



Habitat Partnership Committee Connection

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June 2010
Issue 5



From your Statewide HPC Chairman Commissioner John W. Harris

On February 16, 2010, my nomination to the Arizona Game and Fish Commission was confirmed by the Arizona Senate, and on February 26, 2010, I had the opportunity to chair my first Habitat Partnership Committee meeting. At that meeting I saw some familiar faces, but also some new ones. Getting to know you is important to me, but if we are not already acquainted, here is a quick overview of my background.

I have been involved in law enforcement as a career for 35 years, beginning with the Tucson Police Department. I had spent many years working in various positions with the Tucson police, and when I retired in 1993, I was serving as Assistant Chief. Since that time I have served as the Chief of Police for several cities, including: Pleasant Hill, Missouri; Springfield, Illinois; Evanston, Wyoming; and currently with Sahuarita, Arizona.

I have always had a passion for wildlife and wildlife management. I have spent 10 years as a volunteer Game Ranger Reserve before retiring from Tucson PD, and when I arrived back in Arizona in 2006, I again volunteered in that capacity. I am a Life Member of the Wild Sheep Foundation, Arizona Desert Bighorn Sheep Society, Grand Slam Club, and Rocky Mountain Elk Foundation. I also belong to the Arizona Antelope Foundation, Safari Club International Arizona Chapter, and Mule Deer Foundation. I have served as President of the Wild Sheep Foundation and Arizona Desert Bighorn Sheep Society. When with the Wild Sheep Foundation, I assisted to establish the United States Congressional Sportsmen's Caucus. My goal now is to ensure that my 22-year-old daughter and her future children are also able to have the wonderful outdoor experiences that I have had.

I was impressed by the turnout at the winter HPC meeting, and even more so by the passion of those in attendance as well as the quality of the projects that were being funded. It was pleasing to hear the participants speak of the respect they had for one another, both among the wildlife conservation organizations and with the Department. I find that assuming a leadership role within a work group that is already functioning well is a rewarding assignment. Yet I believe there is always room for improvement, and while I commend both the wildlife conservation organizations and the Department for such a productive partnership, I would challenge everyone to seek excellence in all that we do.

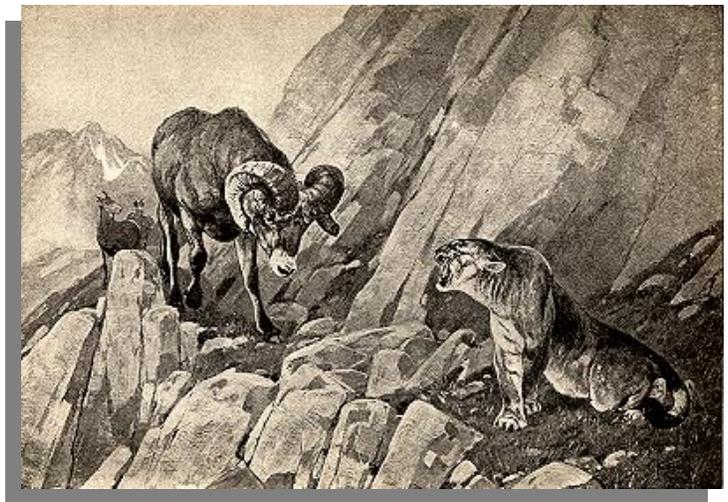
Our next State HPC meeting will be held on July 30, 2010 in Pinetop, Arizona. I look forward to another productive meeting and the opportunity to get to know each other better. Do not hesitate to share your thoughts and ideas with me. 

The Coordinator's Corner – Ron Thompson, HPC Coordinator

I have used this column to highlight several projects that demonstrate the breadth of Habitat Partnership Committee activities. Special Big Game Tag Funds have been raised and applied on the ground through the sweat equity of sportsmen from the Wildlife Conservation Organizations (WCOs) of this state. WCOs have supported projects that increase the ability of wildlife to move across landscapes and highways and to improve the essential habitat components of wildlife habitat – food, water, cover, and space. This newsletter has documented water developments, prescribed burns, and mechanical vegetation treatments, all of which have obvious benefits for wildlife.

In this issue, I would like to feature a topic some may find controversial – predation management. In our current world where anthropomorphic changes to the environment have influenced virtually every aspect of wildlife ecology, predation in some areas has become a factor that regulates prey. Management decisions to benefit wildlife species must consider the array of interrelatedness of habitat and wildlife, habitat needs, habitat specialists and generalists, competitors, and predator-prey relationships. In short, a comprehensive view of wildlife management implications is needed.

Snap shots of the ability of predators to impact wildlife resources and their environments are coming together in an album of scientific literature most often referred to as trophic cascades. Peer-refereed research studies are building a more complete picture of the interrelationships among habitat degradation, habitat fragmentation, and predator-prey dynamics. Currently, Special Big Game Tag Funds are being used to collect data which inform the development and implementation of several Department predation management plans. And while predation management remains a hotly debated topic, it is appropriate that Special Big Game Tag Funds are used to assist in our acquisition of knowledge regarding these sensitive topics.



It is also appropriate that these funds also be used to implement planned management actions to benefit the suite of species that occupy a specific habitat. Allow me to share some information about ongoing data collection that is in part funded by the Special Big Game Tag Fund through the HPC process.

Genetic analysis of scats reveals minimum number, sex, and diet of mountain lions on Kofa National Wildlife Refuge, Arizona*

Ashwin Naidu, Lindsay Smythe, Ron Thompson, Melanie Culver

Predation by mountain lions on vulnerable desert bighorn sheep populations has become a major concern in southwestern Arizona, especially on Kofa National Wildlife Refuge (NWR). Mountain lions have historically been thought to be largely transient in southwestern Arizona; however, between 2003 and 2007, direct sightings, detection of tracks, and an extensive camera-trap survey revealed the presence of 5 different mountain lions (3 adults and 2 kittens) occupying the Kofa Mountains. These preliminary findings, along with the concern over the declining numbers of desert bighorn sheep, prompted further investigation into the abundance and food habits of mountain lions on the refuge.

We collected 105 scat samples suspected to be from mountain lions between 2007 and 2009 from the Kofa and Castle Dome mountains in Kofa NWR. We extracted DNA from the surface of the scat samples to identify from which predator species the scat originated. We successfully identified 53 scat samples to be from mountain lions and 3 from coyotes.

The remaining 49 scat samples failed to yield amplifiable DNA. We then used DNA assay techniques to identify individual animals, which yielded 11 unique individual mountain lions. Although we were unable to identify the sex of all individuals, there were at least 2 female and 5 male mountain lions in this sample (Figure 1).

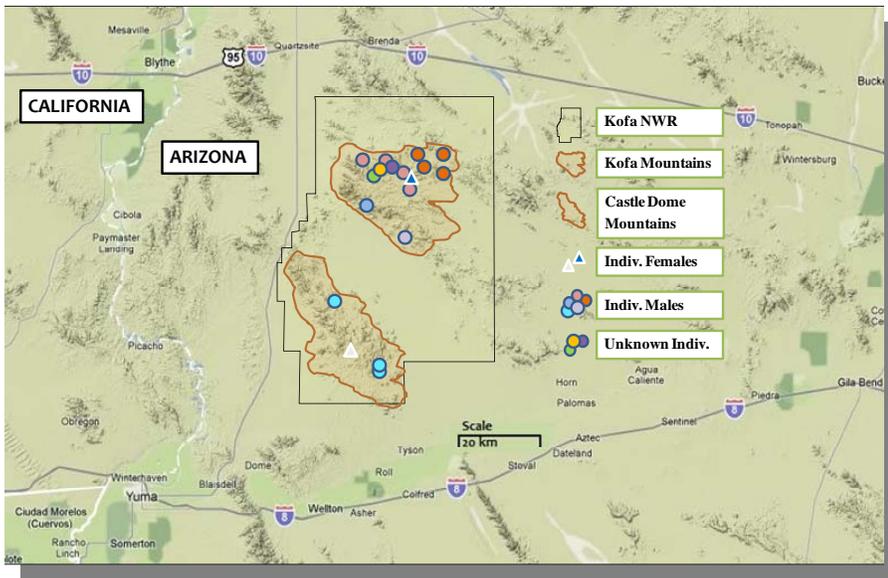


Figure 1: Individual male and individual female mountain lion scat sample locations on Kofa NWR

We used 24 of the 53 mountain lion scats for diet analysis. We used DNA assay techniques to identify prey remains from bone fragments found in each scat. We pulverized each bone fragment and extracted DNA from bone powder. We identified 5 different prey species in the diet and identified that most (58%) of the diet was composed of mule deer (Figure 2).

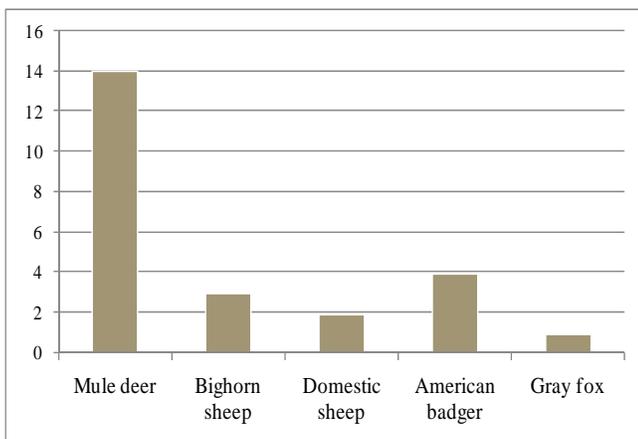


Figure 2: Prey remains identified from 24 mountain lion scat samples.

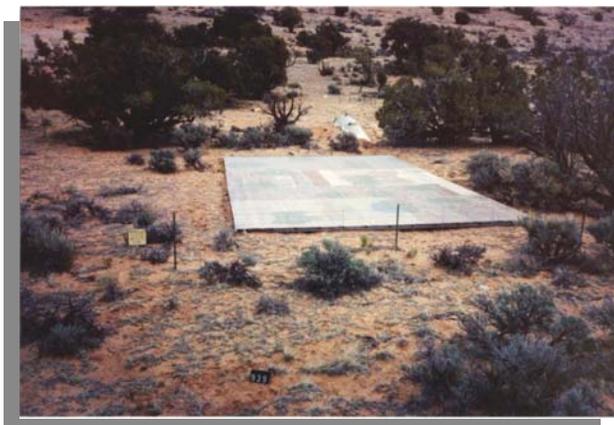
Mountain lion management remains a contentious issue in southwestern Arizona, and information on source populations, movements, and genetic relatedness will be critical to management decisions. Management decisions in the future will require information on how the Kofa mountain lions fit within the larger regional mountain lion population. The Special Big Game Tag Fund is supporting a project to obtain representative mountain lion DNA samples from the surrounding areas including mountain ranges in southern California and to the north and south of Kofa NWR – Plomosas, Harcuvar and Harquahalas, Black Mountains, Cabeza Prieta NWR, Gila Bend Mountains and Pinacate Biosphere Reserve (Mexico). We plan to use DNA markers, once developed, to generate individual identifiers from all representative mountain lion DNA samples and analyze them for relatedness and kinship. Based on the relatedness estimates, we plan to map out a best estimate of gene flow across the compared populations or sub-populations. This will allow future adaptive management strategies to be applied where they will be most effective in the shortest amount of time.

We thank the Arizona Desert Bighorn Sheep Society for their support during this project and the volunteer efforts offered by their members to collect mountain lion scat throughout the proposed project region. 📖

Everybody's Working For The Weekend – Or Are They? By Connie Weise

Dinner and a movie? Golf? A trip to the zoo or a museum? These are things that many of us would prefer to do on weekend. But not everyone. The members of the Arizona Desert Bighorn Sheep Society (ADBSS) have something else in mind. Their plan on this particular weekend was to assist in the redevelopment of the Powell's Monument Wildlife Catchment, in the Paria Canyon-Vermilion Cliffs in the eastern portion of unit 12B. Their goal? To improve water availability for the bighorn sheep and mule deer who inhabit this area. In addition to these big game species, other wildlife such as the California condor, peregrine falcons, spotted bats and other non-game species will also benefit from this water supply. Each year from January to April, the ADBSS collaborates with Arizona Game and Fish Department Development Branch and sets goals for completing 4 – 5 bighorn sheep projects.

Although I had heard and read about these projects for the past several years, this was the first project that I was lucky enough to participate in firsthand. I wasn't real sure what to expect, and to be quite honest with you, I was a little on edge thinking about having a helicopter pick me up and drop me off somewhere near the edge of the Vermilion Cliffs! But once in the air the beauty of the high cliffs and rugged canyons quickly stole my attention, and the nervousness I once felt was replaced with awe as I looked out across the colorful sandstone buttes.



Powell's Monument - BEFORE

The flight in its entirety was less than 5 minutes, and once we landed we took a short hike to the project site. I again looked on in amazement. There they were, just like a very well organized colony of ants; volunteers from the Arizona Desert Bighorn Sheep Society along with a crew from the Arizona Game and Fish Department. All working like a well oiled machine. Each person seemed to instinctively know their role in this effort.

I personally spend most of my time sitting behind a computer and am not skilled in the art of construction, so my role was more that of a gopher doing things like carrying cement bags to the mixing trough or filling up water buckets, which suited me fine.



Crew working on new fiberglass walk-in trough

Powell's Monument Catchment was originally built in September 1986 and was long overdue for renovation. The original "sausage style" tank held 3,000 gallons of water and was replaced with two 3' x 18' diameter fiberglass ring tanks. Getting supplies to this project was no simple feat. A helicopter was used to sling load materials from the staging area to the project site. Each fiberglass tank was manufactured in two separate pieces and each piece had to be flown in separately. The new tanks hold 12,000 gallons of water which will secure water availability during extended dry periods. A new 3' deep fiberglass walk-in trough was also installed that allowed it to be a passive system where the level of water in the trough is the same level that is in the tanks. This system is low maintenance and has no moving parts that can fail and drain the tanks.



Roof being installed to help reduce evaporation

The project was paid for by Special Big Game Tag Funds (Bighorn Sheep) through the HPC Grant Program = \$ 26,300.00; BLM Cost Share Program = \$ 26,700.00; and the Arizona Game and Fish Department's crew costs and Development Branch funds amounting to \$24,000.00.

This entire experience made me stop and think of the incredible importance of volunteers. If these folks are like 99% of the population, I'm sure they have personal to-do lists a mile long, yet they choose to offer their time and resources to benefit the wildlife in our great state! I am a firm believer that we are put on this earth to serve others. By attending this project and meeting these volunteers I was privileged to witness this first hand. 📖



Powell's Monument - AFTER

Total cost of this project: \$77,000.00
 Total benefit for wildlife: Priceless

Project Funding Update – Ruth Gregory, Game Program Coordinator

The 2010 funding coordination meeting, between AGFD staff and our wildlife conservation organization funding partners was held on January 30, 2010. And here we are again, gearing up for the new cycle, which is right around the corner! Where does the time go? Project proposals continue to move toward the goal of landscape level planning and getting the most benefit for all the hard-earned dollars spent. The following projects were approved for funding at the January 30th meeting:

Grant Name	<i>Antelope Tag</i>	<i>Bighorn Sheep Tag</i>	<i>Black Bear Tag</i>	<i>Buffalo Tag</i>	<i>Elk Tag</i>	<i>Javelina Tag</i>	<i>Mountain Lion Tag</i>	<i>Mule Deer Tag</i>	<i>Turkey Tag</i>	<i>Whitetail Deer Tag</i>
<i>Sheep Mineral Supplement/Mgmt.</i>		\$2,091								
<i>Unit 1 Landscape Restoration Maintenance Burns</i>					\$40,000					
<i>Region 1 Bear Mgmt.</i>			\$8,143							
<i>W. Cottonwood Guzzler Redevelopment</i>					\$15,640			\$7,000		
<i>Fuel for High Pt. and Ellsworth Wells</i>					\$4,000			\$2,000		
<i>Carlisle Ranch Grassland Restoration</i>	\$22,400									
<i>High Point Water System Maintenance</i>	\$2,200				\$6,550			\$1,500		
<i>Leonard Pt/Buckhorn Dirt Tank Renovation</i>					\$15,000					
<i>Pat Springs Pipeline O&M</i>	\$1,500				\$1,300			\$700		

Grant Name	Antelope Tag	Bighorn Sheep Tag	Black Bear Tag	Buffalo Tag	Elk Tag	Javelina Tag	Mountain Lion Tag	Mule Deer Tag	Turkey Tag	Whitetail Deer Tag
<i>Ida Grassland Maintenance</i>					\$37,500			\$7,500		
<i>Mt. Dellenbaugh Catchment Redevelopment</i>								\$13,500		
<i>Fisher Pt. Catchment Redevelopment</i>		\$15,000								
<i>Unit 9 Catchment Developments Upper Basin</i>					\$45,000					
<i>Castaneda Wash Catchment Rehab</i>		\$52,740								
<i>Cane Springs Wildlife Habitat Improvement</i>								\$14,250		
<i>Orme Ranch Water Development – Phase 2</i>	\$1,000							\$2,900		
<i>Pinetop Mountain Catchment Redevelopment</i>								\$3,500		
<i>Bill Williams Catchment</i>		\$20,060								
<i>Vulture Mountains #4 Mule Deer Catchment Redevelopment</i>								\$17,705		
<i>544 Trough Replacement</i>								\$4,095		
<i>Crotch Tank</i>		\$20,000								
<i>Sonoran Desert National Monument – Digital Trail Cameras</i>		\$3,520						\$3,834		
<i>Units 20C, 42, 44A, 44B Predator Management</i>		\$27,800								
<i>Mountain Lion Management in SW Arizona</i>		\$14,428						\$9,619		
<i>Region 4 Digital Trail Cameras</i>		\$3,500								
<i>Hidden Valley Pothole</i>		\$15,000								
<i>Water Development 1000</i>		\$30,000								
<i>Chappo Betty Water Development, Rose Tree Ranch</i>	\$11,130					\$3,426		\$8,000		
<i>Sunnyside Canyon Water Development</i>										\$1,485
<i>75 Well and North 75 Pipeline, Phase 1</i>								\$10,000		
<i>Upper John’s Well</i>								\$15,000		\$5,000

Grant Name	Antelope Tag	Bighorn Sheep Tag	Black Bear Tag	Buffalo Tag	Elk Tag	Javelina Tag	Mountain Lion Tag	Mule Deer Tag	Turkey Tag	Whitetail Deer Tag
Unit 3C Turkey Project									\$4,000	
Cunningham Catchment Redevelopment		\$42,870								
Buck Springs Allotment – Habitat Improvement					\$10,000					
Sunami (S. Utah-N. Arizona Mule Deer Initiative)								\$100,000		
Buck Farms Development and South Canyon Water Line				\$148,000						
Castaneda Peak Catchment Rehab		\$32,740								
Mohave Mountain #1 Catchment Rehab		\$42,455								
Boquillas Ranch – Tank Car Pipeline					\$29,230					
Reseal High Tank #3		\$19,650								
McDonald Ranch Access/Tank Repair								\$15,000		
Black Mesa Catchment Redevelopment		\$17,697						\$8,848		\$8,848
Elk Movements – I 40, Williams to Winona					\$82,000					
Total funding by Tag	\$69,409	\$442,551	\$8,143	\$148,000	\$330,720	\$3,426	\$15,400	\$488,951	\$17,962	\$68,727

GRAND TOTAL

\$1,592,789
Thank you, partners in conservation!

The deadline for submitting project proposals for the next cycle is September 1, 2010.

Got questions on an HPC project???

Contact:

Ron Thompson, HPC Coordinator at 623-236-7354 or by email at rothompson@azgfd.gov
 Ruth Gregory, Game Program Coordinator at 623-236-7349 or by email at rgregory@azgfd.gov





Commissioner Bob Hernbrode presents Bill Masters (Rocky Mountain Elk Foundation) and Steve Clark (Arizona Elk Society) with a Certificate of Appreciation for their continued contribution to the conservation and management of Arizona's elk resource through the Habitat Partnership Committee program supported by the Special Big Game Tag Fund

Arizona Game and Fish Wildlife Manager Ben Brochu accepts a Certificate of Appreciation on behalf of the Tucson Local Habitat Partnership Committee for their efforts in planning, coordinating and approval of quality HPC projects during the 2009-2010 funding cycle for the benefit of Arizona's big game resources using the Special Big Game Tag Fund



Meet your local HPC Chairpersons as of June 2010

HPC	Chairperson	Email	AGFD Contact	Email or phone
Forage Resource Study Group	Stephen Williams	swilliams@land.az.gov	Larry Phoenix	lphoenix@azgfd.gov
Fredonia HPC	The Fredonia HPC is no longer active.			
Kingman HPC	The Kingman HPC is no longer active.			
Payson Natural Resources Committee	Vacant		Natalie Robb	nrobb@azgfd.gov
Prescott HPC	Randy Lamb	Ranmad53@aol.com	Tom Finley	tfinley@azgfd.gov
Show Low HPC	Vacant		Bob Birkeland	bbirkeland@azgfd.gov
Safford HPC	Chuck Brooks	mjbrooks@aznex.net	Duane Aubuchon	daubuchon@azgfd.gov
Sierra Vista/Douglas HPC	John Millican	j2dbmill@msn.com	Brad Fulk	bfulk@azgfd.gov
Southwest Arizona HPC	Jean Wilson	jeanrenegade@q.com	Mike Sumner	msumner@azgfd.gov
Springerville/Alpine HPC	Rex Brown	brownrm@frontier.net	Michael Godwin	mikegodwin@frontier.net
Tucson HPC	Brian Dolan	bfd@dakotacom.net	Ben Brochu	bbrochu@azgfd.gov
Williams Flagstaff HPC	Tom Mackin	tmmackin@q.com	Larry Phoenix	lphoenix@azgfd.gov
Winslow HPC	Vacant		Bob Birkeland	bbirkeland@azgfd.gov

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We're on the Web!

See us at:
www.azgfd.gov

Meetings & Announcements

- Statewide HPC Meeting: Friday, July 30, 2010, Arizona Game and Fish Department – Pinetop Regional Office
- Project proposal deadline - September 1, 2010

A word from the editor –

Connie Weise, Game Program Administrative Assistant

It's hard to believe we are already on our fifth issue of the newsletter! I took a moment to peruse through our past issues. It reminded me of the great things that you all do for wildlife. It's always great to stop and celebrate your successful projects and share your stories with others!

If you have an idea for an article, success story, announcement, project status update, or any HPC related news, please submit them to either rothompson@azgfd.gov or myself at cweise@azgfd.gov. Microsoft Word documents are preferred (please try to keep articles to between 500-700 words). Pictures of your projects and volunteers are always welcome!

ARIZONA GAME AND FISH DEPARTMENT

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COMPANY NAME
STREET ADDRESS
CITY, STATE ZIP CODE