

### Come join us! 2016 BOW Dates

Mesa - January 22-24  
Prescott - April 15-17  
Prescott -September 9-11

Scholarships available for April & September

Please visit: [www.azwildlife.org](http://www.azwildlife.org)

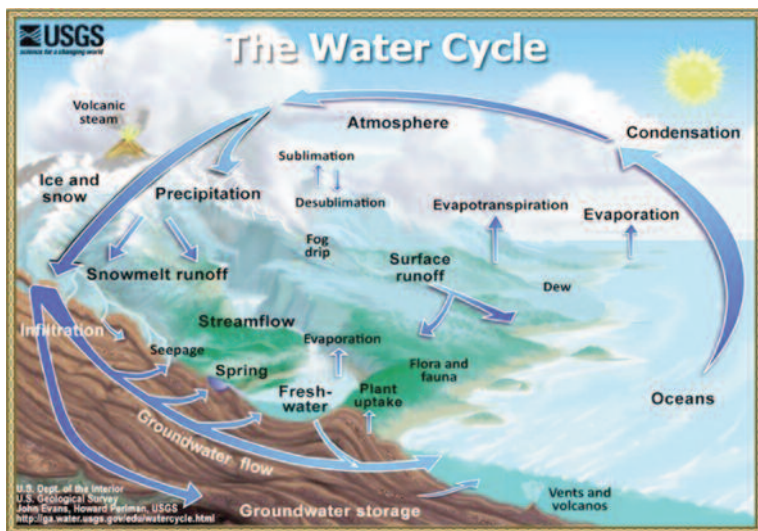
For questions about the Becoming an Outdoors Woman program:

Contact Kim at:  
[awf@azwildlife.org](mailto:awf@azwildlife.org) or 480-644-0077



# New Report: Clean Power Plan Key to Protect Drinking Water, Wildlife Habitat

Courtesy of National Wildlife Federation



**Habitat Loss:** Among the most productive habitats on Earth, coastal wetlands and estuaries are now threatened with the rise of sea levels, more intense and frequent coastal storms and altered runoff. In the central U.S., land loss and drought are threatening the “prairie pothole” region (Montana, North Dakota, South Dakota, Minnesota and Iowa). More than 300 migratory bird species nest or migrate through this area, facing the challenge of finding suitable areas to nest and feed.

“I have been forced to close Montana’s finest cold water fisheries to protect trout from excessive water temperatures and catastrophically low water flows. Climate change affects our family’s business and threatens one of the most sustainable, unique parts of Montana’s economy,” said Dan Vermillion, a fly-fishing guide and chair of Montana’s Fish and Wildlife Commission. Vermillion took President Obama fly-fishing in 2009. “Equally importantly, it threatens one of the most important gifts we can give our children — cold, bountiful waters traversing valleys of healthy forests and grasslands. We must address the changing climate before it is too late. Future generations deserve nothing less.”

The first five months of 2015 were the hottest on record, on pace to surpass 2014’s record year. A recent study published in the journal *Nature* finds an increasingly visible link between global warming and extreme weather, with warmer temperatures adding fuel to superstorms like Sandy.

*Wildlife in Hot Water* details the steps needed to confront climate change and protect our waterways:

**Support the Clean Power Plan.** President Obama’s Clean Power Plan sets first-ever national limits on carbon pollution from power plants. “The Clean Power Plan’s flexible, achievable and science-based approach represent real progress for protecting wildlife and America’s outdoor heritage from the worst impacts of climate change,” said O’Mara.

**Say no to new dirty energy projects.** Oil, gas and coal development destroy, degrade, pollute and fragment habitat. Science is telling us that we must slow and stop the expansion of new dirty energy reserves—such as the massive coal fields in North America and the tar sands in Canada—which threaten important habitat and would lock in more carbon pollution for decades to come.

**Expand clean, wildlife-friendly energy and improve energy efficiency.** Wind (on land and offshore), solar, sustainable bioenergy and geothermal energy can help protect wildlife, habitat and our water from climate change.

**Maintain fully restored Clean Water Act protections.** In addition to curbing carbon pollution, the Environmental Protection Agency recently finalized a new rule restoring Clean Water Act protections to at least 60 percent of America’s streams and 20 million acres of wetlands nationwide.

America’s waterways are already being stressed by climate change and President Obama’s Clean Power Plan is urgently needed to protect them, according to a new report by the National Wildlife Federation. *Wildlife in Hot Water: America’s Waterways and Climate Change* takes a comprehensive look at the science connecting global warming with changes to our lakes, rivers, streams and oceans like warmer water and more extreme weather, detailing impacts on the fish, wildlife and communities that depend on them.

“Hunters, anglers and outdoor enthusiasts are experiencing firsthand how climate impacts are threatening wildlife from coast to coast — fueling warming water in trout and salmon runs, toxic algae in Lake Erie and Florida, record droughts in Texas, California and Florida, and extreme storms along the East Coast,” said Collin O’Mara, president and chief executive officer of the National Wildlife Federation. “The Clean Power Plan’s flexible, achievable, science-based rules represent real progress for protecting fish, wildlife and America’s outdoor heritage from the worst impacts of climate change.”

*Wildlife in Hot Water* provides concrete examples of the bodies of waters that are suffering due to climate change, worsening wildlife habitat and threatening the drinking water for millions of Americans:

**Toxic Algae Outbreaks:** Lake Erie is once again suffering toxic algae outbreaks this summer fueled by increasing runoff from extreme weather events and warming water, one year after an outbreak shut down drinking water to nearly half a million people. To the west, scientists are directly connecting the dots between a massive, wildlife-killing Pacific algae outbreak and record-breaking warm water.

**Warming Water and Drought:** The Pacific Northwest’s salmon have been pushed to the brink by low water flows and warm temperatures, with the Yellowstone River’s trout also stressed. “As much as drought across the West is stressing people, it’s even more devastating for fish and wildlife, which can’t plan ahead or get water from far-away places,” says Doug Inkley, NWF senior scientist and lead author of the report. “They need our help.”

# Sunday Afternoon



by Linda Dightmon



*Friendly Pines BOW workshop, September 11-13, 2015*

**I**t was Sunday afternoon and the camp was quiet. There was a mule deer doe and her spotted fawn noisily munching some weeds between cabins. The air was scented with pine and last night's campfire. I was taking down the notices that I had posted a whirlwind 52 hours ago. And, I was exhausted... and a little bit sad...and a lot proud.

The workshop is now history. There have been forty workshops held at Camp Friendly Pines, two a year for twenty years. Wow! After all this time, there is still a need. We had the maximum 100 registered participants and 12 more on a waiting list three days ago. Yes, there is still a need, we are still germane.

It began Friday morning with the chaos of 125 students and instructors checking in at the Wagon Shed. Cabins needed to be found. Tee-shirts were handed out. Auction items donated by the attendees were stowed. Old friends were reacquainted and the seeds of new friendships sown. After check in, we all met at the Quiet Place for housekeeping rules, introductions and the all-important group pictures. Then off to lunch and the first session.

This year for the first time we tried a crawfishing class. It turned out to be so popular and we had to stop the registration at 12. The goal was to trap enough of these tasty invasive devils so that we could all have a sample. We didn't quite reach that goal but a couple of dozen lucky people were able to try one.

Two other classes from Friday afternoon had extra duties for the game tasting event. The campfire cooking class grilled up some dove that I had prepped at home. Once again the sausage making class was called to service. They made four types of sausage, Javelina Chorizo, Buffalo Sweet Italian Fennel, Turkey and Apple Sausage and Elk Breakfast Sausage. This class also had the added task of serving the camp during the game taste. We added three crock pot dishes, Elk tips, Buffalo chili and pineapple Deer meatballs. There were no leftovers! Along with the game taste we had a variety of wines to sample as well as the beautiful prickly pear margarita. Many thanks to Kathy Greene for harvesting and rendering the fruit into a juice. Yummy!

The Friday night game taste is our ice breaker. It was started by the founders and it works well. Bob Hirsch hosted the first ones. We added the Prickly pear and incorporated the classes for help. But the comments of "I didn't know you could eat javelina." and "My husband's deer stew didn't taste like this." "Wow, do you have recipes?" are the same. I could almost hear the echoes of years past as we executed the fortieth game taste in the Kiva.

After the game taste is dinner. Here is where we changed things up a bit. Instead of a big hearty meal, we have the camp prepare a salad bar. We tell the ladies that we are going to serve them a reverse meal. Main dishes first and then the salad. I have yet to hear anyone complain about this decision.

After dinner Jamacia Smith and Pam Hessey from the Arizona Falconers Association held a presentation about the sport of kings. These birds always steal the show and these ladies are the real deal falconers. It is such a treat to have these women present at BOW. Lady falconers, what great role models!

Later, Jennifer Tipton and Jacque Carden held a beginning handgun seminar. This was a basic informal presentation for someone that wants to learn about or get over a fear of handguns. The ladies were able to handle and manipulate different revolvers and semi-autos of several calibers.

Participants also had the chance to go night fishing. Kathy and Don Greene borrowed some fishing tackle from the Tucson Game and Fish. Don, Mark (Hullinger) and I took twelve interested ladies to the pond for a try at some night time action. Alas, we did not catch any fish but what a beautiful star filled night with some awesome company.

The Arizona Flycasters are a huge part of the success of the Arizona BOW program. Under the amazing leadership of Brian Mazoyer, this club comes through year after year. Every Friday and Saturday evening they hold a fly-tying open house in the Wagon Shed and teach three fly fishing classes.

So, on Friday night, the participant has the choice of fly-tying from 7-10 for 15 minutes or the whole three hours. She could see the falconers at seven, handgun at eight, night fishing at nine and/or the campfire at the camping class site with Stan's gourmet S'mores.



Saturday begins with a hearty breakfast and the bustle of getting folks shuttled and car pools formed for the fishing and shooting classes conducted off sight. It is always a relief when I see the big 15 passenger van roll out with the handgun class. Session 2 is under way.

This is when my hunting class was scheduled. Hunting for me is not a sport. It is a way of life, a heritage passed to me from my ancestors. In the field is where I belong where being a part of the big circle just feels right. Hopefully, this passion gets through. Nine ladies were in the class with four fulfilling their hunter education field day requirements. We set up decoys, did a mock hunt and blood trail. This is one of the larger hunting classes and I am pleased to see the interest. Many thanks to Mark for tag teaming with me.

What is a BOW workshop without a little thunderstorm? Well, I am not sure because it seems there always is one! The sky clouded up and started to growl while we were following our blood trail. We had planned on having lunch outside but Mom Nature threw us a curve. So, the camp staff grilled chicken breasts in the rain and the line was done under canopies. We executed a mad dash to the dining hall, all in good spirits.

I assured everyone that the rain would stop during session 3 (it did) but some did not believe me. Some classes grew while others, especially the paddling classes, shrunk. The few that went to paddling received extra special instruction so it all worked out. With BOW students, it always does.

Saturday afternoon was the most stressful for me. This is when we have three hours to set up the Kiva for the evening. This year was even harder because of our 20 year special theme. My sound person, Kim, was shuttling the shotgun class and I had to recruit Kathy, changing her archery classes around so that her and Don had to get up at 0:Dark 30 on Friday. Nicole, who always helps had to leave yesterday because she did not have a baby sitter. Then the MC that I had lined up got sick and went home and we roped board member Trica into doing it and...THE PRESIDENT was coming. No, not that one! The AWF president. OK, I think you have the idea. I spent the time working out a play list while Kathy set up the

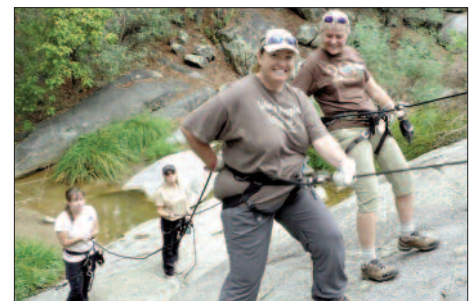
silent auction and bucket raffles.

This was exactly what I needed to do. The hand written schedule kept me and the program on track. With the entire camp in the Kiva the positive energy was palpable and it all came together.

We recognized the board members that gave up a weekend to be with us as well as AWF president Brad Powell and his wife Ana. The normal workshop business of certificates and special awards for the students was done. We had a picture of the first BOW from 1995 and founder Mark Hullinger said a few words. Kim queued up the theme song to *2001 Space Odyssey* and we presented awards to the instructors present. We had three live auction outfits. I called them 'field dressing' BOW style. The "BOW Follies" were a wonderful mixture of old and new. Holly Dickinson did a great job with the lineup. The camp baked us a cake. Bucket raffles and silent auctions were completed and we sold BOW branded merchandise. We grossed \$3,500 in that hour and a half. A relaxing campfire was in order for me that evening while others tied flies.

Sunday morning began with a 6:30 AM bird walk. Trica led the walk with a dozen or so birders. Breakfast was served and then session 4. I struggled with arranging the car pool to the rifle class while the rest of the classes started smooth. (Whew) Lunch time came with clear skies. Afterwards I watched the hugs goodbye and the pictures taken with cabin mates and new found friends. I overheard plans made of camping and fishing trips. Phone numbers exchanged. I have witnessed the same scene year after year. Only the faces change.

Now, as I take down the notices, the last remnant of the noisy bustling workshop that we had just completed. I felt a little melancholy, for this camp was over. It was now history. I am also feeling good about us. Proud of the fact that our little team. Kim, Kathy, Crystal, and I made it all happen. We brought 153 willing and wonderful people together and created a fun learning experience in a non-threatening manner just like the founders of the program intended it to be.



Photos courtesy of Trica Oshant Hawkins



# Instructor Campout...it was All About the Food!

by Linda Dightmon



Photos courtesy of Amanda Moors

**F**or years we have been looking for a good way to have the instructors meet outside of the crazy busy environment of the workshops. Great ideas are shared by great minds in social settings and BOW instructors all have great minds! Because of the logistics of our workshops there are 5 and 10 year instructors that have never met. Shooting instructors wait at the ranges where the classes are shuttled to them. Others come to camp for only the session they are teaching. At the September BOW there were 53 volunteer instructors helping out. Less than half stayed even one night at the Friendly Pines venue.

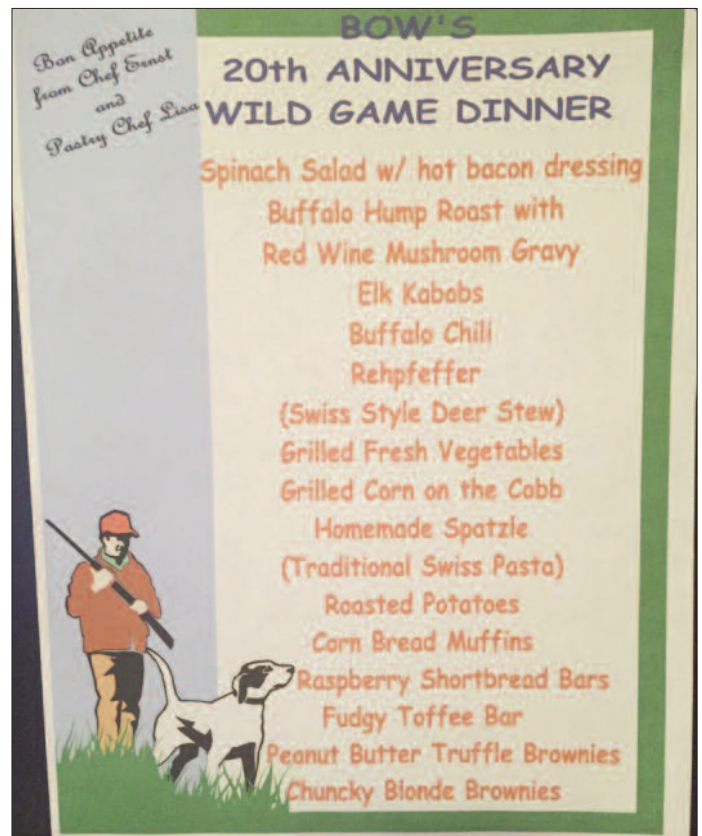
We arranged an instructor/BOW support campout that happened on the 17th and 18th of July. It turned out to be an extra rainy weekend. We expected the usual afternoon monsoon thunderstorms but Dolores had other plans for us. Dolores began her short but exciting life as a cyclone from the Eastern Pacific, it ended as a constant drip on our campout weekend. To make it even more fun, we were in a tent only campground. So, the tarps and EZ-up's appeared. BOW people don't worry too much about weather and as always it turned out to be a great weekend.

Friday night was a potluck with Kathy Greene making a pork roast and everyone else bringing side dishes. Karan Parsley brought some excellent jambalaya. It was a good belly warmer for our stormy night.

To recognize Arizona's 20 years of BOW we hired chef Ernst and pastry chef Lisa to prepare and serve 8 different game dishes on Saturday night. Deer, elk, javelina and buffalo was used. There was spinach, squash, spätzle, potatoes, corn and cornbread to accompany the game meat. It was delicious! The rain stopped just as we sat down to eat and it stayed dry long enough for all to enjoy a campfire. We had about 25 instructors and family members attend this outdoor feast. The game meat was donated by Mark Hullinger and me.

On Sunday morning Kathy made two separate quiches. One had the crayfish we had trapped and the other was a chorizo and green chili delight.

We are planning to do it again next year. I believe that this is a good way for instructors to meet and network. We have it tentatively set for mid July 2016 in another campground. We found out at this dinner that Jim Subers, one of our shooting instructors volunteers as the camp host in a nearby venue! Where the camping is free and there is room for rigs. Great ideas shared by great minds!





# Camp Cook

By Ryna Rock



## DUTCH OVEN ONE POT MEAL

- 1 1/2 to 2 lbs of small to medium red potatoes, washed and unpeeled
- 2 medium heads of cabbage, cut in wedges
- 3 onions, quartered
- 8 ears sweet corn, cleaned and broken in half
- 2 lbs smoked keilbasa or other smoked ring sausage, cut in quarters
- 1 qt water

Place the potatoes on the bottom of the 12 inch Dutch oven and layer as follows: cabbage wedges, onion, corn, and sausage. Add water and seat lid firmly on oven to keep in moisture. Cook for about 1 hour, with 10-12 briquettes on the bottom, replacing charcoal as needed. The smoky juice from the sausage drips down through the other food and gives it all a good flavor.

Serve from the Dutch oven, or transfer some of the top layers of food to other containers for easier access to the potatoes on the bottom. Season to taste when eating. Serves 6-8 people.

## EASY OPEN FIRE CAKE DESSERT

- 2 c flour
- 1/4 c sugar
- 1 tsp baking powder
- 1/2 tsp cinnamon
- 1 egg
- 1/2 c water
- 3 apples, chopped up very small and covered with sugar

Mix flour, sugar, cinnamon, and baking powder together. Add egg and water. Place mixture in greased Dutch oven. Add apples cover top of mix. Cover and place to side of coals. Keep turning oven slowly to bake evenly.

Oven size	Number of briquettes	
	Top	Bottom
10-inch	10 to 12	8 to 10
12-inch	12 to 14	10 to 12
14-inch	14 to 16	12 to 14
16-inch	16 to 18	14 to 16

## WHADDA' YA' KNOW

### Answers

1. Mount Lemmon with a summit elevation of 9,159 ft.
2. Schist which is around 2 billion years old
3. Limestone which is around 230 million years old
4. Petrified wood. Most which comes from the Petrified Forest in northeastern Arizona
5. Arizona has the 2 largest manmade lakes which are Lake Mead & Lake Powell

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# Historical Tales

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## Need For Uniform Wildlife Policies Between State and Federal Agencies

**I**n the absence of a more definite United States Supreme Court decision, it is futile to keep raising the issue of the ownership of resident wildlife as between the State and Federal. One of the nearest to such a decision lies in the case of the *United States vs. Hunt* 19 F. (2nd) 634 (C.C.A. Ariz. 1927), in which the principle is laid down that officers charged with the administration of Federal lands (in this case a National Forest as well as a National Game Preserve), may take steps as are necessary to protect the trees and other vegetation from damage by deer or other wild game, even to the point of destruction and removal of the animals by the most feasible means. This very significant provision follows, however: this not to include the licensing of hunters to transport deer killed on the preserve to place outside the same in violation of the game laws of Arizona." Another section reads, "Whether they (the deer) be the personal property of the United States as contended by the complainant or the property of the State of Arizona, for the benefit of the people as claimed by the defendants, we do not find it necessary to decide." But the decision does constitute recognition, by rather strong inference, of ownership by the State, else it would hardly have prohibited licensed transportation, except in accordance with State law. Nor is it unreasonable that State owned animals must not be allowed to unduly damage range or forest resources upon lands of whatsoever ownership within their respective habitats.

To further illustrate the uncertainty of ownership let's take a decision back in 1896 by the U.S. Supreme Court in the case of *Greer vs. Connecticut*. 161 U.S. 519, 16 Sup. Ct. 40 I. Ed. 793, in which the following appears in one petition".....the subject of this whole discussion is wild game which the state may preserve for its citizens if it pleases," and this in another section, "The ownership of the wild game within the limits of a state, so far as it is capable of ownership, is in the state for that benefit of all its people in common." In the first instance the state may "preserve" wild game, and in the second it may "own" the wild game insofar as it is capable. It would appear the court had in

mind some provision of law, or the Constitution, setting a limit upon the capacity of a state to own such property.

Then we have numerous decisions by state courts defending the principle that wildlife within the borders of a sovereign state is vested in that state for the benefit of its people. An excerpt from a decision in 1909 by the Supreme Court of Florida *vs. Galloway* is typical: "The power to regulate the killing and use of game was vested in the Colonial Governments of America and passed with the title to game in the natural condition to the several states as they became sovereign."

In setting up the Yellowstone National Park in 1879, and with subsequent establishment of the various other National Parks and Monuments, including the Act of 1916 establishing a National Park Service, the Federal Government is clothed with an exercise authority over resident game to the extent of prohibiting any form of artificial management. Although the fauna be entirely indigenous to a given state, its citizens and institutions are given to understand they have no further jurisdiction. The same is true of other federal laws within National Game Preserves not open to hunting.

Perhaps here is where a state is "incapable" of ownership as inferred by the U.S. Supreme Court. Perhaps it is a case of each sovereign state having complete control over its wildlife unless this may interfere with plans of the parent government, which represents the people of the whole nation, rather than one of its local units. In this connection, there is no time like now to demonstrate the affection we all have, maybe game managers and sportsmen in particular, for Old Glory and the Nation as a whole.

But thus we have a rough picture of the legal status of wild game in the United States, under which, just what is the present relationship of different agencies having to do with wildlife management, especially in the west where so much government land of various classifications is involved? Federal lands fall into five main types: National Forests, Natural Wildlife Refuges-big game and migratory bird, Taylor



Grazing Act units, National Parks, and Indian Reservations. Then we have the occasional National Game Preserve within National Forests which, by Act of Congress or Presidential Proclamation, is administered with greater Federal authority over game than is exercised in ordinary forest land. Come now the State Game and Fish Department, empowered by local laws to administer these resources directly or in cooperation with one or more Federal Agencies having jurisdiction over government lands enumerated above, in addition to the activities where privately owned lands are concerned.

Taking up the various agencies in order, our National Forests were very properly created primarily to stop the wanton destruction and waste of a fast vanishing natural resource. Not only timber, but other forest products were being unduly exploited and literally devastated with little or no renewal for the future. A farsighted basic policy was laid down, that of accomplishing "the most good for the most people in the long run". Game management was given a place, along with lumbering, grazing of livestock, recreation and the protection of eroding watersheds. To the Forest Service, coming into being at the turn of the century, much credit is due for leading the way to practice conservation of our remaining natural resources, including game.

The Fish and Wildlife Service, modern combination of the Biological Survey and the Bureau of Fisheries, has a well defined place in the national setup. It not only stabilizes administration of migratory birds, perhaps not unlike other Federal Agencies take jurisdiction over matters of an interstate nature, it is very helpful in the states in their fish problems. It also recognizes the serious damage from predation upon game and livestock, and has set up, insofar as funds will permit, an efficient organization of trappers and hunters which in a state like Arizona, has been of inestimable value. We all appreciate the excellent job this agency has done in assisting nature to increase duck population from an estimated 30,000,000 in 1936 to 100,000,000 at this time. It is also the official research medium for the other Federal Agencies.

The Division of Grazing, baby member of the family, was set up under the Taylor Grazing Act of 1934. Some 80,000,000 acres of the remaining Public Domain was authorized to come under this jurisdiction. Wildlife is included in the management of grazing. Advisory boards for the various grazing districts are made up of stockmen who officially vote on matters of administration, and include representatives of state game departments who act in an advisory capacity on wildlife issues. Four large districts are functioning in Arizona.

The National Park Service is charged with custodianship of our national wonders, typical cases being the Grand Canyon, Yosemite, Zion Canyon, Bryce Canyon and others. The establishment of the Park Service and the various parks and monuments under its jurisdiction has an entirely different basic objective than do other government administered lands. Practically all the other agencies have in mind production for utilization, whereas the Park Service conception is to preserve in its pristine condition, insofar as is possible, the various areas within its boundaries. There is comparatively little disturbance to faunal environment. Especially hunting is prohibited and only in rare cases of overgrazing or over population of a species is any action taken to correct the lack of balance. It is often stated that surrounding areas get the benefit of overflow of game animals, which no doubt exists on many areas. On others the overflow consists perhaps more of predatory animals and makes a bad situation on the adjoining game producing lands. We have no quarrel with the officials who administer the Park Service under its various enabling Acts and naturally we respect these laws so long as they are in effect. It is wondered, however, if in time we will not come to realize that a greater unification of policy should be put into effect wherein National Parks with unfenced boundaries in valuable game country should include in their management plans the taking of predatory animals, perhaps up to a certain limit,

which will tend to more equally distribute carnivores and game over areas that may be shown as unevenly balanced by properly qualified officers of the Fish and Wildlife Service. We have areas in Arizona where the Fish and Wildlife Service is making a drive on predators in order to increase game and livestock right up to a National Park boundary, but from there on no control is expected and it makes a bad situation. On many other areas no doubt this condition is entirely reversed and the Park Service is faced with an overgrazing problem. Would it not be in the public interest to seek legislation giving the Park Service and cooperating agencies greater latitude in order that any local situation could be taken care of, even to the point of issuing permits for limited hunting? From a tourist standpoint, it seems unlikely that many of them ever get to see a cougar, a wolf, a coyote, or a bobcat, and it is believed, insofar as range conditions will permit, the more valuable game animals should be given the benefit of any doubt.

The Indian Service again is entirely unique in its aims and objectives. After occupying the Native's domain by force of arms, our democratic way of life demanded proper recognition of his remaining rights and a very creditable effort was launched to look after his welfare and that of his children. Vast acreage in the Public Lands states were set aside as a dwelling place for Indians and though in Arizona they comprise some of our choicest lands, we are inclined to take the matter in the spirit of live and let live. Under the administration of the present Commissioner of Indian Affairs, Tribal Councils have been set up among the various tribes to encourage Indians to take more interest in their own affairs, and it is surprising a lot of times the good sound sense and logic displayed by these councils. They are showing an increased interest in wild game and in most instances State Game Laws are respected, although the Indian Service reserves the right to issue permits and otherwise control hunters possessing hunting and fishing licenses.

As to predatory animals here is another case where all government departments are not in agreement. Extensive examinations have already been made in cooperation with the Fish and Wildlife Service into the coyote livestock relationship. Many Indians have complained of losing calves and, of course wild game comes in for its losses. Methods of trapping were criticized by the service, but in one outstanding demonstration traps of a special type designed to be as humane as possible turned out to be in fact more inhumane than the ordinary iron traps in use. All in all, it is believed game management on Indian reservations is in for great improvement, both for the benefit of the Indians and a limited number of white people within game supply limits.

The Kaibab National Game Preserve was set up in the Kaibab National Forest by President Theodore Roosevelt in 1906. All are more or less familiar with the many complex game problems that have arisen there since that time. Hunting was not contemplated at the outset, but over population developed to a point where hunting is a regular part of management under joint administration of the Forest Service and the State Game Department.

The whole point of this story, after a brief description of the various types of lands and jurisdictions to show the need for a more closely co-ordinated wildlife policy. I might say the finest relations exist between the State and all the Federal Bureaus and it is believed we are in a fair way to bring about even better relationships than have ever existed. On the other hand, it is believed each unit should be handled on its own merits, more closely tied in with surrounding areas so that the common principle or the most good to the most people in the long run can more nearly be attained. Legislation in some instances would be necessary, but even this is not insurmountable if presented in the proper way by such groups as this organization and various game and sportsmen's associations.

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