Catalina Bighorn Sheep Reintroduction Project
September 15 - 28, 2014

BRIEFING

The following is a summary of Catalina Bighorn Sheep Reintroduction activities on the Coronado National Forest. This project status update covers the period from September 15- 28, 2014. For project background and previously-reported information on project events, including photos and videos, please visit www.azgfd.gov/catalinabighorn.

Additional project information can be obtained by visiting the Arizona Game and Fish Department Facebook page at https://www.facebook.com/azgafd#!/CatalinaBighorns, the Arizona Game and Fish Department webpage at http://www.azgfd.gov/catalinabighorn, the Arizona Desert Bighorn Sheep Society webpage at http;//www.adbss.org or by visiting the Catalina Bighorn Advisory Committee webpage at http://www.catalinabighornrestoration.org/. This update is a public document and information in it can be used for any purpose.

TO SUBSCRIBE

If you would like to receive project updates as they are published please send your email address to jsacco@azgfd.gov.

CURRENT POPULATION STATUS

Including this reporting period, it has been over six months without a sheep mortality. The original release of 31 sheep consisted of 21 adult ewes (females), three yearling/juvenile ewes, five adult rams (males), and two yearling/juvenile rams. Thirty of the released sheep were outfitted with satellite GPS collars to provide biologists with up-to-date information to help make adaptive, data-driven decisions. As of September 28, 2014, 13 of the remaining 14 collared sheep are known to be alive; one of the collars may be malfunctioning.

COMMUNICATION AND COORDINATION

The next written briefing will be provided on October 17, 2014.

CONTACT

Mark Hart is the Public Information Officer for this project and can be reached at (520) 628-5376.

RESEARCH PROJECT FIELD NOTES

About a month ago, we sent out an invitation in regards to some of the vegetation sampling we'll be doing in the Catalinas. This effort will include some fairly simple measurements we'll make on the ground at sheep locations that the GPS collars provide us so that we can estimate just how much a sheep's view might be obstructed by boulders, topography, vegetation, etc. This is an important measure among many that we will be analyzing as we examine habitat use in great detail. The challenging part of this research effort won't be taking the measurements, but rather getting to a large number of the remote sheep locations in the Catalinas to take our measurements. A few brave souls have already volunteered to help (our many thanks to you who have!), and we're still looking for more who like to hike and want to be part of this effort. So if you'd like to get involved
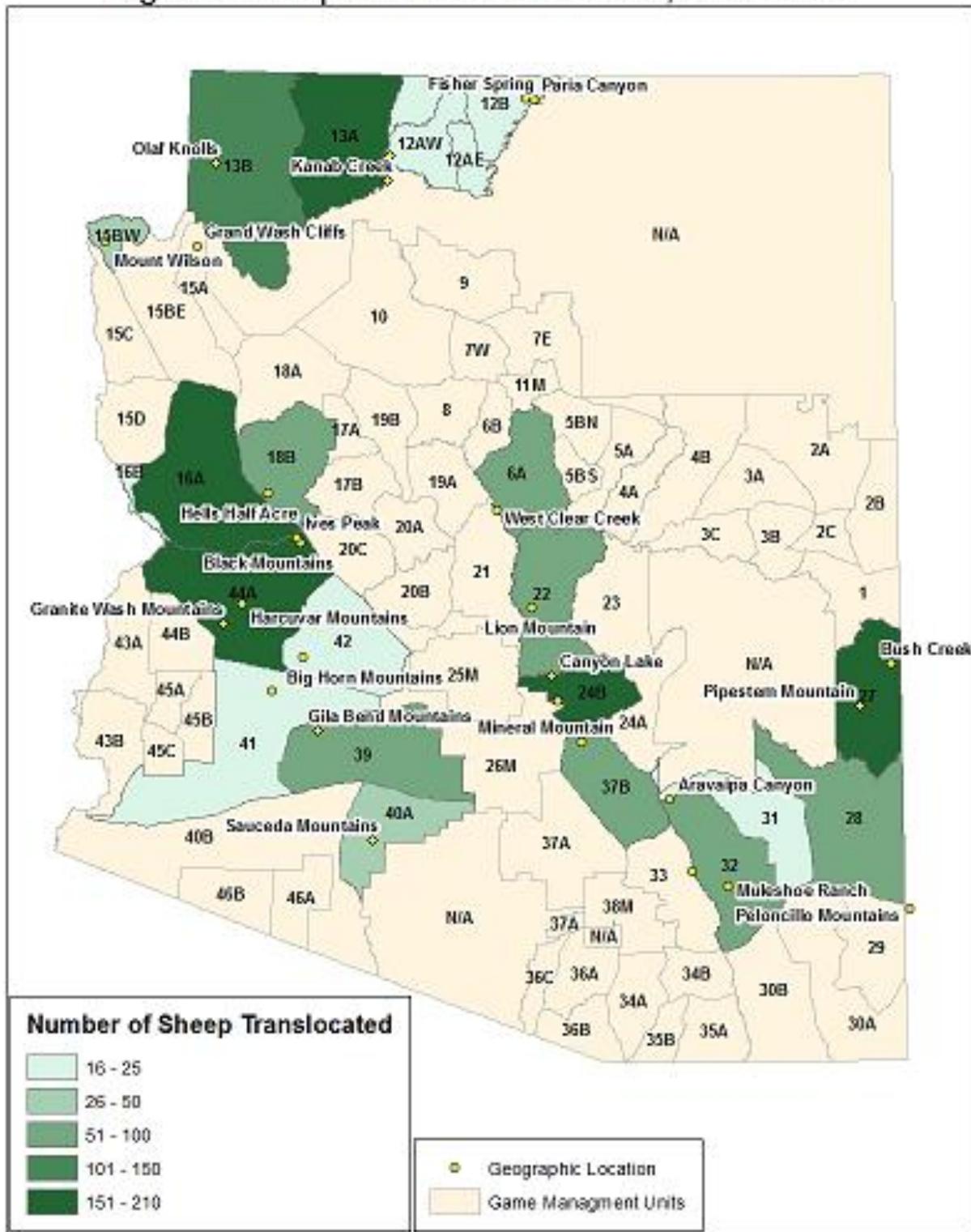
(and enjoy some pretty spectacular hiking along the way), please contact either Research Biologist Andrew Jones (ajones@azgfd.gov) or Larisa Harding (lharding@azgfd.gov) and let us know as we begin to organize this effort. Sampling will most likely occur from early January through the end of February 2015. Come join in the fun and contribute to the research efforts!

OTHER REMARKS

This project is unique in several ways, with the most notable being the use of GPS collars on all but one of the sheep that were captured and released. In addition, the Catalina bighorn sheep reintroduction project is capitalizing on significant technological advances in GPS collars that have increased our ability to gather data and actively monitor individuals. For example, the collars detect potential mortalities by monitoring animal activity, and we receive a text alert when the collar determines that an animal may have stopped moving. This facilitates timely investigations that allow us to confirm mortalities and determine the cause of death. Although GPS collars have been in used in wildlife research since the late 1990s, the collar technology to send data and alert us to potential mortalities has only been developed in recent years. Prior to these technological advances, mortalities were often detected well after the fact and evidence for determining the cause of death may have been lost. We now have improved abilities to monitor causes of mortalities and habitat use patterns, thereby better allowing us to track success of this translocation project.

In general, most translocation efforts experience some loss of animals from predation, stress, disease, or other limiting factors. The Catalina project is no exception to this pattern, yet despite losing multiple bighorn sheep, there is hope. Though many have expressed concern that the losses sustained during the first few months after the Catalina sheep release signaled that it was a failure, history tells us that it is too soon to tell. Historically in Arizona, most translocation efforts demonstrated that bighorn sheep were able to establish a sustainable population after initially suffering an elevated mortality rate. Table 1 illustrates that many successfully established sheep populations across Arizona began with translocation efforts that suffered losses and/or required several translocations and the addition of multiple sheep before they founded resident herds. As Table 1 shows, translocation efforts have dramatically increased bighorn sheep populations throughout the state, and these efforts have not only repatriated populations but also kept bighorn sheep from being listed as a threatened and endangered species in in Arizona.

Map. 1. Number of bighorn sheep translocated in Arizona by game management unit.

Map 2. Years after initial release until bighorn sheep populations were re-established in Arizona.

Table 1. Bighorn sheep (BHS) translocation efforts in Arizona showing repatriation areas, translocation years, number of sheep moved, and time elapsed until each population was considered established.

Unit	Areas or Mountain Ranges	Release Years	Number of BHS Released	Total Number of BHS Released	Time Elapsed Until Considered Established
6A	West Clear Creek	2005	15	75	5 years
		2005	15		
		2006	31		
		2007	14		
12A	Jumpup Point	1999	22	22	Augmentation only
13A	Bush Head Spr, Paria Canyon, Fisher Spr, Hack Cyn, Kanab Creek	1984	37	162	Augmentation into vacant pockets
		1985	15		
		1985	24		
		1987	19		
		1995	20		
		1995	21		
		2005	26		
13B	Virgin Mtn Enclosure, Squaw Cyn, Grand Wash Cliffs, Olaf Knolls, Snap Cyn	1979	12	139	Augmentation into vacant pockets
		1981	20		
		1981	21		
		1982	2		
		1983	12		
		1984	5		
		1984	1		
		1986	22		
		1995	22		
		1999	22		
15BW	Mount Wilson	2012	35	35	Augmentation
16A	Bill Williams, Aubrey Pk, Crossman Pk, Mojave Mtns, Rawhide Mtns, Skull Mtn, Artillery Mtns, Peoples Cyn.	1986	22	209	8 years
		1988	13		
		1989	15		
		1989	14		
		1989	13		
		1991	20		
		1993	17		
		1993	13		
		1995	14		
		1995	18		
		2011	20		
		2013	30		
16B	Needles Peak	1988	21	21	7 years
18B	Hells Half Acre	2006	28	55	7 years
		2007	27		
22	Indian Springs, Goat Mtn, Painted Cliffs, Lion Mtn	1980	19	51	6 years
		1981	12		
		1985	20		
24B	Superstitions - Horse Mesa, Bronco Butte, Millsite Cyn, Tortilla Mtn, Canyon Lake	1983	31	157	19 years
		1984	30		
		1987	30		
		1989	30		
		1992	24		
		1995	12		
27	Bush Creek/Blue River, Pipestem Mtn	1979	8	153	10 years
		1980	12		
		1994	21		
		1995	27		
		2002	26		
		2003	16		
		2003	11		
		2005	32		
28	Peloncillos in AZ and NM (1980-1982 were in NM)	1980	12	73	14 years
		1982	4		
		1982	11		
		1986	31		
		1990	15		
31	Aravaipa Canyon	1958	1	17	18 years
		1959	3		
		1960	4		
		1966	1		
		1967	1		
		1968	1		
		1971	3		
		1972	3		
32	Redfield Canyon, Muleshoe Ranch	1980	12	80	4 years
		1981	9		
		1981	21		
		1982	2		
		1984	2		
		1984	5		
		1988	29		
37B	Minerals	2003	30	100	10 years
		2007	10		
		2010	30		
		2012	30		
39	Gila Bend Mtns	1987	12	54	7 years
		1988	11		
		1989	15		
		1990	9		
		2009	5		
		2010	2		
40A	Saucedas	1993	46	46	Augmentation
41	Eagletails	1984	8	16	Augmentation in part, 3 years
		1984	8		
42	Bighorn Mtns	2007	13	23	6 years
		2010	10		
44A	Black Mtns, Ives Peak, Buckskin Mtns, Granite Wash Mtns, Harcuvar Mtns, West & East Harcuvar, Harquahala Mtns, Big Horn Mtns.	1985	21	207	7 years
		1986	8		
		1986	14		
		1994	30		
		1995	26		
		1998	20		
		1998	10		
		2000	25		
		2001	25		
		2005	28		