Arizona Wildlife News

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www.azwildlife.org

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From the Editor's Desk

By Larry Audsley

This is my first issue as editor. I want to thank past editor John Underwood for helping me get started and my colleagues Ryna Rock and Linda Dightmon for their patience while I was learning the things that can only be learned on the job.

Before accepting this assignment, I discussed with other board members what the publication's purpose should be. We agreed that *AWN* should further Arizona Wildlife Federation's stated mission to educate people about wildlife. We also hope that attracting new readers will boost membership.

In thinking about content, I surveyed what's currently out there in the way of news and information about Arizona's outdoors. It's already a crowded field. Arizona Game & Fish's *Arizona Wildlife Views* offers beautiful wildlife photography and informative feature articles. The agency's website provides more timely information and news than most of us have time to read. There are several private websites and discussion forums offering specialized information and advice on almost any outdoor-related topic, no matter how obscure. Newsletters and websites for dozens of environmental and single-species sportsmen's groups also offer news and information for members. To be widely read, an outdoor news publication needs to offer content that isn't available elsewhere and do a good job of it.

Not all that's out there is necessarily accurate or complete. House publications understandably reflect the goals and beliefs of their sponsoring organizations, often ignoring what is being said in other circles. As someone has said, we're all ignorant, just about different things.

As a coalition-style organization that has both green preservationists and hook-and-bullet people on its Board of Directors (sometimes in the same individual), Arizona Wildlife Federation's publication requires a broader viewpoint, one that admits to a bias toward wildlife and our ability to enjoy it and not much else. I'm hoping *Arizona Wildlife News* can build readership by addressing timely issues and telling it like it is. AWN will be a bit edgier than an agency publication and more reflective of diverse perspectives than your typical organizational newsletter. Think *High Country News* meets *Outdoor Life*, but only dealing Arizona and its wildlife.

Someone famous once said that a vigilant and informed society is a necessary component of a successful democracy. Many of us would like just to be left alone to hunt, fish, hike and enjoy the outdoors without having to worry about protecting the future of wildlife, habitat and our right to access and enjoy it. I wish that too, but it doesn't work that way. Threats are everywhere. Wildlife can't be at the table negotiating for its own future. That job falls to us, and to be effective we must be informed.

Along with our regular features, this month's issue includes my articles on current legislation that would make it harder to limit the range and number of feral horses and burros roaming our public lands. AWF is actively opposing this legislation and hopes to enlist other organizations to do the same. We also have a rather scholarly piece by Jim Heffelfinger on the impacts of "trophy hunting" on wildlife gene pools. This article was inspired by a Newsweek story that suggested hunting is degrading the genetic health of the world's wildlife.

In future editions we'll have a lot to talk about. State Trust Land Reform is a huge issue for wildlife and our ability to enjoy it. We'll try to give it the wildlife perspective without boring you too badly. Predator management, wilderness designations, Federal land management plans, travel management, habitat partnerships, solar power sites and the pros and cons of the border fence will be keeping AWF board members busy the next few months. We look forward to telling you what we learn.

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ARIZONA WILDLIFE NEWS

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In This Issue

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.

On the Cover:

Ken Toney is the featured artist for the cover of the *Arizona Wildlife Sportsman* from the October 1960 edition.

If you have a photograph or painting that you would like to submit for consideration on a future cover of Arizona Wildlife News, please contact AWF at the address below.

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The Arizona Wildlife Federation welcomes stories, art and photographic contributions. We will consider, but assume no responsibility for unsolicited proposals, manuscripts, art, photographs and transparencies. Contact the Federation office at 480-644-0077 for details.

Advertising inquiries should be directed to the Arizona Wildlife Federation at the above address or phone number or by email editor@azwildlife.org. AWF does not assume any financial responsibility for errors in advertisements that appear in this publication. If notified promptly of an error, we will reprint the corrected ad.

AWF Mail Pouch

Hello AWF,

Just wanted to say thanks for your hospitality at the annual meeting last month in Flagstaff. It was a privilege to get to meet so many wonderful people.

Bill Hudzietz

Bill was awarded the "Head and Horns Award" from the AWF's Trophy Book Committee at our Annual Meeting in June.

Hi Ryna, *(Rock,AWF President)*

It was great to hear your words at the Diablo Trust meeting, and I look forward to getting more involved with AWF in the near future. Unfortunately, I will be in New Mexico during the campout, so I'll have to take a rain check (maybe literally, if current weather continues!) I am interested, will be joining shortly, and I look forward to sitting down for a good conversation with you sometime soon.

Best regards, Tom Sisk,
Flagstaff, AZ

These folks objected to the AWF's recent Enews Bulletin on HR 2454 and our support of the National Wildlife Federation's stance on Climate Change recently. We are always glad to hear different points of view and do send an individual answer to any who take exception to our position on a particular issue or concern.

Dear Editor,

Two references to climate change caught my attention "-- habitat and ecosystems threatened by climate change" "--safeguard Arizona's natural resources from climate change".

It sounds as though AWF has jumped on board with the junk science climate change scam. Please tell me it isn't so. ?????

Kent Hamm

Dear Editor,

One of the reasons this country is in trouble is because few people read the total bill. Everyone picks out their pot of gold instead of looking out for everyone. Is it your job to take a political position?

Lou *No last name provided*

Dear Brian,
Brian is the BOW fly-fishing team leader

I very much enjoyed the Intro to Fly Fishing and Fly Fishing sessions as well as learning to tie flies!!! You have a great gift of making learning fun! I cannot imagine what effort goes in to making these classes successful, but I know that there is a great deal of planning, coordination and implementation. You and your team of instructors were great --enthusiastic, interested, and gentle.

I was so pleased to see you at the "pond" fly fishing in your floater on Saturday afternoon, because I was trying to imagine exactly what that looked like.

Thank you so much for remaining committed to BOW Camp. I had such a wonderful experience; I will definitely be back. Two of my four sessions related to fly fishing, so you can take a bow!

Sincerely,
Sally

We urge our readers to communicate to us cheers and even jeers (given in good taste, or course). 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 possilbe.

Send your 'snail mail' to:

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

Send your email to:
Editor@azwildlife.org

It is our goal to provide a well-written informative magazine and your feedback will help us do that. This is your magazine, let us hear from you.

Are you aware that because you are a member of the Arizona Wildlife Federation YOU are eligible for a reduction in premiums for Mutual of Omaha's Long Term Care policy called "Mutual Care Plus"

Contact a fellow Arizona Wildlife Federation member, Bryant Ridgway at 602-989-1718 or 800-224-1120 x 210 for details.

From The President

Ryna Rock

Where Is Everybody?

Two weekends ago Ken and I participated in a wildlife project co-sponsored by the Arizona Wildlife Federation and the Arizona Antelope Foundation, along with about 80 plus other folks from all parts of the state. I saw a lot of very familiar faces but there were some volunteers who weren't members of one or the other group; some were just concerned citizens who got wind of the project from the newspaper, an enews bulletin, email notices, or some other form of media we used to get the word out to as many people as possible. We all had a great time! The food was good, with a steak dinner and Eggs Pierre breakfast provided by the two organizations. The companionship was great with everyone there having the satisfaction of knowing we were going to be doing some good work that benefited wildlife. We appreciated the G & F and Forest Service folks who gave up their weekend to keep the whole thing on track and had done the pre-project work to identify the "where and why" of the project areas.

Coming home, I got to thinking about all those faces I see over and over again at projects, and about the project organizers that put so much work into planning projects and communicating to the public and their memberships about them in an almost ceaseless and continual effort to keep volunteers coming out and keep these important wildlife and habitat improvements/restorations happening. So my question is, "Where is everybody?" Why aren't there more "bodies" helping with planning, organizing, and accomplishing?

According to the National Survey of Fishing, Hunting and Wildlife Associated Recreation, in 2006 Arizona had 418,000 people purchase hunting and fishing licenses that went on to spend 3.1 Billion on their chosen sporting opportunities! That is a lot of bodies! How many of those do you suppose belong to an organization that actually supports wildlife and habitat by going out and doing on the ground work? How many of those do you suppose actually even belong to conservation minded organization at all? Not too many. I would venture to guess that a majority of those 418,000 hunters and anglers either consciously or sub-consciously make a choice to believe that some other person will step up and do the right thing by volunteering to work for wildlife and habitat, so they don't need to.

Let me list some of the most common "NON-EXCUSES" we hear from "NON-VOLUNTEERS". #1 – I don't have time (Who does, but make time once in a while. I guarantee it'll feel good.). #2 – I used to volunteer, but got burned out (Lame excuse, especially if you are still USING the resource.). #3 – I don't want a long term commitment (No one is going to ask you to change your last Will and Testament.). #4 – I don't know how to get involved (Arizona has many conservation minded groups, check AZ Game & Fish's website-Wildlife & Conservation-Resources.).

I don't want to pick on hunters and anglers only here; this is not specific to that segment of the public. If I had the figures for all the other outdoor recreationists, I believe they would show the very same thing. Every one of them believes that "SOMEBODY else will do it" or "it's not MY job to do it". That is where they are all wrong, because we are fighting a losing game here. The "few who do" cannot keep up with all that needs to be done and our wildlife and habitat are suffering a "perfect storm" of challenges in these days. There is no excuse for every person who "uses" the outdoors to not belong to a conservation minded organization and to not be doing on-the-ground work for wildlife and habitat. It makes no difference where you live, city or suburb or rural area, there is work that you can do to help. Let us see your faces out there!

WHADDA' YA' KNOW?

1. What is one of the major functions of Riparian Ecosystems (wetlands)?
2. Where does the largest measured cottonwood tree reside?
3. What ecosystem is one of the most endangered in the U.S.?
4. Native American tribes manage how many acres of land?
5. Private forest lands account for what percentage of all forested land in the U.S.?
6. Name a few of Arizona's rivers that originate grasslands.

(Answers on page 7)

Historical Tales

Reproduced by Ryna Rock from Arizona Wildlife Magazine, December 1938

MR. DING GOES TO TOWN (Part Two)

Authored by famed conservationist and first President of the National Wildlife Federation, J. N. (Ding) Darling

I have been looking for a remedy for that hookworm disease which makes 11,000,000 sportsmen and 36,000 organized clubs so completely helpless in the face of the need for a good, nation-wide job of restoration for all forms of wildlife. With that many converts of conservation, there is no need why this nation should continue on the downhill skids of wildlife population than there is for a farmer with 40 cows to go without cream on his oatmeal and butter on his pancakes. Even with 40 cows, someone has got to do the milking and churning if we are going to have cream and butter. The strangest thing about wildlife is that we really don't have to do the work ourselves. We have a full corps of hired men to do our shores. But the conservationists aren't even wide-awake enough to see that the hired men have the necessary tools with which to do their jobs.

We have a U.S. Biological survey and the U.S. Bureau of Fisheries for our hired men in the national field and every state in the Union has a fish and game or conservation department. They are our hired men. The politicians have borrowed the milk pails and milking stools and given them away to their political friends and never brought them back. I mean that Congress and State legislatures will borrow all the funds they can get their hands on and allocate them to those who demand them for other purposes. Vast expenditures of public funds are made by the Federal and State Governments, but not for conservation projects. They never hear from the 11,000,000 sportsmen and 36,000 clubs about the needs of wildlife conservation. Consequently, the Biological Survey, the U.S. Bureau of Fisheries and the State Conservation agencies and all their wildlife activities are half-starved for lack of means to accomplish their normal duties. Legislatures, governor and congressmen yield to pressure only when pressure is applied.

Eleven million horses running wild on the hills can't pull a rubber-tired baby buggy to town unless there is a harness to hook them to the load. Likewise 11,000,000 sportsmen and 36,000 organized groups without some kind of harness can't prevent the Chamber of Commerce of Woodchuck Hollow from promoting a factory whose total benefit to the community is a payroll of 10 employees, although the factory may destroy a thousand miles of river and everything in it, including water for drinking purposes.

Education on the subject of conserving our natural resources is one of the most needed projects which confront us. We can agree to that. Thirty million youths go to school each day and learn why Hannibal crossed the Alps, but there isn't a comprehensive text book on conservation available for the public schools in the United States.

Our Commissioner of Education, John W. Studebaker, has put in his budget for the last three years the $35,000 necessary to compile a series of text books for national used in the public schools. And for three years, with sickening regularity, it has been cut out by Congress and the budget directors. Meanwhile, because a small organized group of real estate promoters asked for it, Florida got 100 and some millions to build a yacht canal. And, out on the Columbia river, they got 300 millions plus to build dams in this river. To 3000 cattle and sheep men was parceled out the last remainder of our public domain, your land and mine. A hundred and forty million acres was given to them for perpetual use for grazing. On that 140,000,000 acres are the last remaining hereditary ranges of many of our finest big game species. Bighorn mountain sheep, antelope, elk, sage grouse, etc., etc. At least a fair share of that 140,000,000 acres should have been set aside to save these magnificent and profitable species of wildlife. Where were the 11,000,000 sportsmen and 36,000 groups when 3000 cattle and sheep men captured the public domain? They were scattered like wild horses on the distant hills. They are the unharnessed forces of conservation.

The Biological Survey asked for its share of public domain for the wildlife three years ago, but there has been no organized pressure of public sentiment to back up the request. Hunters who complain that the seasons are too short and the bag limits too small ought to be interested in the fact that hundreds of thousands of ducks and shore birds die annually from botulism and preventable diseases. A cycle of grouse diseases comes every six or seven years and almost wipes out the population of the grandest of game birds. These hundreds of thousands of game birds which are lost annually from disease should be saved and added to the sportsmen's bags through a lengthened season. Yet, where were the 11,000,000 sportsmen when the Biological Survey asks for a small appropriation to solve these research problems. From personal experience, I would say a good many of them were busy thinking up new names to call the Biological Survey because there aren't more game birds.

I say to you that you can have all these things and wildlife in abundance on this continent perpetually if the 11,000,000 sportsmen and 36,000 organized clubs will avail themselves of the simple process of pulling together and make themselves heard when conservation needs are up for legislative discussion.

You are not asking for new money or new taxes to be added to the taxpayer's burden. The taxes which come out of the natural resources are already collected and should go back into restoration and maintenance of those resources. Or there will come a time when they are so exhausted that they will cease to yield a revenue. The receipts from national resources are given to everything else in the world, including the Florida yacht canal, but not to conservation.

The General Wild Life Federation is a non-profit organization with which all-groups are invited to file their membership rolls to receive information when emergencies arise and to appeal to their government representatives in impressive numbers. If you are interested in the simple details of this organization, write Carl shoemaker, General Secretary of the Wild Life Federation, Investment Building, Washington, D.C.

By John Underwood

Streams and Game Trails

Well, here we are at the end of summer. The kids are back in school. The fish are getting a rest and hunting season is about to get under way. How about you, Mom and Dad? Did you get those youngsters out to enjoy the Great Arizona Outdoors, by fishing, camping, hiking, boating or just exploring? Are you getting them ready for the upcoming hunting season? Enrolled in an Arizona Game and Fish "Hunter Education" course? Show those young folks how much you love them by getting them outdoors with you. All will have a great time as well as a lifetime of memories. We Arizonans have a great state with an amazing amount of outdoor activities to pursue.

Fishing participation stays strong.
Despite the sluggish economy and cutbacks in consumer spending, there are strong indications that recreational angling remains one of the largest outdoor recreational activities in the nation as well as one of the most solid industries in the United States. Annually, nearly 40 million anglers generate over $45 billion in retail sales with a $125 billion impact on the nation's economy creating employment for more than one million people.

The number of U.S. anglers is greater than California's population. One out of every three anglers fishes for largemouth bass, America's most popular game fish. Flounder is the most-targeted saltwater fish. Forty-five percent of anglers come from cities of one million or more people.
Fifty-one percent of anglers have a household income greater than $50,000 per year and 17 percent have incomes in excess of $100,000 per year. Over half of all anglers have attended college. Twenty-five percent of anglers are women. Nearly half of all anglers are between 35-54 years of age.
(data was compiled by Southwick Associates, Fernandina Beach, Fla.)

Bass Alive Analysis shows that water temperature is the most significant factor related to initial mortality. But other factors — hooking and handling injury, exposure to sustained low dissolved oxygen, temperature shock, toxic chemicals, or chemical shock — can, and do, contribute to initial mortality.

Some fish, even though they appear active and healthy, die after release. This mortality is called post-release, or delayed, mortality. Delayed mortality was also highly variable among the studied tournaments, ranging from zero to 52 percent.

The hunting season kicks off with the opening of Dove on Sept. 1st through Sept 15th. Quail season opens on Friday the 2nd of Oct. through Feb. 7th 2010. Remember to pick up a Migratory Bird Stamp at your favorite sporting goods store or any AG&F department before heading out and while there pick up a copy of the Dove and Band-tailed Pigeon regs. Shooting hours for Dove are one-half hour before sunrise until noon in southern zone and until sunset in northern zone.
Sept. 15- 6:12 6:34

My parting thought: The Center for Consumer Freedom (CCF), a nonprofit group, published documents at www.consumerfreedom.com showing that People for the Ethical Treatment of Animals (PETA) killed 95 percent of the adoptable pets in its care during 2008. Might also check out http://saova.org.

Until next time,
Be Safe and Enjoy the Great Arizona Outdoors.

(Questions on page 5)

WHADDA' YA' KNOW?

Answers

1. Improving water quality
2. On the banks of the Santa Cruz River
3. Over half are grasslands (98% of area either lost or degraded)
4. 95 million acres
5. Nearly 63 percent
6. The Verde, Agua Fria, Little Colorado and Cataract Creek

Kid's Korner

A Future...WITHOUT Energy?

By Karen Schedler

What would happen if our energy grid developed a giant hiccup and simply stopped functioning for 24 hours? It happened a few years ago in the upper Midwest, and thousands of people had no electricity for longer than they wished.

What would that mean to you?

No cell phone charger to keep your phone alive. (You might have to chat with your brothers and sisters or parents instead.)

No computer or TV. That also means no Facebook, MySpace, and their cousins.

No lights once the sun goes down. It's tough to read by candlelight but the camping lantern is much better.

No air conditioning. Let's hope this does not happen in July!

No morning coffee for the coffee addicts. Stay out of the way of a cranky parent who needs that cup of coffee to start functioning in the morning.

There are so many more ways we depend upon electricity that it's hard to imagine life without it, even if for only a brief time.

So where does our energy addiction take us in, say, 20 years from now? If we're smart, we will have a very different energy grid by 2029. What might that look like – and where will the energy we need come from? Every source of renewable energy has its good points and its "challenges." Let's look at a few that may have some potential to power our future. We'll start with wind energy in this issue.

Can **wind** energy solve our problem? When wind blows, we can harness its energy and use that to power homes and cities. *Advantage*: wind is pretty much found in many places across the country (although changes in weather patterns indicate there is decreasing wind in parts of the Upper Midwest). With modern technology, it takes only 7 mph of wind speed to generate electricity.

Challenge: we can only harness wind when it's blowing! (How would we manage during the times it doesn't blow?) If the wind speed reaches 37 mph, the turbine may have to be shut down – so areas that have frequent bouts of high wind speeds may not be able to solve our problem. And many people do not want to see 250' tall wind towers on their property. (It's safe: the towers themselves may be 250' or so tall and each blade is about 120' across – so no blade would be closer to the ground than about 130'. Note that different wind turbines have different specifications. The ones I've given here are from a company doing business in the Great Lakes states.)

Wind and wildlife: It seems there are very few "perfect" solutions to anything in life and, yes, there is a downside to wind turbines. In some parts of the country, birds (especially raptors) and bats fall victim to these wind farms. Birds may get caught in the blades themselves, while bats find a completely different situation. Since they can detect and avoid objects no larger than a human hair while echolocating, they can avoid being struck by wind blades – but the overall air pressure inside a wind farm changes so much that bats flying through that airspace while turbines are spinning simply drop dead out of the sky. This is something like a case of a deep-sea diver who gets "the bends: when he tries to dive too deep or rise too quickly, due to the abrupt change in pressure.

To learn more about wind energy, here are a couple places to begin:

Check with your local energy company. Do they have wind energy as part of their energy portfolio? That means, are they using wind energy – which is a renewable energy source – to provide some of the electricity they deliver to their clients?

The NEED National Energy Education Development Project: www.need.org – click on the Kid Wind program and you can find lots of neat stuff about wind energy, how to build your own replica of a wind turbine, and much more. If you need a science fair project, this might be a great place to start!

Next time the wind blows while you're outside, just imagine its power….. turning on your TV, charging your cell phone, churning your ice cream maker. Yup, I think wind energy is a good thing!

Of course, wind is not the only renewable energy source. We'll explore others in upcoming issues.

Arizona's first commericial windfarm is now being built near Snowflake. It is to be operational by the end of this year.

Image courtesy of Salt River Project

The East Maricopa NCRD

By Ty Rock

Previously, we have highlighted a variety of NRCD's whose projects, locations and areas of concern are, primarily, rural in nature, which is typically how the NRCD's are envisioned by many people. However, this quarter I felt it might be appropriate and interesting for our readers to become aware of an NRCD that is heavily impacted by the urban interests and environment of the "Valley of the Sun" – the East Maricopa NRCD. Headquartered in Chandler, Arizona, the boundaries of this NRCD appear to stretch from the East Valley, including the urban environments of Mesa, Tempe, Chandler, Higley, etc., on the West, to the Maricopa/Pinal county lines and Tonto National Forest to the East, Carefree & Verde/Salt Rivers on the North and the Gila River Indian Reservation and the river itself on the South.

Education is one of the strong suits of this District, which is exemplified by its promotion of the East Maricopa Resource Management Education Center, presenting activity-based, natural resource demonstrations to elementary, middle schools and other community groups. Curriculum offerings include agriculture, energy, desert, forestry, soil, water and wildlife. The Center's on going pursuits include presenting water conservation education programs to at least 3,000 students and their teachers, supporting Superstition Farms (a family oriented, working dairy farm, education center), teaching OHV education programs and supporting Envirothon.

The East Maricopa has partnered with Everlasting Marks (a non-profit educational forum) and Superstition Farms in the construction of a free standing, off-grid education facility and a Desert Open Space Garden (DOS). Construction materials for this truly unique, education facility are, primarily, used tires, which are laid up in "benches" of rammed earth fill and then plastered to form walls. Students are encouraged to participate and the actual construction of this facility is an educational tool in itself, instructing students and the community about sustainable construction alternatives. The DOS garden's goal, when complete in 2009, is to promote Permaculture and native plant education, as well as the ability to save water, reduce waste and recycle on many levels. The garden will consist of native ground cover, cacti gardens, a healing garden, tortoise habitat, a wickiup and an organic vegetable, "keyhole" garden.

In addition to its educational venues, the East Maricopa NRCD promotes water conservation issues in urban and rural settings, partners with the ADWR on various programs, informs Central Arizona dairy operators of impending regulations in the Legislature and keeps cooperators informed of conservation issues within its borders. Like many of the active NRCD organizations the "East Maricopa" and their cooperators employ EQUIP, WHIP and other programs for water development, erosion control, fencing projects, etc. Working closely with the Arizona Game & Fish Department, USFS, Arizona State Land Department, county and local governments, and other NRCD's is of paramount importance. One prominent concern of this NRCD, due to its close proximity to large metropolitan areas, is the tremendous abuse that some areas have received due to the uncontrolled use of ORV's/OHV's. Large portions of this fragile, desert environment have been closed to public, vehicular travel due to escalating erosion and land degradation issues. As this NRCD is one of the first to implement closure policies in the state due to ORV/OHV abuse, rigorous enforcement of these closures is being implemented by the cooperative efforts of local ranchers, Arizona State Land Dept. and the Arizona Game & Fish Dept. It is heartening to note that the East Maricopa District is so heavily invested in conservation education so that future generations may become more involved and understand the needs of the environment that each of us impacts. For additional information the "The East Maricopa" may be contacted via E-mail at emnrcd@yahoo.com.

While researching and choosing which NRCD to feature this quarter, a glaring divergence has come to light; a condition that has become more apparent as the writer attempts to contact and highlight NRCD's in less active or remote locations. It many instances it has become the norm to find websites not updated or non-existent, phone numbers to be erroneous and messages to not be returned. It is the writer's hope that these conditions are due, in these uncertain times, to a lack of funding and volunteerism rather than a lack of interest. To some this may appear to be negative information concerning the conservation issue, as a whole, however, at the outset of this series of articles, it was acknowledged that findings that are considered to be less than positive would be referenced along with the great successes that have been achieved in many, individual NRCD's.

The Volunteer Instructor

Amanda Moors & Tice Supplee

By Linda Dightmon

Finding and keeping good instructors is and always will be a challenge for the BOW program. First a BOW instructor must be proficient in the subject they are teaching. I know, this sounds like a no brainer…but you would be surprised. Second is that this person must be a good teacher. Sometimes the best experts in the field are frankly, lousy teachers. A third factor is that we are talking volunteer, as in no pay. Since we are geared to teaching women, it would be nice to have some female instructors. So, ideally we need a woman who is good at what she does, knows how to instruct and works for nothing!

Arizona is lucky, no.... BLESSED, to have two ladies that fit the bill. I met Amanda around the turn of the century. (Sounds like a long time ago, doesn't it?) I was brand new to BOW and franticly trying to put together my first workshop.

Amanda Moors

She sent me a three-word email, "Need some help?" From that simple beginning, BOW got an instructor and I got a friend.

Amanda is a wildlife biologist with her own consulting business. She has done studies and projects for the San Carlos Apache Tribe, US Forest Service, University of Arizona and other agencies across the country. She has a Master's degree in Wildlife Management and is a Coues deer fanatic. In 2002 she created a website about this little deer, coueswhitetail.com. It has grown into a premier source of information for hunters or anyone else who wants to learn about the Coues deer.

Amanda and I usually tag team on the hunting class. This class is usually small but we both feel that it is important to give the woman who wants to hunt, all the resources possible. She brings her bow, her shotgun, her rifle, her backpack and her optics to the class. We bring two different perspectives to the session. She is a professional who learned to love hunting because of her career where I grew up in a hunting family. We traveled different roads but we ended up in the same place. Amanda also teaches GPS and Geocaching.

Vashti or 'Tice' Supplee has been involved with the program since it began in 1995. At that time she was Game Management Chief for the Arizona Game and Fish Department. When I joined the program in 2000, I was a little awed and delighted that we had such a high ranking official as one of our instructors. In 2005 she retired from the department and is now the Director of Bird Conservation at Arizona Audubon. Like Amanda, she has a Master's degree in Wildlife Management.

Tice Supplee

Tice usually teaches the wildlife identification class (Trick Track Trail) and Arizona Wildlife and Habitat. She leads night walks and many times finds owls for the ladies to see. First thing the next morning, she is up with the early risers for the pre breakfast Bird Walk.

It is not easy to be a BOW instructor. The students are adult women who ask pointed questions, so you better know you stuff. These two ladies are the best. They are dedicated to the program and it shows. When a fellow instructor was in a car accident the day before a workshop, they got together and did a wonderful job on the campfire cooking class. Their talents really came through last August when their group wowed the judges in the "Bow Follies"! It is such a pleasure to work with Amanda and Tice and I am truly honored to call them my friends.

Is Trophy Hunting Draining the Gene Pool?

By Jim Heffelfinger

Photo courtesy of Arizona Game and Fish

Hunters in the U.S. and Canada are the driving force behind the most amazing system of wildlife conservation ever developed. Because of its resounding success, this North American Model of Wildlife Conservation is now being applied in other countries. Unfortunately, this is a largely untold story as most of the public thinks their government takes care of wildlife using their tax dollars. There is a serious lack of understanding and appreciation for the true history of wildlife conservation. Even after learning about this fantastic story, some cannot reconcile the benefits of this system with their emotional qualms about wildlife being killed. Not everyone needs to be a hunter, but the superiority of this conservation model is undeniable.

With emotions come criticisms. Critics of hunting try desperately to find any information that can be played to their favor. A single action of an inconsiderate or unethical hunter is portrayed as the norm. Likewise, any scientific finding that shows any negative effect of hunting is paraded in the popular press with all sorts of far-reaching generalizations and poetic license. Trophy hunting is one of their most frequent targets. Let's explore the charge that hunters are negatively affecting the gene pool of the very species they strive to conserve.

The Building Blocks of a Trophy

Three factors are necessary to produce animals with qualities (such as antler size) far above average for their species. Age, nutrition, and genetics all work together to determine whether an animal is a trophy. Age is the most obvious and easily understood portion of the equation; we learned long ago that antler, tusk, and horn size increases with age. Likewise, the European game keepers in the 14th century were already writing about the importance of good nutrition to antler size. These are not new ideas. But the third factor, genetics, is where our knowledge has increased exponentially in recent decades.

Each animal has a different genetic potential for horn or antler growth. Some individuals have superior "antler genes" to others the same age and some will always be below average just as some humans never reach six feet tall regardless of diet or age.

Humans have the potential to alter the gene pool anytime they influence what animals are available to do the breeding for the next generation. This includes human activities such as selectively harvesting trophy males, culling undesirable animals, establishing harvest restrictions based on horn or antler size, and translocations (moving animals to a new area).

Tools of Change

In thinking about human-induced changes to the gene pool, we have to understand the concepts of heritability and selection as each plays a role in the ways humans can potentially affect the genes in a population. *Heritability* is simply the inheritance of certain characteristics from the previous generation. Antler, horn, and tusk size or shape have been shown to be heritable; thus, the potential to affect future gene frequencies exists. *Selection* refers to anything that disproportionately removes future breeders from the population based on some characteristic rather than randomly. Selection can be intensive enough to rapidly change the genetic makeup of future generations or so light and sporadic that it is meaningless at the population level. Taking a group of yearling bucks and breeding the 5 with the largest antlers to all does in captivity (as has been done with cattle and horses for centuries) is much more intensive selection than removing a

single trophy buck in a free-ranging population. Both actions represent selection, but potential for changing the gene pool is dramatically different.

Deer researchers in Texas have been able to make changes to antler size in herds maintained within small enclosures where they had complete control of selection. Inversely, no differences in antler size within age class were observed following eight years of intensive removal of small-antlered whitetails on a 10,000-acre portion of the King Ranch in Texas. The question is not whether hunters can be agents of selection; it is the *intensity* of the selection that is the fulcrum upon which this whole issue balances.

Obstacles to Selection

Regardless of demonstrated changes in captivity, there are many obstacles to applying intensive selective pressures on a wild population. These obstacles interfere with and lessen the chance of altering the gene pool.

Age. Many times the effects of *age* are confused with those of *genetics*. Hunters deciding whether to harvest an animal rarely know if they are looking at a poor-antlered 6-year-old or a "good" 3-year-old. As a result, the largest-antlered bucks may be harvested, but they are mostly just the oldest deer and not the most genetically superior. Seeing fewer "big ones" is usually a lack of older animals, not a genetic deficiency. Additionally, the older bucks have learned behaviors that make their harvest far less likely.

Patterns of Breeding Success. Mature animals usually do most of the breeding, but research on members of the deer and sheep families has shown that younger rams and bucks are participating in breeding to a greater degree than previously thought. Recent whitetail research showed that nearly a third of the fawns were sired by yearling and 2½-year-old bucks. The data further showed that on average, a single buck sired only one to three fawns each year that survived to enter the next year's population. This obviously complicates the idea that hunters are exerting a strong selection by removing large antlered/horned animals.

Genetic Contribution of Does. Female ungulates contribute at least as much to the antler and horn quality of their male offspring as do the sires. Experiments have shown that whitetail fawns born from the same doe, but sired by very different bucks, often have antler conformations similar to each other and sharing characteristics with their mother's father. A male-to-female ratio of 1:2 or 1:3 means that 66-75 percent of the total gene pool is made up of females that cannot be subjected to selective pressures related to horn or antler quality. It would be very difficult to manipulate the quality of horns or antlers by incomplete selection on only 25-34 percent of the gene pool.

Movements. Although there are exceptions, most big game populations are not isolated from genetic exchange. Even seemingly separate bighorn populations exchange genes with one another. This clustering of interrelated populations into one metapopulation dilutes any selection applied to a population and helps to maintain genetic diversity. In whitetails, approximately 70 percent of 1½-year-old bucks disperse from their birth area, travelling one to five miles on average, with many going 10 miles or more. Likewise, areas inaccessible to hunters serve as genetic reservoirs that contain animals not exposed to this source of selection.

Nutrition. It is no secret that poor nutrition affects the growth of antlers, horns, and pronghorns. Substandard nutrition results in animals not expressing their real genetic potential and thus any selection based on the size of their headgear may be confounded by the lack of nutrition.

Linked Genes. All genes reside on a set of chromosomes. We don't know where most genes are located, but we do know that genes located close to one another on the same chromosome are usually inherited together. When this happens these are referred to as "linked genes." For example, if a gene related to inferior horn size resides close to one that increases survival, these 2 genes may be inherited together most of the time. In this example, intensive selection resulting in smaller horns may increase survival through some other mechanism, thereby confusing the idea of simple selection.

Other Environmental Pressures. Hunters are not the major selective force in most big game populations. Even if managers are able to exert an intensive selective removal on adult animals, it is not the only selection taking place. Many other factors (predation, malnutrition, disease, weather, etc.) remove individuals from the population irrespective of genetic potential for horn or antler size, and these other removals are not always random but due to many other selective pressures. Each year a population produces a new batch of DNA in the form of lambs, calves, or fawns. At least half of this new genetic material never makes it into the breeding gene pool due to these environmental factors, with absolutely no relation to any selection that may be occurring on the adult population by hunting.

The Intensity of Selection

There is a misconception among some that hunters in general are selecting mature animals in most cases. The reality is that a very small percentage of hunters are truly passing over young animals and waiting to harvest trophies. Also, for those that are, we find that a trophy is in the eye of the beholder. One hunter may be very satisfied with a buck that another hunter has already passed up in their search for a bigger one. If one hunter's trophy is another's reject, it becomes very difficult to discuss the genetic effect of removing "trophies." Most trophy hunters are simply taking the oldest male, not the most genetically superior. Except in a few very limited cases, trophy hunters do not take the largest males in each age class, but rather the largest they encounter within rifle range, during the season, during daylight hours, while they are in the field. Remember, hunting is not merely an open selection process like grocery shopping. The animals are quite adept at avoiding the hunter while afield, particularly as they mature.

Only in the most intensive selection scenarios could we measurably affect the age-specific horn or antler size. The many obstacles to selection discussed above cushion against any hunter-induced selection on the population. In theory, wide buck-to-doe ratios (rather than trophy harvest) have the most potential to selectively change the gene pool because fewer males in the population reduces overall effective population size.

Change You Can Believe In?

Research has also illustrated that deer with more genetic diversity have higher Boone and Crockett scores, higher body weights, and better reproductive rates. There are definitely measurable differences in gene pools that relate to real population performance. Because of this, we need to be aware of factors that have the potential to negatively affect genetic

diversity. Luckily, genetic work has shown that most hoofed animals have remarkably high levels of genetic diversity and white-tailed deer in particular are among the most diverse mammals.

In the last five years, several newspaper and magazine articles have charged that trophy hunters are degrading the gene pool. "Evolution in reverse," they call it. These arguments may sound good superficially and certainly make for sensational news because the case can be presented to the lay public without any messy details or professional accountability. An article in *Newsweek Magazine* (1/12/09) casts wide, sweeping aspersions on trophy hunters. Many disingenuous, or simply sloppy, writers have generalized this even farther to say "hunters" are degrading the gene pool. As evidence of this assertion, writers trot out the same list of species (fish, elephants, deer, sheep) said to be changed due to human selection.

One species of fish in the Atlantic Ocean became smaller and started maturing later, apparently due to human exploitation. Extensive use of certain-sized mesh nets had intensively gleaned only larger fish from the population. This change is well-documented, but there is some debate about how much of this change is due to genetic factors and how much to changes in the physical environment (water temperature or disturbance of the ocean bottom by heavy beam trawlers). It is conceivable that nets of a certain size used extensively may apply an intense selection on any fish not small enough to slip through, but this is obviously unrelated to individual harvest that occurs in typical big game hunting situations.

No article on the perils of trophy hunting is complete without reporting about the African elephant populations purported to be evolving into tuskless freaks. In 1969 and 1972, surveys revealed 10-12 percent of the females were without tusks, but then when surveyed again 1988-93, the estimate was 28-38 percent. They surmised (without data) the change was due to heavy ivory poaching. The problem with this is that there was no monitoring between the two early years and the later period and no evidence at all for cause and effect. Even the original paper concedes that the proportion of the population without tusks changed with movements of elephant groups on and off the study area.

Some deer harvest restrictions based on antler characteristics could apply more intensive selective pressures by age category. This has concerned biologists in some areas, but these are unfounded fears in all but a few very limited circumstances where regulations are not adjusted to local antler development data.

Most articles on this topic have cited a short letter that appeared in the journal, *Nature,* in 2003 that highlighted research conducted on a small, isolated sheep population on Ram Mountain in Alberta. This long-term research was well designed, thorough, and found strong evidence that hunters removing trophy rams in that population had resulted in a reduction in average horn size within age classes. This selection was possible because a ram had to be 4/5 curl to be legally harvested. This resulted in most rams with fast-growing horns (genetically superior) removed before they could breed and some old rams with slow-growing horns that never reached 4/5 curl and were never removed. This intensive selection, coupled with genetic drift from the small gene pool (as few as 26 sheep at one point) and complete isolation from other sheep populations allowed for these genetic changes in horn size. Those responsible for the management of this herd changed the harvest restrictions to full curl before the study was even complete and effectively eliminated the intensive selection.

Researchers of Ram Mountain acknowledged that nutrition and age played a larger role than genetics in determining horn size, and subsequent work in this population and elsewhere showed that when nutrition increased, so did horn size. In fact, the largest horns in that population were produced by increasing nutrition.

Historical Heritabilities or Heretical Hysteria?

The *New York Times* (1/13/09) followed up the *Newsweek* article with a related one subtitled *"…hunting, fishing and even conservation efforts may have ill effects on some species."* The ridiculous game continues. It's hard to understand the near-hysteria in these popular articles when even the most prominent researcher from the Ram Mountain study has stated: *"While the potential evolutionary impacts of trophy hunting are worthy of consideration, there is currently not enough evidence to determine when they should be seen as a significant concern for conservation."* Some of the articles on this topic contain so many silly quotes from "researchers" that one has to wonder if there is really that much ignorance in the sciences these days. Perhaps some researchers have trouble seeing the forest of facts through the trees of their own biases.

The *Boone and Crockett Big Game Records Book (www.boone-crockett.org)* has kept consistent records since 1950, containing data back to 1830, and yet, the number of annual entries has quadrupled since 1980. Since 1994, new world records have been set for pronghorn, bighorn, white-tailed deer, and elk. Likewise, for the Pope and Young Club (www.pope-young.org), which processes data on big game animals taken with the bow and arrow, entries have increased eightfold over the past 25 years with a minimum of 23 new world records in the last 12 years. Both organizations use the same scoring system that evaluates only the antlers, horns, or skull (bears and cougars) of a trophy.

To continually warn about the dangers of trophy hunting based on this one exceptional case and a few poorly-supported anecdotes takes significant ignorance or bias—neither of which is flattering for a scientist or writer. This is not to say human selection and maintenance of genetic diversity should be ignored. The demonstrably high genetic diversity in wild sheep and deer, gene flow among populations, and all the other selective pressures work to "reshuffle" the genetic card deck to inhibit detrimental change in horn and antler size.

The public needs to be told the truth that hunters have always been, and will continue to be, the vanguards of an incredibly effective system of wildlife conservation. Researchers, wildlife managers, and their conservation partners in the hunting community will continue to do what they have done so well for nearly a century: execute the most successful conservation paradigm ever devised.

This article originally appeared in the Boone and Crockett publication Fair Chase. Jim Heffelfinger is a regional game specialist with the Arizona Game & Fish Department and a professional member of the Boone and Crockett Club. Mr. Heffelfinger resides in Tucson. His book Deer of the Southwest can be found in bookstores or ordered through his website www.deernut.com.

Marilyn Gregory

Does Congress Have Any Horse Sense?

Images courtesy of US Fish and Wildlife

By Larry Audsley

New legislation currently working its way through Congress pits the values of wildlife advocates against those of wild horse and burro lovers. What's at stake is whether our public lands will be managed for native plants and wildlife or as a horse pasture celebrating idealized images of wild mustangs and prospectors' burros. So far the horse people are winning.

Though most people don't realize it, horses and burros are extremely destructive to wildlife habitat. They're harder on soils and vegetation than cattle and are especially destructive to water holes and riparian areas. And while cattle numbers on public lands have been declining and made subject to more responsible range management practices, horse and burro populations are increasing and remain largely outside the control of the people responsible for them.

Let's get one thing straight from the start. The horses and burros that roam free in parts of the American West are not wildlife, nor are they in any way native to North America. Rather they are the descendants of European horses that were lost, turned out or escaped at various times since being brought by humans to the New World. There is no native American horse in existence today. Pre-Columbian horse species have been extinct in North America for 10,000 years. The modern horse is believed to have descended from four pre-historic horses in Europe and Asia and was selectively bred to become the creature it is today. Burros (Spanish for donkey) are native to North Africa. This is important because the fact that America's native plants and wildlife evolved separately from the modern equines of the Old World is what makes the two ecologically incompatible.

The "wild horse" protection movement started in the 1950s through the efforts of a Nevada ranch wife named Velma Johnston, nicknamed Wild Horse Annie. With children's letter-writing campaigns behind her, she managed to get some weak protections through Congress in 1959. In 1961 John Huston filmed *The Misfits* about some losers who go "mustanging" in Nevada hoping to sell the animals for dog food. In its emotional climax, Marilyn Monroe pleads tearfully with Clark Gable to turn loose the horses they'd just captured. This film contributed to the public's sympathetic awareness of the plight of feral horses, which eventually led Congress to pass The Wild Free-Roaming Horses and Burros Act in 1971. At that time BLM estimated there were somewhere between 10,000 and 17,000 "wild" horses and burros left. Today BLM estimates there are nearly 70,000.

Now Congress is preparing to let them spread out across our public lands at will. House Bill 1018, Restore Our American Mustangs (ROAM), which passed the House July 17 and was introduced in the Senate August 6, promises to open the floodgates for horses and burros to go everywhere on public lands, which at the very least will include national forests, BLM and Department of Defense lands. While these bills do not explicitly mandate the spread of feral equines to other federal lands, they practically guarantee that result by removing BLM's current statutory requirements to euthanize surplus animals and to contain them within established boundaries. The Congressional Budget Office's cost estimates assume the animals would expand from the 33 million acres they presently occupy to 53 million acres of federal lands within three years after passage. That assumption was based on their discussions with various federal agencies.

The potential for resource damage has left public lands and wildlife officials wishing this bill were just a nightmare from which they could wake up. Don Glenn, Division Chief for BLM's Wild Horse and Burro Program in Washington, D.C., was blunt: "If this passes, it will be an environmental disaster."

Agency officials are hoping the nation's conservationists will work to defeat the proposed changes, but so far that hasn't happened. Activists who raise hell about ATVs, oil and gas extraction and too many cows on public lands have been mysteriously silent on this issue.

One BLM official said " I heard Sierra Club was opposed to it, but I haven't seen them do anything."

Environmental groups recognize the problem is serious but may be reluctant to attack the bill because of the support given to other environmental issues by the bill's sponsor, Nick Rahall (D-W.Va) and principal co-sponsor Raul Grijalva (D-Az). The environmental lobby regards both as being among their most loyal friends in Congress. Speaking off the record, one environmentalist described the situation as "politically awkward."

And at least up to now, the nation's conservation-minded sportsmen's groups aren't doing any better. Lack of awareness about the bill's progress through the House and its potential impact on wildlife habitat may be partly to blame. Fortunately there may still be time for conservationists to take effective action.

Federal lands agencies such as BLM and the Forest Service have been transitioning to new leadership and have not yet taken formal positions on the bills, but BLM's Glenn was fairly frank about it. "The nation's environmentalists and sportsmen need to get 100 percent behind defeating this."

So far the horse lobby has been the dominant public voice, and in the three-ring political circus we call Congress, judiciously worded warnings of public lands and wildlife officials are no match for the impassioned voices of animal lovers.

H.R. 1018 passed the House by a vote of 239-185. Among Arizona's Congressional delegation, Democrats Harry Mitchell, Ed Pastor and Raul Grijalva voted yes. Democrats Ann Kirkpatrick and Gabrielle Giffords voted no, as did Republicans Trent Franks, Jeff Flake and John Shadegg.

Some conservationists are saying the proposed law doesn't yet merit their active involvement because it's unlikely to pass in the Senate. Senate Majority Leader Harry Reid of Nevada is strongly against it, as is Arizona's John McCain. However, some senators are up for re-election in 2010, and polls show the public favors the bill 2 to 1. Furthermore, any time a bill with the potential to wreak ecological havoc passes the House by such a comfortable margin, it's time the conservation community had a talk with the public, press, politicians and each other.

Thanks to Congress and the wild horse lobby that controls this issue, feral horses and burros have been out of control for nearly 40 years. The horse lobby has prevented BLM from euthanizing excess animals, and non-lethal control methods haven't been effective. Unlike game animals, their numbers cannot be controlled through hunting. With no predators that can consistently prey on them successfully, their populations increase by 15 to 20 per cent a year. When their numbers exceed available forage, BLM must remove some or else stand by and watch the deterioration of soils, plants, wildlife and eventually the horses and burros themselves. For most of the last 40 years, BLM has been doing some of both. No one, including BLM, has liked the results.

On a feral horse refuge in Nevada, researchers placed a wire cage next to a stream to see what vegetation would look like without horses.

The nation's current policy for horses and burros on public lands began with passage of the 1971 law, which states that *"Congress finds and declares that wild free-roaming horses and burros are living symbols of the historic and pioneering spirit of the West; that they contribute to the diversity of life forms within the Nation and enrich the lives of the American people; and that these horses and burros are fast disappearing from the American scene."*

The 1971 Act made it illegal to kill, remove or harass the animals, or to sell their remains for meat or commercial products. It also requires BLM to establish Herd Management Areas (HMAs) wherever the animals were present when the law was passed, to keep them confined within those areas and to hold their numbers at Appropriate Management Levels (AMLs). The 1971 Act encourages adoptions by private individuals and directs BLM to euthanize excess animals that cannot be placed in adoptive care. This meant any excess animals including healthy ones. However, BLM stopped euthanizing healthy animals in 1982 after a public outcry. Since 1988 Congress has attached no-kill stipulations to BLM's annual budget appropriations in every year but one. Currently BLM is still permitted to euthanize old, sick or lame animals, but the proposed legislation would eliminate even that.

Since the beginning of the program, BLM has been chronically incapable of complying with the law's requirement to manage animal numbers to the established AMLs, citing inadequate funding from Congress. Adoptions have failed to keep up with population growth, and the disparity has steadily widened as the herds kept growing and demand for adoptions declined. The principal means of population control has been "gathers" in which BLM rounds up horses and burros and places them in holding facilities in the Midwest. Currently more than 30,000 are receiving feed and veterinary care that cost more than $27 million in 2008, about three-fourths of the annual horse-burro program budget.

BLM's most recent estimate of the number of horses and burros still out on the range is 37,000, which is nearly 11,000 above the AMLs. If BLM were to round up and hold enough animals to bring the numbers down to their AMLs, as required in the 1971 Act, fewer than 40% of the nation's feral horses and burros would be running free. The majority would be inside fenced enclosures receiving federal welfare. Obviously this is not what horse lovers had in mind when they pushed to get the 1971 Act passed.

But despite the high number of incarcerations, BLM has been getting hammered for years by ranchers, wildlife officials and biologists from other public lands agencies because animal numbers have greatly exceeded AMLs and they kept getting outside their HMAs. There were constant complaints about resource damage, intrusions onto private land, traffic hazards, and competition with wildlife and private livestock. Arizona Game & Fish has had to take BLM into federal court three times to force them to control the numbers and locations of the animals as the 1971 Act requires.

After removing euthanasia and long-term incarcerations from the toolbox, Congress now expects BLM to manage horse and burro numbers using two methods that haven't worked in the past plus three new ones. The new legislation directs BLM to make more extensive use of adoptions and birth control. In addition to allowing the herds to expand on to federal lands outside the current HMAs, it also provides for land acquisitions

or exchanges to provide new federal lands for horses and burros and to find private landowners willing to take them in.

Continuing the "Adopt a Wild Horse (or Burro)" program doesn't promise much help since adoption numbers have steadily declined in recent years, and a sharp nose dive may be coming because the market for horses crashed along with the economy. With reports of horses being dumped on horse ranches during the night like orphans on a doorstep and sale barns starting to require deposit checks from sellers in order to ensure that unsold horses will get picked up following the auction, the near-term prospects for adoptions look bleaker than ever.

The proposed legislation also calls for greater emphasis on birth control. A PZP pellet administered with a jab stick keeps a mare infertile for two years, but it requires first capturing the mare. Another method that is used to treat mares on the run, without actually having to capture them, is good for only one year. Needless to say, annual or semi-annual treatment of several thousand animals is time-consuming and costly, but the new legislation nonetheless directs BLM to begin making greater use of birth control.

The Humane Society of the United States is trumpeting the proposed legislation as offering great savings to the taxpayer because, they say, the combined effects of more intensive birth control efforts and allowing surplus animals to expand into new areas will do away with the expensive roundups. Others aren't seeing the same savings. The Congressional Budget Office forecasts that the new legislation will cost an additional $200 million in the first five years, largely for the purchase of private lands as sanctuaries for surplus animals.

BLM also had trouble finding any cost savings. Ed Roberson, BLM's Assistant Director of Renewable Resources and Planning, told a House subcommittee " We are concerned that several provisions of H.R. 1018 could increase the operating costs of the wild horse and burro program in several ways. The 1971 Act requires The 1971 Act requires the BLM to manage wild horse and burro populations only in the areas where they were found when the law was passed in 1971. H.R. 1018 would allow these animals to expand beyond their current herd management areas to all public lands. Because wild horses and burros have virtually no natural predators, their numbers can double about every four years. Under this scenario, BLM expects that program costs could grow exponentially with every new herd management acre and new population."

Congress and the horse lovers are also hoping to place large numbers of excess horses on private ranch lands owned by people who appreciate wild horses. H.R. 1018 seeks to accomplish this by removing limits on the numbers of animals an individual can adopt, paving the way for large-scale adoptions. Madeleine Pickens, wife of billionaire T. Boone Pickens, told members of the House Subcommittee on National Parks, Forests and Public Lands that she would head up an effort to find homes on private lands for the excess animals, starting in her home state of Texas. Suddenly Congress saw an easy out and snapped it up. Section 7 of H.R. 1018 authorized the Secretary of Interior to enter into agreements with private entities for the management of surplus horses on private land "sanctuaries." It also authorizes land exchanges and purchases of private land for that purpose.

The Pickens proposal set off scoffs inside BLM. "Madeleine Pickens has changed her story 160 degrees since this thing started," observed a BLM staffer involved with Arizona's burro program. "At first she was going to take 'em all. Now she's going to find other ranches to take some. We'll have to see what she plans to do next week."

With the private horse market in the tank and the public steadily losing interest in adoptions, the BLM's unbroken horses might have about as much hope of finding warm welcomes elsewhere as a Guantanamo inmate. But large-scale placements on private ranches or land exchange parcels, along with allowing the animals to spread onto more of our public lands are the key elements of the new plan. If it fails, BLM and other federal land agencies will be stuck figuring out what to do about an even larger animal population that is spread over a larger area and will continue to increase its numbers.

America isn't alone in its dilemma over protection of animals versus protection of natural resources. Australia is now going through the same thing with feral horses and camels, except that Australia's environmentalists are solidly behind lethal control efforts and defending biologists that are under attack by some members of the public and press. Generally, officials in democratically elected governments around the world are increasingly reluctant to sanction the killing of animals even when biological science indicates it is probably the only practical and effective solution. The problem extends not only to feral domestic animals but also to wildlife all around the world, whether it's elk or buffalo in the national parks of the U.S. or elephants in the national parks of South Africa. But tough problems almost inevitably require decisions that will be unpopular with many, at least in the short term. If the proposed legislation passes and becomes law, we might want to consider how we will feel in another 20 years about having taken today what appears to be an easy way out.

MEET THE WILD HORSE LOBBY

An alliance of horse lovers and traditional animal rights groups has kept feral horses and burros roaming public lands. They are also the force behind current legislation that would expand their range and numbers. Together they're a formidable lobby that has closed slaughterhouses, halted euthanasia policies used to control exploding populations of feral horses and burros, and ignored the impacts of population numbers above range carrying capacities.

Activists smitten with images of wild horses have gained strength from the legal and political expertise of the Animal Welfare Institute and Humane Society of the United States. They dismiss the science based expertise and opinions of biologists that horses and burros are ruining the range by blaming cattle and sheep for the damage. They dispute government estimates of the numbers of horses and burros on the range and substitute their own. They maintain that today's feral horses are a "reintroduced" species that can be genetically traced to the ancestors of all modern horses. They cite the role of the horse in America's history and maintain it has earned the right to run free in the wide-open spaces of the American West.

Anyone wanting to get to know the horse lobby better can visit their websites.

www.wildhorsefoundation.org/
www.thecloudfoundation.org/
www.madeleinepickens.com
www.wildhorsepreservation.com
www.wildhorsesanctuary.org/
www.isbp.org/ (The International Society for the Protection of Mustangs & Burros)
www.ahdf.org/ (American Horse Defense Fund)
http://www.hsus.org/horses_equines/issues/qa__wild_horse_protection_in_congress.html
http://www.awionline.org/ht/d/sp/i/11223/pid/11223 (Animal Welfare Institute)

What's Wrong with Arizona's Burros?

Photo Credit: Jim Arthur

By Larry Audsley

Arizona's BLM has 11 Herd Management Areas (HMAs), all in the western part of the state. Unlike most other states, about 95% of Arizona's feral equines are burros. Only two of BLM's HMAs have any horses. These are Cerbat–Black Mountain in the northwest part of the state and Cibola-Trigo near Yuma. Perhaps due to the harsh desert climate, Arizona's feral horses have had lower recruitment rates than other parts of the West, and horses haven't been much inclined to migrate outside their HMAs.

Burros, however, are another story. BLM estimates that Arizona currently has more than 2,100 burros, which is about 800 more than they believe the habitat can reasonably accommodate. The largest herds are around Lake Pleasant and the Black Mountains.

Up until 1989, most agreed that BLM was doing a pretty good job of keeping the burros inside their HMAs and at reasonable levels. Then the Interior Department's Interior Board of Land Appeals (IBLA) ruled in favor of a lawsuit alleging that the numbers of burros being removed by BLM were "arbitrarily derived." That ruling, along with insufficient funding by Congress, led to burro over-populations and burros straying outside their HMAs with relative impunity.

Ever since the IBLA ruling citizens and officials concerned about Arizona's public lands and wildlife have been pleading with Congress for years to do more about the burro problem. In 1998 Jon Fugate of Yuma Valley Rod and Gun Club presented a letter to a Congressional subcommittee asking them to recognize that feral horses and burros are no longer at risk for disappearing. YVRGC suggested BLM's emphasis should change from "primarily protecting wild free-roaming horses and burros, to trying to protect our public lands from being destroyed from over-populations. In the case of Arizona, you should also advocate that burros, not horses, are the primary target for removal."

Former Arizona Game & Fish Director Duane Shroufe told the same sub-committee that burros were damaging sensitive riparian areas and encroaching on lands that had been set aside for other purposes. Shroufe said his department wasn't having much luck getting responsive action out of BLM. "The only success we've had so far is when we get a biological opinion on an endangered species, then the BLM is more apt to prioritize that and take some actions. But when it comes the degradation of the habitat for mule deer or just other general wildlife species where there is not a federal hammer hanging over their head, it seems like it is not a priority."

Current AGFD Director Larry Voyles recently testified before a House sub-committee stressing the need to keep burros contained within their approved areas and manage their numbers to appropriate levels.

While wildlife officials sympathize with BLM's frustration with lack of funding and mixed directions from Congress and the courts, some also believe BLM has also exacerbated the problem by promoting burros as a feature of interest on BLM lands. The website for Arizona's BLM directs visitors and tourists to places where they can see "wild" burros.

Don Glenn, BLM's Division Chief for the Wild Horses and Burros program, isn't arguing about that. "That's probably true to some extent. We have promoted burros as part of eco-tourism."

So why are burros so damaging to wildlife and wildlife habitat?

For one thing, they have a tendency to hang around water sources, including seeps and springs, and to run off approaching wildlife that needs the water too. Horses and burros are known to be somewhat hyper-vigilant and behave aggressively toward perceived threats, often stomping desert tortoises and gila monsters to death, which native ungulates don't normally do. They are also especially hard on fragile desert soils, grasses, shrubs and trees.

"The have solid hoofs and meshing incisors," according to Dave Conrad, AGFD's Region IV supervisor. "That causes them to do more damage than native wildlife like deer and bighorn sheep, or even cattle. They break entire limbs off Palo

Verde and Ironwood trees that may be 300 or 400 years old. These trees are important nesting sites for birds, as well as food and cover for wildlife."

Bill Knowles, AGFD's Region IV habitat specialist, said "They're especially hard on riparian areas. They strip bark off Cottonwoods. There is controversy about whether or not this is actually killing the trees. I believe Cottonwoods may be able to handle it in good times, but when trees are already stressed from other factors, they don't need their bark stripped."

AWF board director Valerie Morrill saw lots of burro damage during her 20-year career as a Wildlife Biologist and Conservation Manager at Yuma Proving Ground. "In addition to routine impacts like dust wallows, trailing and disturbance to surface cultural sites, burros would strip bare Palo Verde trees and Ocotillos and chew two-inch diameter Mesquites down to nubs. I think the impacts are more sobering when one realizes how slowly woody perennials grow in the desert. Also, surface disturbance from wallows and trails can be permanent, especially on desert pavements. The mechanisms are a bit complicated, but desert pavements are the controlling landscape feature for desert in this area, creating the mosaic of broad barren pavements intertwined by washes lined with trees and shrubs. These washes maintain ninety per cent of the biomass and biodiversity and serve as significant cover, forage and transportation corridors for wildlife, and all of it is dependent upon adjacent desert pavements remaining impervious and intact."

Morrill believes the existing Wild Horse and Burro Act unduly protects feral horse and burro populations at the expense of native species. "Wild and free roaming horses and burros have a place in the West, but more from a cultural perspective than an ecological one. From a natural resources management perspective, they are non-native invasive species that by definition can't be managed for 'thriving ecological balance'," as prescribed in the Horse and Burro Act. "Native species such as deer and bighorn sheep show how well we are doing at management when science is the controlling factor. Management of horses and burros is hamstrung by emotional drivers rather than scientific ones, and our native plants and wildlife suffer as a consequence."

HORSES TO ROAM FREE IN APACHE-SITGREAVES?

After trees that were destroyed in the Rodeo-Chedeski fire of 2002 began falling on the fences separating national forest land from the White Mountain Apache Reservation, feral reservation horses entered Apache-Sitgreaves National Forest. They found the new green grasses and shrubs sprouting in the burned areas much to their liking. Soon an estimated 300 to 400 horses had taken up residence inside the forest boundary and were reproducing.

The Forest Service's initial response was to declare the horses "unauthorized livestock" and plan a program of eradication. As unauthorized livestock, the animals would not be protected under The Wild Horse and Burro Act of 1971. But the eradication effort lasted only as long as it took for word to reach Phoenix that the Forest Service was planning to kill "wild horses." Forest officials were quickly inundated with protest letters from school children and inquiries from TV stations. Then some animal rights groups and the International Society for the Protection of Wild Mustangs and Burros filed a lawsuit demanding that the forest service first develop a management plan for the Heber Herd Management Area before taking any action. Although a Herd Management Area was created near Heber in 1971 for some feral horses that were in the area at that time, the Forest Service believed the HMA had been abolished after surveys in the mid- 1990s found only two horses. However, their subsequent investigation failed to find evidence that the Heber HMA had ever been officially abolished. When a federal judge ruled in the plaintiff's favor, Apache-Sitgreaves officials began developing a management plan for the HMA. That plan is expected to be out late in 2009. The forest service will receive public comments on the plan before putting a final version in effect.

AWF Board Minutes, June 13, 2009
East of Kendrick Park, North of Flagstaff, AZ

At the first board meeting of the new AWF business year, re-elected President, Ryna Rock, and the elected slate of officers were approved, as were bylaws directed appointments of other officers. A current listing of this year's officers is available on the credits page of each Arizona Wildlife News.

Bill Keebler, current chair of the Trophy Book Committee, reported on production progress of the 2010 edition. The deadline for submissions is May 1st 2010. The committee decided not to print a field copy. The book will be out in early Fall (before Christmas). Their by-laws are being changed and will be sent to the AWF Board for approval.

Current initiatives/issues were reported on by Brad Powell, VP of Conservation. The goal to have all Forest Plan revisions for all Arizona Forests done by end of year will not be met and Forest rules are in limbo at present time. Efforts to revise rules have been ongoing for the last decade — rules get litigated, new interpretations of rules emerge from court. BLM Travel Management Plans should be completed by June of next year. A significant change involves driving; everything is closed unless specified as open. State Trust Land Reform is another important issue, with the Nature Conservancy offering a "re-write" of reform legislation. Changes will involve both federal and state legislation. Two other pieces of legislation the AWF is considering are the revised Wild Horse and Burro Act, and the Wildlife Heritage Act.

Brad and Ryna reported the NWF Annual meeting focused on climate change. NWF has had to pull back, as they were hit hard in the market with a loss of $40 million, which resulted in staff reductions.

AWF Budget discussion/approval was lead led by Jerry Thorson & Tom Mackin, with this year's budget showing no red ink anywhere. Building revenue was a topic of discussion.

Membership Committee Chair, Dick Snell asked the board to maintain contact with AWF affiliates. Members of the affiliates will be offered individual membership at $15 each.

Habitat Project Committee Chair, Brian Wakeling discussed the post-annual meeting work we have slated, the Antelope Foundation Aug 8th dinner, AAF/AWF co-sponsored project at Lower Lake Mary, and the Anderson Mesa tour in August in conjunction with the Diablo Trust meeting Aug 21st.

The meeting was adjourned and followed by a steak dinner (prepared and served by the Arizona Antelope Foundation), a power point presentation on the North American Conservation Model, and good fellowship in the pines.

Camp Cook

by Ryna Rock

JACK'S BEER BATTERED TROUT

3 eggs
1 c. Bisquick baking mix
½ tsp. each salt and pepper
3 c. cracker crumbs
½ + bottle of beer

Mix the eggs, salt, pepper, beer, and baking mix in a mixing bowl. Add enough beer to achieve a thick "pancake like" batter. Dip the fish in the batter and then roll them in the cracker crumbs. Fry the fish until golden brown in oil in a hot frying pan.

PARMESAN MASHED POTATOES

Make mashed potatoes the way you usually make them on a camping trip—either from scratch or using instant potatoes.

Add: ½ c. sour cream
½ tsp. ground black pepper
½ c. Parmesan cheese

Stir the sour cream and Parmesan cheese into the potatoes until well blended and serve immediately.

EASY OPEN FIRE CAKE DESSERT

2 c. flour
½ tsp. cinnamon
¼ c. sugar
1 egg
1 tsp. baking powder
½ c. water
3 fresh apples, chopped up very small and covered with sugar (other fruit can be substituted)

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

Every Sportsman/Sportswoman in Arizona Should Belong to the ARIZONA WILDLIFE FEDERATION

The AWF is a statewide organization that was organized as the Arizona Game Protective Association in 1923 to safe guard our privileges of hunting and fishing by insisting on sane administration of the states natural resources, thus avoiding repetition of the almost total extinction of game experienced in many eastern states. There, organized sportsmen have brought back wildlife through organized action; here, Arizona's organized sportsmen have been responsible for the maintenance, and in some cases, the increase, of the state's wildlife. Thus the A.G.P.A. and AWF's results have not been so spectacular, but have been effective.

The AWF can rightfully be a little proud of its accomplishments. But leaders in conservation are agreed that the battle is not yet won, that it will probably never be won until every person recognizes that only through the proper use of our natural resources can we maintain prosperity.

AWF is so concerned with the broad aspects of conservation, because it recognizes that only with the highest type of land and water use can game and fish supplies be maintained. When land begins to go downhill, game and fish are the first to follow.

The only source of funds are, private individuals, corporate sponsors, affiliate organizations, fundraisers and membership. If you enjoy the outdoors, even if hunting and fishing are only secondary in your enjoyment, you'll want to help maintain our natural resources, for ourselves and our children. YOU CAN MAKE THE DIFFERENCE BY SUPPORTING THE ARIZONA WILDLIFE FEDERATION. By filling the following application for membership and sending it, with the dues, yearly, life, or benefactor, you will become a member of a worthwhile organization. If you are already one of our supporting members, get a friend to join up. If each member signed up just one new member, AWF would double our membership. So lets get out and get those new members and make a difference!

Annual Meeting 2009

AWF Round Up

On June 13, 2009 the AWF held its Annual Meeting and Conservation Awards Banquet in Kendrick Park near the San Francisco Peaks, a place that was guaranteed to remind all attending of exactly what business we are in.

AWF Associate Affiliate, the Arizona Antelope Foundation, pitched in to make it all a success through the fantastic culinary skills of Bill and Mary Keebler with the AAF mobile chuck wagon. They were assisted by various other members of the AAF and the AWF.

Bill Keebler is also the Chair of AWF's Trophy Book Committee and presented the prestigious "Head & Horns Award" to Bill Hudzietz during the awards ceremony. An FYI, 2010 is the year in which the next Trophy Book is turned out. The Committee is hard at work on that as we speak.

Jamaica Smith of Kingman, a delegate at the meeting from AWF's newest associate affiliate, the Arizona Falconers Association, entertained the gathering midday with the help of a feathered personal friend. Jamaica spoke about all that is entailed to become a falconer and to maintain life as a falconer. Jamaica volunteers as well with the AWF's Becoming An Outdoors Woman Program using her birds and her skills to educate and thrill.

The AWF Annual Conservation Awards Banquet not only celebrates another succesful year for the AWF (86 and counting), but also the excellence of individuals in service to the conservation ethic.

This year's winners were:

Conservation Volunteer of the Year -
Paul Wolterbeek, Boyce Thompson Arboretum

2009 McCullough Award, Non-Professional -
Clair Harris, Coconino Sportsmen, Flagstaff

2009 McCullough Award, Professional -
Solange Whitehead, Environmental Fund for Arizona

Patti Ho Lifetime Achievement Award -
Lee Kohlhase, Mesa (AWF Life Member & Past President)

Following the Conservation Awards, an excellent presentation was given by Craig McMullen, Arizona Game & Fish Dept., on the "North American Conservation Model in Arizona". Everyone listening had no difficulty seeing how devoted Craig is to getting the public to understand the importance of this management system to Arizona's wildlife and habitat. He brought up a plasma TV to use for his presentation! Do not pass up a chance to hear Craig give this presentation as it is excellent and very informative.

Craig also gave recognition to the long history the AWF has with the Arizona Game & Fish Commission and Department, encouraging his listeners to honor that and continue the tradition.

The AWF Annual Meeting begins the new AWF year and this one got off to a good start with the updating of AWF's Omnibus Resolution and Bylaws, and the election of this year's Officer and Director Slate.

The new AWF Roster reads as follows:
President - Ryna Rock, Camp Verde
Vice President of Operations - Tom Mackin, Flagstaff
Vice President of Conservation - Brad Powell, Payson
Treasurer - Jerry Thorson, Mesa
Secretary - Jody Latimer, Phoenix

Directors At Large - Brian Wakeling, Desert Hills; Don Hoffman, Alpine; John Koleszar, Gilbert; Jim Solomon, Phoenix; Kate Mackay, Phoenix; Richard Snell, Phoenix; Glen Dickens, Tucson; Fred Fillmore, Mesa

Regional Directors - Region 1, Bob Vahle, Pinetop; Region 3, Chris Fonoti, Chino Valley; Region 4, Valerie Morrill, Yuma; Region 5, Larry Audsley, Tucson; Region 6, Ken Alexander, Glendale

It looks to be another good year for the AWF and we look forward to concentrating on several critical issues facing Arizona's wildlife, sportsmen/women, and outdoors enthusiasts. We hope all our readers will take this to heart and help us move forward through your support and participation. In the meantime – **JUST GET OUTDOORS!**

Membership

Welcome New Life Member
Ken Vensel Flagstaff

AWF Members wanting a full copy of Board Minutes,
contact Kim at: 480-644-0077
A summary is available at www.azwildlife.org

Welcome New Members!

Mindy Adami	Goodyear	Marsha Foutz	Clarkdale	Jose Montijo	Mesa
Barbara F Alter	Phoenix	Bonnie Fowler	Peoria	Richard Morehouse	Tucson
James Ambrose	Tucson	Rhonda Franks	Prescott Valley	Jennifer Nerat	Tempe
Julie Lee Amos	Tucson	Holly Franks	Surprise	Pat Nicolato	Tuba City
Brigit Anderson	Scottsdale	Stephanie Gallagher	Chandler	Valerie Nicolato	Tuba City
Kirsten Anderson	Phoenix	Cheri Gilbert	Gold Canyon	TR Olson	Phoenix
Ray Arreola Jr	Phoenix	Sheryl Glassburn	Scottsdale	Cheri Ong	Tucson
JoAnn Avey	Atlantic, IA	Rachel Gutekunst	Kingman	Linda Overby	Phoenix
Marcia Ayres	Chino Valley	Dianna Guyer	Peoria	Juliet Peters	Scottsdale
Mike Baier	Chandler	Beth Haas	Tucson	Wayne Pierri	Marana
Scott Ballor	Mesa	Pamela Hall	Scottsdale	Molly Pitts	Eager
Robert Baum	Tucson	Mannette Hall	Katy, TX	Jean Post	Apache Junction
Jeannie Berryman	Yorba Linda, CA	Kathy L Hartsock	Tucson	James Price	Gilbert
David Bertelsen	Tucson	Andrea Hathaway	Phoenix	Bob & Judy Prosser	Winslow
Jean Biggers	Tucson	Gloria B Haugen	Glendale	Terri Pruett	Oro Valley
Beth Bisbee	Prescott Valley	Deborah-Anne Heinz	Phoenix	Christina Read	Phoenix
Joan Brennan	Phoenix	Betty Lou Helsel	Prescott	Amy Reid	Cave Creek
Jennifer Breslin	Tucson	Kathy Henderson	Prescott Valley	Amber Rheubottom	Bagdad
Rebecca Brinkerhoff	Tucson	Carl A Herman	Chandler	Sandra Ribble	Goodyear
Lynn Brysacz	Phoenix	Jenny Holmquist	Apache Junction	Linda Riggs	Tucson
Suzanne Buchanan	Mesa	Darla Homer	Phoenix	Sheila Rosenau	Mesa
Bob Burnside	Camp Verde	Gail Hutchinson	Dana Point, CA	Liz Ross-Kinninger	Fountain Hills
Rob Burson	Cottonwood	Aidyl Jago	Bagdad	Joanne Round	Mesa
David Carpenter	Mesa	Dianne James	Phoenix	Carol Ann Sabareio	Apache Junction
Kristy Carskadon	Avondale	Bob Jeffery	Mesa	Cathryn Scheeler	Chandler
Alice Casey	Phoenix	Phillip Jones	Valley Farms	Phyllis J Scheuerman	Prescott
Theresa Castanon	Phoenix	Fran Jones-Lory	Chandler	Katharine Schinzel	Tempe
Sistine Castellini	Tucson	Dianne Kanzler	Scottsdale	Marilyn Schrab	Scottsdale
Max Castillo	Cottonwood	Tammy Kehl	Phoenix	John Schulz	Chandler
Penny Celmins	Paradise Valley	Sara Kehl	Phoenix	Vicki Scott	Yuma
Peter Chapman	Phoenix	Shalene Kirkley	Phoenix	V Lynn Shoopman	Prescott
Kenneth Chase	Arizona City	Jon Klesner	Fountain Hills	Greg Smith	Kingman
Lynda Cohen	Tucson	Gabriele Koschorke	Tucson	Ronald C Smith	Strawberry
Fred Collins	Sedona	Neal Krog	Nogales	Maria-Elena Soto	Globe
Julie Cowan	Phoenix	Gayle Krom	Phoenix	Sam F Spiller	Phoenix
Rebecca Crone	Mesa	Nancy Lambert	Prescott	Judy Spradling	Wittmann
Mary Crosby	Cave Creek	Stephen Laubach	Phoenix	Tina Springer	Tucson
Chris Davis	Phoenix	Elizabeth Lewis	Apache Junction	James Sterzenbach	Conifer, CO
Ron Day	Phoenix	Donna J Lewis	Camp Verde	Jimmy Stewart	Queen Creek
Roxanne Motrenec	Phoenix	Bob Logan	Gilbert	James & Maxine Strang	Bagdad
Diana Mansell	Phoenix	Beverly Lyle	Phoenix	Trindal Terry	Mesa
Mele Dickey	Phoenix	Charles Mackey	Cottonwood	Niel Thomsen	Avondale
Timothy Dolley	Prescott	Rob Mackin	Flagstaff	Pat Tucker	Gold Canyon
Arnold & Joan Drucker	Marana	Teresa Manix	Las Vegas, NV	Kim Tucker	Gold Canyon
Anne Dubuc	Morehead City	Susy Manning	SanTan Valley	Maggie Twomey	Flagstaff
Pam Dugan	Maricopa	Joan M Marshall	Tucson	Osa Undhagen	Phoenix
Kevin Eaton	Tucson	Patti Martin	Mesa	Terry A Vaughan	Rimrock
Kathi Erps	Goodyear	Diane McIntyre	Prescott	James Vickers	Scottsdale
Anne Fairholme	Mesa	Brianna McKee	Phoenix	Joseph Viellette	Mesa
Steve Favour	Flagstaff	Joan McKinley	Mesa	George & Nancy Vlassis	Safford
Cheryl Fehlner	Scottsdale	Bill & Linda McLean	Gold Canyon	Christine Waternaux	Tucson
Brianna Felix	Mesa	Roxinne McPhail	Carlsbad, CA	Joanne Webber	Mesa
Cindy Felix	Mesa	Sally Mettler	Oro Valley	Susan Weiss	Bullhead City
Cathy Ferguson	Apache Junction	Kit & Jack Metzger	Flagstaff	Monika Wheatley	Tucson
Donna Ferris	Chandler	Mandy Metzger	Flagstaff	Crystal Wunderlich	Cottonwood
Michelle Filkins	Apache Junction	Linda Metzger	Mesa		
Cyndi Fleming Smith	Apache Junction	John Misiaco	Mesa		
		Kara Monsen	Tucson		

AWF Members

Please take a moment to review the list of Life Members and past Benefactors to make sure we have not missed anyone.

If you want to add someone to the list or upgrade your own membership status, please use the membership form provided below.

AWF Membership Application

Name

Address

City State Zip

Phone Email

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PO Box 51510
Mesa, AZ 85208

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☐	45	Family
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☐	500	Life Member
☐	325	Distinquished Life Member (65+ or Disabled Veteran)
☐	500	Benefactor
☐	75	Small Business
☐	500	Corporate

All Membership fees are tax deductible

Arizona Wildlife Federation Life Members

Alan Abel	Tucson	Chris Fonoti	Chino Valley	Don Luke	Phoenix	Randy Sosin	Sedona
William Acheson	Flagstaff	James E. Frye	Mesa	Jerry Marquis	Page	Wendell G. Swank	Cottonwood
Patsy Apple	Phoenix	Steve Gallizioli	Fountain Hills	Christina Mathew-Bowers	Phoenix	George L. Sypherd	Sun City West
Jeff Augustine	Scottsdale	John Gannaway	Phoenix	Patricia A. McNeil	Payson	Lewis N. Tenney Jr.	Heber
James Baldree	Phoenix	Gilbert F. Gehant	Mesa	Duke Mertz	Chandler	Larry Thowe	Page
John Bauermeister	Scottsdale	Fred Gerhauser	Peoria	David & Victoria Morgan	Anthem	Robert D. Tucker	Buckeye
David Beaty	Mesa	Donald Gerould	Sun City	Allen Naille	Flagstaff	Charles W. Tyree	Tucson
John R. Beck	Peoria	J. David Gibeault	Tucson	Mike Neilson	Queen Crk	John B. Underwood	Scottsdale
Donald Billick	Phoenix	Rene G Gilbert	Anthem	Fred Nobbe	Phoenix	Ken Vensel	Flagstaff
Bruce H. Bishop	Tempe	Hank Gonzales	Tucson	Daniel & Annalee Norton	Scottsdale	Mark T. Vi t t	Scottsdale
Clarence Bowe Jr.	Scottsdale	Kim Graber	Phoenix	Donald J. Parks Jr.	Peoria	Stephen T. White	Scottsdale
M.J. Bramley Jr.	Mesa	Timm J. Haas	Willcox	Ace H. Peterson	Prescott	Brian H. Williams	Scottsdale
Jay Brandon	Apache Jtn	Donna J Hallman	Queen Creek	Price Phillips	Somerton	Pat Willis	Payson
Jonathan Brooks	Anthem	Western Hardwoods	Phoenix	Jim Pierce	Scottsdale	Robert A. Witzeman	Phoenix
Wade Brooksby	Phoenix	Cole Harvey	Casa Grande	Jerome Pratt	Sierra Vista	Larry M. Wolfe Sr.	Phoenix
Roger J Carroll	Sierra Vista	Miles C. Hauter S	Sedona	Paul Pristo	Scottsdale	L.V. Yates	Phoenix
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Louise Coan	Tucson	Jeffery L. Hinkley	Phoenix	Judith Riddle	Phoenix		
Clifton E. Cox	Tucson	Mark Hullinger	Chandler	Bryant & Marsha Ridgway	Casa Grnde	Diana Beatty	Laughlin, NV
Don Cox	Peoria	Richard Humphrey	Tucson	Ryna Rock	Camp Verde	George Boutonnet	Salinas, CA
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Howard Darland	Mesa	Henry Johnson	Lake Havasu	Robert C. Schatke	Chandler	Terry Johnson	Costa Mesa, CA
Anthony Diana	Phoenix	Thomas Kalos	Paradise Vlly	Terry Schupp	Tempe	Roy G. Jones	San Jose, CA
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Linda Erman	Phoenix	Lee A. Kohlhase	Mesa	Walter Scrimgeour	Prescott	John W Nelson	Montrose, CO
Rick Erman	Phoenix	Roy Kornmeyer	Kingman	David Seamans	Scottsdale	Robert Stragnell	Hanover, NH
Toni Erman-Kirch	Phoenix	William Lacy	Mesa	Duane Shroufe	Glendale	Jaren Vanderlinden	Amarillo, TX
Robb Evans	Flagstaff	Harvey J. Lawrence	Scottsdale	Jack H. Simon	Phoenix	Tom Ward	Orange, CA
Donald Farmer	Scottsdale	Nancy L. Lewis	Phoenix	Jim A. Slingluff	Tucson		
George Flener	Mesa	Long Valley Service	Happy Jack	Dale Slocum	Phoenix		

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Honoring the memory of sportsmen and sportswomen through a $500 Benefactor Membership

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