



PRONGHORN

4th Quarter 2017
Volume 23 Number 4



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AAF Mission Statement:

The Arizona Antelope Foundation is an organization dedicated to the welfare of pronghorn antelope. The Foundation's Mission is to actively seek to increase pronghorn populations in Arizona through habitat improvements, habitat acquisition, the translocation of animals to historic range, and public comment on activities affecting pronghorn and their habitat.



ON OUR COVER

PHOTO CREDIT TO BETTY DICKENS. YES, BETTY LOVES HER ANTELOPE SUBJECTS, AND ALL WHO HELP THEM. WE THINK IT IS FAIR TO SAY SHE KNOWS THEM FRONT TO BACK.

Pronghorn is a quarterly newsletter for the members of AAF. Letters, comments, news items, articles, pictures and stories are all welcome and will be considered for publication. Address all such items to:

Lenée Landis, Pronghorn Editor, PO Box 12590, Glendale, AZ 85318, or by email at info@azantelope.org.

PRESIDENT'S MESSAGE

Welcome to the Winter 2018 Issue of the Pronghorn, the quarterly publication of the Arizona Antelope Foundation. This publication just keeps getting better and better Thanks almost entirely to these three folks; our Vice President Glen Dickens, our administrator Tracy Unmacht, and our Editor Lenee Landis. The time and effort these folks put into every issue of the Pronghorn is, I believe, unprecedented for a volunteer organization. Thanks Guys!!

The 2018 Project season will be a strong one and will encompass nine months of the year, starting in a couple of weeks with a project down near Ajo for a fence modification around a waterhole for Sonoran Pronghorn to keep burros out. It will end in September with the continuation of the Bonita project down in Unit 32 in southeast Arizona. In between there will be projects around Sonoita and west of Flagstaff and up around Big Lake, so we will have a project in almost every region of the state. Please come out to help Antelope and other wildlife and get to know your fellow wildlife enthusiasts!

Our raffles for the most part went great in 2017 though you may have noticed that we had a bit of a hiccup here on this final optics raffle at the end of the year due to the holidays and some communication problems with our provider. Your support in this fundraising tool is critical and we Thank You for your Support! The last raffle did sell out and our very own Board of Director member Gary Boyer was the Winner. Congratulations Gary!! Gary has been such an avid and hard working board member that I can't think of a better winner to have!

At the January Board of Directors meeting we had a presentation by Joshua Smith, the Wildlife Specialist for the Buenos Aires National Wildlife Refuge and he presented what has been going on down on the BANWR in the past 18 months. One of the BANWR original missions when acquired in the mid 1980s besides protecting and restoring the Masked Bobwhite was to preserve the desert grasslands of that region in Arizona and the pronghorn populations in them, which were essentially non-existent by the 1980s. There were a few transplants in the '80s that initially looked promising however, the lack of brush control on mesquite trees eventually resulted in the grassland being very fragmented and the population crashed due to the lack of open space as protection from predators. That is now changing and the refuge has been on a mission to remove the interior fences, and is in the process of returning the grasslands to



their native state—this is extremely good news! We look forward to working with the BANWR in any way that we can moving forward and for some great articles for the PRONGHORN in the near future.

The last important item to mention is the summer BANQUET Fundraiser that will be held once again at the Embassy Suites in Tempe, Please mark this on your calendar for Saturday, June 16th, 2018. Last year's banquet was a great success, but we need your help to keep the funds rolling in so we can continue to help antelope and their habitat.

If anyone has any thoughts or comments regarding this issue of the Pronghorn, please write or email us at info@azantelope.org.

Sincerely,

Brian R. George

President

**"LIBERTAS AD VAGOR"....
FREEDOM TO ROAM**

BONITA GRASSLAND RANCH BOUNDARIES FENCE MODIFICATION SEPTEMBER 30, 2017

BY GLEN DICKENS AAF VP/PROJECTS/GRANTS MGR.

Another successful AAF fence modification/removal project was completed by 41 volunteers in Southeastern Arizona on September 30, 2017 in the northeast end of game management unit 32 near Bonita.

We modified 3 miles of existing boundary fence between the KJ and Bonita Ranches north of the High Creek Road. We removed the bottom barbed wire strand and replaced with smooth, along with installing replacement stays along the fence line. 100% of the work occurred well away from the roads and required considerable hiking and carrying of materials. During the project weekend, multiple sightings of rutting pronghorn occurred by most everyone traveling to the camp site on USFS land at the western end of the High Creek Road.

This effort is in direct proximity to ongoing mesquite removal for the Bonita Grasslands NRCS/G&F restoration project with a goal of improving an additional 10,000 acres in the next 4 years. Over the past 7 years, the areas adjacent to and within this project have been grubbed and new waters and boundary fence installed. These projects will help ensure that resident pronghorn and mule deer can safely utilize open grassland corridors without interference due to fence line obstructions. It assisted in accomplishing a key portion of the overall Bonita Plains pronghorn travel corridor improvement project.

Photos by Betty Dickens





This project effort benefits the National Fish and Wildlife Foundation grant in that *all* labor hours, materials and mileage from this project were used to *match* the AAF’s \$430K 8-year grant for our “Southeastern Arizona Grasslands Pronghorn Initiative”- *the grant has a goal of improving up to 100,000 acres of “Pronghorn habitat connectivity.”*

Dinners were served on Friday and Saturday nights with the sides provided by Mary and Bill Keebler who hosted Saturday and Sunday morning breakfasts as well. Thanks Mary and Bill!

Thanks go out to several groups of folks that contributed to this successful project:

- Representing the AAF Board: Al Sue, Connie Taylor, Gary Boyer, Joe-Bill Pickrell and yours truly.
- Representing the Mule Deer Foundation: Sherry Kapaldo
- University of Arizona: Mallory Rae, Ethan Taplin, Colin Hurkett, Philip Weathrby and Ben Morrison.
- Other AAF members and volunteers: Betty Dickens, Marsha Sue, John Millican, Mary and Bill Keebler, Kara Jensen, Paul Pavlich, Sue Moeller, Earl Polvent, Jay Leadabrand, Jerry Guevin, Jeff Yost, Dave Cruce, Ron Hazzard, Ken Johnson, Wendy Finch, Bob Hernbrode, Janet Hall, David & Elizabeth Breeden, Abe Magana, Hannah Rosen, Robert Velasco, Tyler Mayberry, Dave McCasland, Janet Millard, Triston Dixon, Michael Gullatt and Kaden Haws,
- Game & Fish personnel: John Bacon, Devin Skinner, Troy Christensen, Keith Callaway, and Duane Aubuchon.

Thanks, everyone for your efforts!

GLASSFORD HILL PRONGHORN REVIEW BY ARIZONA GAME AND FISH, NEW MEXICO GAME AND FISH, AND THE ARIZONA ANTELOPE FOUNDATION

BY GLEN DICKENS AAF VP/PROJECTS/GRANTS MGR.

On December 18th, three New Mexico Game and Fish Department wildlife employees, including the Big Game Chief, traveled to Arizona and joined eight Arizona Game and Fish employees and six members of the Arizona Antelope Board to review the Glassford Hill pronghorn population. This to discuss the best location (s) for a capture trap to allow for the safe capture and relocation of the resident herd to areas in southeastern Arizona to supplement existing populations. During the field review at least 65 individual pronghorn were observed.

The Glassford Hill pronghorn herd over the past 10 years is rapidly being surrounded by urbanization in the form of new high-speed roadways and multiple and increasing subdivisions of Prescott Valley. The AAF has been actively advocating both verbally and in writing for their removal prior to them winking out as a viable population in the near term e.g. 1-3 years. Presently the herd numbers around 100 individuals.

The Arizona Game and Fish Department both at the Regional and Phoenix staff level have been responsive to this request and this species need and in October of 2017 produced a 5-page plan to address the situation including wildlife issues and considering the human dimensions of such a public removal.

The AGFD *Central Yavapai County Pronghorn Public Outreach Plan* states in pertinent part the following;

“The Arizona Game and Fish Commission is charged with the protection and management of all wildlife within the state, including pronghorn. The Commission, as trustees, and the Arizona Game and Fish Department, as managers under that trust, have responsibility to manage pronghorn for sustainable populations and



to protect public access and use of wildlife resources. Inherent in the Public Trust responsibility, the Department also seeks to ensure all management decisions consider the current values and perceptions of all citizens of Arizona. This public outreach strategy is designed to identify and communicate the challenges facing pronghorn and pronghorn management in Central Yavapai County, involve the public, developers, and elected officials in discussions of these challenges, and increase the awareness of the public on the Commission and Department's mission to manage pronghorn for healthy and sustainable populations."

And;

The grasslands of central Yavapai County have supported a healthy, robust pronghorn population for many decades. These grassland landscapes are also attractive locations for people to live. The communities in central Yavapai County continue to expand into these grasslands fragmenting the pronghorn population and reducing the total amount of space available to pronghorn. Maintaining a stable or growing pronghorn population in areas where communities are expanding becomes challenging. The Department needs to understand the values placed on pronghorn, by individuals and communities, and be present during the planning phases of community expansion to ensure for sustainable pronghorn populations decades into the future. Isolated populations will disappear; identifying acceptable direct management approaches, such as translocation, and early community planning measures will be critical to preventing the total loss of these pronghorn.

The pronghorn herd located west of Glassford Hill Road and south of U.S. Highway 89A has become isolated from other pronghorn herds in the area, and community development is further reducing habitat available to this isolated herd. As habitat is lost, this pronghorn herd will not be able to persist and will disappear. The viability of this herd, whether in or near its current location or elsewhere in Arizona, is dependent on direct management actions such as translocation. The Department needs to identify effective translocation approaches and communicate the risks and challenges with these approaches.

Much is left to be done to educate all the key players in this growing part of Arizona's high-country grasslands. The Arizona Antelope Foundation has made clear we will assist and partner with the AGFD in this educational process over the coming year. We are pleased to see this type of initiative coming from the AGFD personnel involved and want to extend our appreciation for their efforts and forward planning on behalf of Arizona's Pronghorn antelope.



RECAP OF THE 2017 ARIZONA ANTELOPE FOUNDATION FUNDRAISING AND RECOGNITION BANQUET

The second annual AAF Fundraising and Recognition Banquet was celebrated in Tempe on June 17th. We told you about the recognition awards last issue, and want to show you a few photos and share some info from the banquet in this one. Imagine the setting and excitement with 13 live auction items, including the Arizona Special Pronghorn Antelope Tag which alone brought in \$51,000 for the Habitat Partnership Committees. In addition, there were 51 bucket items, a \$500 cash raffle, blitz for a Canyon Cooler, and a special mug with an AAF pewter medallion. Net income was \$17,232



A myriad of opportunities were available to appeal to anyone and everyone. For example, an ultimate wilderness rafting adventure on Idaho's Grand Canyon of the Salmon where cell phones do not work—"true freedom" they call it! Or indoor skydiving without jumping out of a plane. Our donors went all out on behalf of the antelope, and we thank them again:

Action Whitewater Adventures, Al & Marsha Sue, American Precision Target Systems, Andries Van Zyl, Mount Carmel Safaris, AZ Wildlife Federation, Canyon Coolers, Christopher Holleman, Connie Taylor, Dave & Sue Laird, Don Martin, Eddy Corona, Erin Hickson, George Ford, Gnat Warfare, Glen & Betty Dickens, Greg Hughes, Heritage Metal Works, Jim & Deb McCasland, Jim & Tracy Unmacht, Kenetrek, Lighting Ridge Cellars, M3 Industries, Miller's Southwest Processing, Outdoorsman's, Patrick Swafford, Island Point Lodge, PBS Automotive, Pearson Taxidermy, Rancho Rossa, Rick Vinncet, Firestik Antenna, Rim Country Custom Rods, Robert Velasco, Robin & Billie Bechtel, Steve Adams, HMI, Tom Boggess III, Vortex, Zulu Nyala

Watch for more information through email, through the website at azantelope.org, and through the newsletter. For more information on the awards program, please visit azwildlife.org. You are invited, and we hope to see you there! For information about being a donor, contact info@azantelope.org.

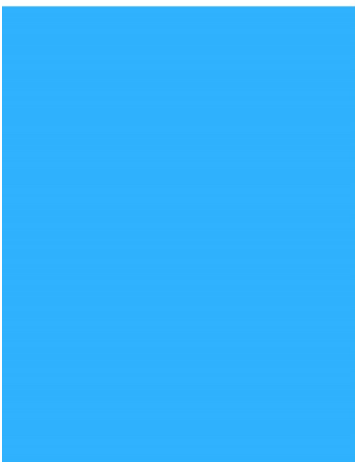
Reward the past, celebrate the present, and invest in the future!

SAVE THE DATE

For the

3rd Annual Pronghorn Recognition and Fundraising Banquet

June 16, 2018 at Embassy Suites in Tempe



ARIZONA ANTELOPE FOUNDATION HUNTER'S CLINIC

What do you do after you receive your antelope tag? Well, if you're like the 42 attendees at our Hunter's Clinic, you start learning everything you can from the people who know so you don't come back from your trip with nothing more than a suntan. The speed and eyesight of these animals far surpass ours, so we need to get a leg up on the competition.

Attendees at our 25th Annual Hunter's Clinic in Tempe on June 17 had a four hour seminar where they learned archery and rifle hunting tactics, how to use optics (a MUST), spotting and stalking tactics in open areas without cover where antelope hang, how to distinguish bucks from does (both can have horns!), proper field care, how to field judge your trophy, and how to photo document your hunt. Also Game and Fish reps were on hand to give you the insight of where to hunt, discussing the units. Thank you to all the presenters who brought their wealth of information and answered questions!

The 26th Annual Hunter's Clinic will be June 16, 2018 and is free to attend if you are currently an AAF member, otherwise the fee is \$20 per person and includes a 2018 membership. It is the same day and location as the 3rd Annual Pronghorn Recognition and Fundraising Banquet, so why not make a day of it? The pronghorn thank you! They benefit greatly by your participation.

Here are some photos of presenters giving the information you need at the last clinic:



*Photos pages 8-10
courtesy of Richard
Ockenfels*





SONORAN PRONGHORN UPDATE



BY JILL BRIGHT AZ GAME & FISH
NOVEMBER-DECEMBER 2017

Captive Breeding:

Cabeza Pen

In north herd, Green collar doe had been observed separate from the group on most scoping sessions. She had been walking very slowly for a long time, and she looked aged. On Nov. 13th she was found dead in the pen. She was one of the original does brought from Mexico in January 2004, so she was 13+ years old.

On 17 November, a college group came down from Prescott, AZ to help out around the pen. The NW drinker was dug up and lowered approximately 10 inches. This was followed by concrete work around the edges to help keep dirt out. The drinker is working more efficiently now.

Temporary holding pens at the three release sites were constructed during November. These pens are located on the BMGR east of Highway 85, in the Mohawk Valley, and in the Valley of the Ajo. Pronghorn from the captive breeding pen will initially be moved to these pens and will be held for approximately 3 weeks while we ensure the effects of any drugs have worn off, they are healthy and were not injured in the handling, and they acclimate to their new surroundings.

Attempts to passively capture the pronghorn in the boma traps started on 3 December. Twenty-seven of the 34 in north herd were caught on 4 December including all the animals slated for release. South herd was not as cooperative as usual. On 5 December, 31 48 pronghorn were caught; several that would have been released were not caught. While doing the boma capture, it was determined that the numbers and sex of fawns thought to be in each half of the pen by the pen crew was not accurate. In north herd, 9 doe fawns and 7 buck fawns were recruited. In south herd, 10 doe fawns and 5 buck fawns was the final number.



Processing took place December 7 – 8. All pronghorn were vaccinated, had blood drawn for disease and genetic testing and were marked.

All pronghorn being released were fitted with GPS collars. Breeding females being released back into the pen were fitted with VHF collars if needed. All also re-

ceived color coded ear tags if needed. There were no injuries or mortalities.

The south herd was processed on December 7. Four males and four females were transported via trailer to the holding pen on BMGR east of Highway 85. Two males and three females were transported via trailer to the holding pen on ORPI. One buck was transported via helicopter to the Kofa captive breeding pen. One buck was moved to the north pen for breeding purposes. The remaining pronghorn were returned to the pen for breeding or because they were too young to be released.



One buck transported to BMGR was brought back to the captive breeding pen because he seemed unable to get up or stand when he was being released from the trailer. The veterinarians gave him fluids, and other medications, and he was placed in the padded 10x10 recovery pen in the north pen for observation overnight. He recovered from whatever was ailing him, and he was released into the north pen the next afternoon. He has been closely monitored but he appears perfectly healthy; his new name is Faker.

North herd was processed on 8 December. Four males and two females were transported via trailer to the holding pen on the Marine range, Mohawk Valley area.

We want to give a big thank you to everyone who participated in the 2017 capture and release. It was a huge success.



All the animals in the holding pens were monitored on a daily basis. The six pronghorn in the Mohawk Valley were released to the wild on 27 December. The seven pronghorn were released from the BMGR holding pen on 28 December. The Organ Pipe animals are expected to be released in early January. The pen and most areas of pronghorn range received between 0.3 and 0.6 inches of rain on December 17; this should help green up the pen and surrounding areas.

Animals in the Cabeza pen after the release

NORTH HALF		SOUTH HALF	
Adult Females	10	Adult Females	12
Yearling Females (<i>b 2017</i>)	9	Yearling Females (<i>b 2017</i>)	10
Adult Males	4	Adult Males	6
Yearling Males (<i>b 2017</i>)	7	Yearling Males (<i>b 2017</i>)	5
Fawns (<i>b 2018</i>)		Fawns (<i>b 2018</i>)	
TOTAL	30	TOTAL	33
Total Pen	63		

Kofa Pen

The pronghorn in the Kofa pen continue to do well. The buck brought into the Kofa pen from the Cabeza pen is healthy and has joined the Kofa herd. There has been no rain at the Kofa pen or vicinity.

Adult Females	11
Yearling Females (b 2017)	5
Adult Males	4
Yearling Males (b 2017)	4
Fawns (born 2018)	
TOTAL	24

Wild Pronghorn Cabeza/ORPI/BMGR Herd: Most of the range received a good rainfall on 17 December; however, it is currently in fair to poor condition in most places. A few areas (west of the Sierra Pintas, Organ Pipe) are still in good condition.

A radio collared doe was found dead 27 November in the vicinity of East Release and Pack Rat Hill. She was an 8-year old doe released from the pen in 2010 and she was likely killed by coyotes from the available sign.

One of the newly released females on the Marine range was found dead on December 30 – 3 days after she was released from the holding pen. GPS data showed that she and a newly released buck were initially together, but when her collar went on mortality signal, the buck was about 7 miles away from that location. Investigation on the ground determined she was killed by coyotes.

Wild Pronghorn Kofa Herd: The two collared does continue to remain near Highway 95. The area is very green likely contributing to them being there. Most of the rest of the range is in fair condition. Other animals are north west of the pen, in the Clancy Tank area, and in King Valley on Kofa and YPG. A large herd (25) was seen near the farm pivots east of YPG on the last telemetry flight.

On the December 29 telemetry flight, a doe, released in January 2015, was found dead. She was a 7-year old doe and had ranged widely on Kofa, including east towards Gila Bend. She was found near the Crystal Hills road. Cause of death is unknown; she was intact but had some internal bleeding and rumen material in her body cavity, however we found no large marks on her hide and no broken bones.

Wild Pronghorn BMGR East of Highway 85 Herd: Several of the newly released pronghorn have joined up with wild pronghorn; the others are near the wild herds. Range conditions are fair although this area also received rain in December.

A 4-year old doe, released in December 2015, was found dead on the last telemetry flight. She is west of the north water, but we have not investigated her mortality yet.

Water Projects: Point of the Pintas water was enlarged 15,000 gallons November 3 - 4. This should greatly reduce the need to haul water there in dry periods. Water was also hauled to the Devils Hills drinker (2000 gallons) in December.

Forage Enhancements: Irrigation continues at Charlie Bell; it was irrigated for 16.5 hours in November. However, only one buck was documented at the site; they have likely moved to greener areas. At least 12 pronghorn are still using Knucklehead. At least 13 pronghorn continue to use East Release. Alfalfa is still being provided at both these sites. While the helicopter was in Ajo for the capture, 24 bales of hay were flown to the Knucklehead site stockpiled for the summer.

Other Projects: The range-wide survey in the Pinacate area of Sonora Mexico took place November 27 – 29. Fifty-two pronghorn were observed, leading to an estimate of 72 pronghorn. This was lower than 2015 when 96 were observed and the estimate was 117. The survey in the Quitovac area of Sonora took place December 11 – 14. Results from that will be available soon.

Written January 2, 2018, Photos by George Andrejko (AGFD) and Ivonne Cassaigne

MANAGING FOR AN ELUSIVE SPECIES

Why an article about mountain lions in the Pronghorn?

Humane Society of the United States Backing Arizona Hunting Ban Ballot Initiative

The Humane Society of the United States (HSUS) has now entered the Arizona ballot initiative process for the 2018 election cycle. They have formed a local campaign called Arizonans for Wildlife in an attempt to ban all wild cat hunting in Arizona, much like they did in California a number of year ago (and it isn't going so well there).

Their goal with this action is to get Arizona voters to reject a century of sound scientific wildlife management from our Arizona Game & Fish Department biologists, and turn over the management of wild cats to the ballot box, with an emotion based, non-factual initiative.

*The AZ Antelope Foundation does not support this measure as it is our belief that **management of ALL 800+ species in Arizona should remain in the capable hands of our state wildlife agency.** Wildlife management across all species within shrinking available habitat is a complex matter, and does not belong at the ballot box.*

HSUS propaganda leads one to believe that wild cat populations are in danger in Arizona. On the contrary - current wildlife management practices have resulted in healthy mountain lion and bobcat populations across the state. Three other species of cats listed in the ban are already federally protected and cannot be hunted.

*Please note the following article *Managing For an Elusive Species* is reprinted with the permission of the Arizona Game and Fish Department Wildlife Views regarding the management of Arizona's mountain lion populations.*



You can call mountain lions elusive, solitary and primarily nocturnal, but you can't call them rare in Arizona. Mountain lions are abundant in Arizona and are broadly distributed throughout a variety of habitats across the state. In fact, over the past 20 years, their distribution has expanded into the southwestern part of the state where mountain lion sightings used to be rare.

It is important to understand how the Arizona Game and Fish Department manages this captivating, yet not uncommon, species.

Monitoring an Elusive Species Isn't So Straightforward

The size and density of Arizona's statewide mountain lion population are difficult to estimate because mountain lions typically are solitary and live in rugged terrain. Their secretive behaviors, nocturnal nature and wide dispersal across the state make them a difficult population to study across large geographical scales. The high cost of long-term research projects, which can exceed \$1 million annually, is another limitation, making efforts to count every mountain lion logistically impractical or economically prohibitive.

To offset these limitations, the department uses several methods to monitor the population and estimate abundance. Methods include harvest numbers, age and sex of the animals harvested, sighting reports, depredation incidents, habitat availability and prey density. The department's recent monitoring results indicate a healthy and robust mountain lion population in Arizona.

The department also does small studies to provide insight on the characteristics of local mountain lion populations in Arizona, such as survival, reproduction, immigration, emigration and diet. These studies contribute to biologists' understanding of local populations and help influence management decisions. As examples, recent research around the cities of Tucson, Payson and Prescott examined mountain lion use of lands and communities adjacent to and surrounded by wildlands and current work in the lower Sonoran Desert should help biologists understand survival, reproduction, movements and prey use in desert environments with multiple prey species.

Managing for Sustainable Populations

Active management is a crucial component of all wildlife conservation, but mountain lion management presents many complex challenges. The department strives to implement management strategies that maintain a sustainable mountain lion population while addressing the diverse needs and views of the public.

Through regulated hunting, hunters fund most wildlife management activities in Arizona and help to maintain the mountain lion population at levels compatible with human activity, various land uses, available habitat and prey density. Mountain lion



hunting and harvest are closely monitored to ensure a sustainable population. A hunting license and tag are required to hunt mountain lions, and hunters must report their harvest within 48 hours. They also are required to have their harvest physically inspected by the department within 10 days of take. During the inspection, important biological information is collected, including DNA that has been used to assess potential barriers to dispersal and distribution across the state. A tooth from the mountain lion also is collected to determine its age using “cementum annuli” analysis (similar to counting tree rings).

Using the sex and age composition of the harvest, the department annually evaluates the impact of hunting on the mountain lion population. By closely monitoring the mountain lions taken in the annual harvest, biologists can ensure that the population maintains an appropriate composition of adults, subadults and juveniles of both sexes, all of which are necessary for a sustainable population.

One of the department’s management strategies is to protect the adult female segment of the population. The proportion of adult females (females 3 years or older) in the annual harvest is a useful indicator of the impact hunting may have on mountain lion populations.

Since 2011, adult female harvest has been monitored in management zones throughout the state, with female harvest limits and/or season closures established if the adult female harvest threshold is ever exceeded. The department has managed for a two-year average adult female harvest to be less than 35 percent of the total take in each zone. This threshold was based on scientific evidence that indicated population declines when adult females make up between 25 percent and 42 percent of the harvest.

Although adult female harvest in Arizona has never exceeded 35 percent in any zone since implementation, more recent research suggests the lower end of this percentage range is a more sustainable limit. For the 2018 mountain lion season, the department will manage for 25 percent of the total take over a three-year average as a parameter to monitor harvest and establish harvest thresholds.

Spotted kittens, and females accompanied by spotted kittens, also are protected by state statutes, and reports of any illegal harvest are investigated thoroughly by wildlife managers.

Mountain lion harvest has remained fairly consistent during the past 20 years, with about 250 to 350 mountain lions harvested annually. A low of 193 mountain lions were harvested in 1984; a high of 384 were harvested in 2001. The steady rate of harvest during the past two decades, along with the consistent number of tags sold, indicates that current harvest levels are sustainable.

Adapting Management to Modern Approaches

The department continually evaluates new and current research and management methods through the hunt guidelines process every five years — which incorporates public comment — and makes changes accordingly. Adapting the best and most effective management strategies ensures harvest levels (and populations) remain sustainable.

Most recently, department biologists re-evaluated management goals and objectives for the minimal occurrence zone and day-long seasons and made significant changes. These season structures had been designed to maintain historically low mountain lion populations in certain parts of the state or were implemented in units where there are concerns about prey populations. It was determined these approaches were ineffective at influencing harvest, so they were removed from the 2017–18 hunt recommendations. The entire state will now be included in the standard management zone, with a bag limit of one mountain lion per person per year with daylight hunting hours.

Additionally, the department is using other management strategies such as eliminating multiple bag limit season structures; monitoring at a smaller scale using mountain lion management zones based on biogeographical boundaries; establishing harvest thresholds that will close a zone when the threshold is reached; and implementing a season closure during summer months when mountain lion births are at their peak. Furthermore, wildlife managers are using the best scientific approaches for estimating population size, which will help refine management strategies.

As with all other species, management is necessary to satisfy social and ecological goals. Finding balance is the key, as managing some species while leaving other populations unmanaged is detrimental to the ecological balance in the environment. The department is committed to incorporating sound science into mountain lion management and will continue to adapt management to the evolving world of wildlife biology.

April Howard is a predator, furbearer, and large carnivore biologist with the Arizona Game and Fish Department. This article originally was published in the September-October 2017 issue of Arizona Wildlife Views magazine, published by the Arizona Game and Fish Department.

SOME FREQUENTLY ASKED QUESTIONS

Mountain lions are an important part of Arizona's ecosystem, but over time a number of misconceptions about mountain lions have been perpetuated. Read the FAQ document below to learn the facts about mountain lions and to clear up misconceptions.

What is the status of mountain lions in Arizona?

Mountain lions are not a threatened, endangered or sensitive species in Arizona. In fact, for a large predator, they are abundant throughout the state especially in areas where their major prey species, deer, are present. An independent scientific organization, the International Union of Conservation in Nature, documents that mountain lion populations are expanding in North America and are listed as a species of "Least Concern," a ranking that supports that mountain lions are not at risk in any fashion. In Arizona, mountain lions are expanding into regions where they were once rare, supporting the fact that in this state mountain lions are following the continental pattern of expanding.

If mountain lions are abundant in Arizona, why do we seldom see them?

Despite having one of the most extensive geographic ranges of any land mammal, their elusive, solitary, primarily nocturnal nature, and distribution in rugged terrain makes it rare to observe them in the wild. They typically hunt at night and are adept at using terrain features to remain hidden. Mountain lions tend to avoid humans and human-dominated landscapes, and although they have been documented near urban areas, they typically use those areas during the night to avoid interactions with humans.

How are mountain lions managed in Arizona?

Mountain lions are regulated by several statutes and Commission Order. For example, it is unlawful to harvest a spotted kitten or a female accompanied by a spotted kitten. The Department has implemented several changes to update "best management practices" as part of the agency's adaptive management protocols that dictate the Commission evaluate and establish management guidelines on a periodic basis. An example of these changes is the establishment of several zones in the state with harvest thresholds that would close the season in that zone when a predetermined number of mountain lions have been harvested in that zone.

What data does the Department use to manage mountain lions?

Mountain lions are difficult to survey due to their cryptic behaviors, and similarly to most wildlife agencies, the Department manages this species on data that are derived from harvested animals. Every harvested mountain lion has to be physically inspected by the Department so age and sex data can be collected and analyzed to determine the age distribution of harvested animals. These data are used to create a demographic representation of the population in the wild. In addition, the Department uses harvested female data to adjust season prescriptions if a predetermined percentage of the harvest is adult females. This threshold, which is based on the best available science, has never been met in Arizona.

Is there any indication that mountain lion harvest in Arizona is not sustainable?

No, to the contrary, all of the harvest data that the Department uses to ensure sustainable populations suggests that the population is stable to increasing in many parts of the state. The age of every hunter harvested animal is determined by "cementum aging" techniques, the most commonly accepted method to assess age. The age distribution is "normally distributed," a measure that suggests that based on the best available literature, the population is not being over exploited.

If mountain lion populations are not effectively managed, will there be an increase in human-mountain lion conflicts?

In looking at California, where regulated mountain lion hunting has been banned for decades, there has been an increase in human-mountain lion conflicts. While it is difficult to determine cause and effect, there has been an increase and the same is a potential in Arizona.



MEET THE BOARD—

KARA JENSEN

Kara Jensen has lived in the valley for 22 years and was introduced to the world of wildlife conservation in 2004 by being invited to tag along on an antelope hunt near Prescott Valley. Having not grown up around hunting and the fact that she didn't even know Arizona had a pronghorn antelope population, her curiosity was piqued. The curiosity turned into a passion!

That experience led her to take a hunter safety course and apply for the spring draw. In an effort to learn how to hunt, a Google search commenced and two clubs popped up on the screen. Arizona Predator Callers and the Arizona Antelope Foundation. Arizona Predator Callers provided the information and mentors needed to learn to hunt and the Arizona Antelope Foundation introduced her to another side of wildlife conservation. She was part of the fundraising committee from 2006 to 2010. In 2016 she returned to the organization and has helped us on the fundraising committee and our social media outreach through Facebook. She also emcees the banquet.

Taking a break from her emcee duties

Over the years she has attended many meetings on sportsman's issues, participated in multiple outdoor EXPO's, and fixed many miles of fences on work projects. She is also on the board of the Arizona Predator Callers. She hosts the 37B Youth Javelina and Small Game hunting camp in January through the Outdoor Skills Network with AZ Game and Fish, and also runs an outdoor activity calendar for Be Outdoors Arizona.



When she doesn't have free time for outdoor activities and volunteering, she works as the owner of the marketing firm Triffid Online and runs a business mastermind group for sales professionals. Other personal interests are photography, camping, hiking, gardening and reading.



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WELCOME TO NEW MEMBERS:

Nick Religa, Chandler
Joshua Smith, Tucson

MEET YOUR 2018 BOARD

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Directors:

Gary Boyer
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Arizona Antelope Foundation Goals

Acquire blocks of key pronghorn habitat and manage them for pronghorn .

Participate in habitat manipulation projects to enhance pronghorn habitat.

Develop additional water sources for pronghorn.

Modify existing fences to exceed current wildlife standards.

Reintroduce pronghorn into historic habitat.

Support predator control efforts where necessary to insure the survival of pronghorn populations.

Educate the public about pronghorn in Arizona.

Coordinate with the livestock industry, land management agencies, private landowners, and game management agencies to encourage programs emphasizing pronghorn.

Promote research necessary to better manage pronghorn.

Serve as an advocate for the enhancement of pronghorn.



Photo courtesy of Betty Dickens

GREETINGS!



It has been a wonderful year for me, getting to know the plight of the pronghorn and what human and humane efforts go on behind the scenes to improve their lives.

Thanks to all of you for supporting the Arizona Antelope Foundation whether you are brand new and just becoming informed, already out there at the projects with your work clothes on, or participating through the online raffles, AZ license plate program, AZ Big Game Super Raffle, the annual Banquet and/or the Hunter's Clinic. If you're brand new to this, grab a friend to join you and head out to one of the projects where you'll both widen your circle to include some of the friendliest, most committed people around.

It takes everyone to pitch in, and we all reap the rewards. Feel free to write about your pronghorn experience, send photos, or make suggestions at info@azantelope.org.

Best to you, Lenée