2015 Spring Desert Bighorn Helicopter Surveys

Synopsis: A 1-day survey of the Peloncillo Mountains and a 1-day survey in the Little Hatchets were flown May 19 and May 21, 2015 respectively.

Peloncillo Mountains

We flew a 1 day survey in the Peloncillo Mountains. The pilot was G. Ezell and observers were E. Rominger and C. Ruhl. Calm winds allowed us to fly a complete survey to Burro Canyon, with a high-grade between I-10 and Granite Peak where no ewes have been reported for more than a decade.

We saw a total of 79 bighorn in 14 groups in 3 hours and 54 minutes of observation time (time of high-grade portion was not included). Only 8 of a potential 19 radiocollared bighorn were observed. This would result in a population estimate substantially higher than our projection. Hunting guides, scouting for the auction hunter classified 27 rams of which 7 CIII rams would be additional bighorn. Therefore the minimum population estimate was 86 (Table 1).

A yearling ewe was observed on the east-side of Granite Peak. This is the first ewe documented north of Granite Gap in more than a decade. The guides also saw a small group of ewes in the Granite Peak area. The 42 ewes and yearling females is the greatest number of females seen during a helicopter survey. Only 7 radiocollared ewes of a potential 15 were observed. If all missed collars were alive the number of ewes should be ~50 for the first time.

Only 1 radiocollared ram died since the spring 2014 helicopter survey. However, a lion has been documented to have killed at least 2 lambs and a lion was culled the day after the helicopter survey. The lamb:ewe ratio for the entire survey was just 29:100. However in the area of the known lion presence the ratio declined to 23:100.

We observed 57 mule deer (12.1/hr), 12 white-tailed deer, and 33 javelina (7.0/hr). As in 2014, no radiocollared deer were observed.

Table 1. Bighorn sheep observed or accounted for in the Peloncillo Mountains, 2009-2015.

Year	Total	Ewes	Y. Ewe	Lambs	L:E	CI	CII	CIII	CIV
2009	44	20	2	10	50:100	2	2	7	1
2010	49	17	3	10	59:100	3	3	5	8
2011	54	20	4	12	60:100		1	11	7
2012	56	26	2	18	69:100	1	1	3	5
2013	62	34	5	7	21:100	5	1	8	2
2014	46	24	2	10	42:100	5	1	2	2
2015	79 (86)	36	6	12	29:100	12	4	2 (+7)*	7

*9 CIII rams seen by guide T. Hatch

Little Hatchet Mountains

We observed 68 bighorn in 14 groups during the helicopter survey. Because we were using a Bell Long Ranger we had a third observer (J. Pitman) on board. This certainly had an effect on the number of deer observed and potentially bighorn sheep as well. This survey was completed in 1h 56m for an observation rate of 35.8 bighorn/hr. This was the greatest number of bighorn

ever observed in the Little Hatchets. The observed lamb:ewe ratio was just 31:100, with 10 lambs. Eleven radiocollared bighorn were observed. Currently there are just 7 functional radiocollars on bighorn sheep released into the Little Hatchets. Because we did not fly with telemetry it is unknown if some of these collars were from bighorn sheep released in the Big Hatchet Mountains or if they were non-functional collars on bighorn released into the Little Hatchets. The metric that is most puzzling is the 10 yearling rams observed in a herd where just 5 lambs were counted in the autumn 2014 census.

Five rams were harvested in the Little Hatchets during the 2014 hunt and 9 rams have been harvested during the last 2 hunts. This is reflected in the age class of rams observed (Table 2) and is a concern as hunters do not currently harvest as many rams in the Big Hatchet Mountains. The preference would be that the harvest would occur equally between the 2 ranges or increase in the Big Hatchet Mountain following the release of 38 rams in November 2014.

We observed 48 deer for an observation rate of 25.3/hr. We observed 40 javelina in 4 groups for an observation rate of 21/hr. Both the totals and the rates are the highest ever recorded for the Little Hatchet Mountains. A tom lion was observed stalking bighorn sheep in the foothills south and west of Granite Pass. This lion was culled the day after the helicopter survey using hounds.

Table 2. Bighorn sheep observed or accounted for in the Little Hatchet Mountains 2008-2015.

Year	Total	Ewes	Y. Ewe	Lambs	CI	CII	CIII	CIV
2008s*	58	19	2	12	6	4	4	9+ (2)*
2009s	43	16	3	9	1	3	5	6
2010a*	45	17		6	4	4	9	5
2012a	41	18 +4		4	1	5	8	5
2013a	66	27		13	7	7	5	7
2014a	57	27	1	5	9	10	3	1
2015s	68	27	5	10	10	3	12	1

a) Autumn*
s) Spring*

Table 7. Spring population estimates for desert bighorn sheep populations in New Mexico, 2015. Minimum number of lambs in parentheses. No data from herds without lamb:ewe ratios.

Herd	L:E (lambs/100 ewes)	Population Estimate
Fra Cristobals	39:100 (31)	200-220
Caballos		115-125
Peloncillo	29:100 (12)	90-110
Little Hatchets	31:100 (10)	75-85
Big Hatchets		135-145
Sierra Ladron		75-85
San Andres		115-135
Totals		805-905 Midpoint=855