

2017 Spring Desert Bighorn Helicopter Surveys

Synopsis: Surveys of all 3 subpopulations of the Bootheel metapopulation were flown. The number of observed bighorn in the metapopulation was 263 versus 308 in 2016. Most of the decline was in the Little Hatchet population that declined from 89 in 2016 to 39 (adults) in 2017. It is unknown whether a large number of sheep were missed, emigrated, or died. There were 6 confirmed mortalities of radiocollared bighorn since the 2016 survey. There were an estimated 45 radiocollars during this time period (~13% mortality). During the autumn 2017 surveys a day will be dedicated to look at the habitat in the Cowboy Rim and Alamo Hueco Mountains.

Little Hatchet Mountains

We observed 52 bighorn (39 adults) in 9 groups during the helicopter survey. This is a substantial decline from the 89 seen in 2016. We flew the standard survey in 2.3 hours but then flew another 20 minutes to search Howell Ridge and the Playas Peak area.

This survey was completed in 2.3hr for an observation rate of 22.9 bighorn/hour compared to 40.4 bighorn/hr in 2016. The observed lamb:ewe ratio was 43:100, with 13 lambs. There were 10 yearlings detected and 23 lambs observed in 2016.

Table 2. Bighorn sheep observed or accounted for in the Little Hatchet Mountains 2008-2017.

Year	Total	Ewes	Y. Ewe	Lambs	CI	CII	CIII	CIV	Total Rams
2008s	58	19	2	12	6	4	4	9+ (2)	25
2009s	43	16	3	9	1	3	5	6	15
2010a	45	17		6	4	4	9	5	22
2012a	41	18 +4		4	1	5	8	5	19
2013a	66	27		13	7	7	5	7	26
2014a	57	27	1	5	9	10	3	1	23
2015s	68	27	5	10	10	3	12	1	26
2016s	89	42	2	23	4	5	6	7	22
2017s	52	24	6	13	4	2	1	2	9

a) Autumn

s) Spring

Big Hatchet Mountains

The Big Hatchets were again flown over 2 days because we were blown out after 1hr 5m on the first day. An additional 4hr 50m was flown the second day for a total of 5.9 hours.

A total of 112 bighorn was observed in 24 groups for an average group size of 4.7. The largest group size was 16 compared to 34 last year. The final group was 2 ewes and 2 lambs observed

in the Sierra Ricas, north of the Big Hatchet's and there was a lion-kill mortality there approximately 1 year ago. The lamb:ewe ratio was just 32:100.

Table 3. Big Hatchet desert bighorn sheep surveys 2010-2017.

Year	Total	Ewes	Y. Ewes	Lambs	CI	CII	CIII	CIV	Total Rams
Jun10	57	22		11	2	4	7	12	25
May11	47	12	4	9	6	1	9	6	22
Oct12	71	27		13	4	8	6	13	31
Oct13	51	21	2	1	9	5	6	7	27
Oct14	47	18	1	6	3	9	4	6	22
Nov14	113	46	1	6					58
Oct15	99*	47	3	15	2	7	6	19	34
Apr16	116	47	10	21	7	9	10	12	38
May17	112	45	6	17	4	16	9	15	44

*99 observed+20 missed collars—some may have been Little Hatchets

Peloncillo Mountains

We flew a 1 day survey in the Peloncillo Mountains. We searched the area north of I-10, then flew a sightability survey from I-10 to an area just south of Granite Gap. The pilot was E. Watter and observers were E. Rominger and N. Quintana. Calm winds allowed us to fly a complete survey to Highway 9, with a high-grade to about Burro Canyon.

We saw a total of 99 bighorn in 19 groups in 5 hours and 57 minutes of observation time (time of high-grade portion was not included). There was just a single radiocollared ram killed in the last year. The lamb:ewe ratio for the entire survey was 45:100.

Table 3. Bighorn sheep observed or accounted for in the Peloncillo Mountains, 2009-2017.

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
2016	103	51	1	38	73:100	3	6	1	3
2017	99	42	5	21	45:100	4	5	11	9

*9 CIII rams seen by guide T. Hatch

Table 4. Spring population estimates for desert bighorn sheep populations in New Mexico, 2017. Minimum number of lambs in parentheses.

Herd	L:E (lambs/100 ewes)	Population Estimate
Fra Cristobals	28:100 (40)	300-350
Caballos		140-155*

Peloncillo	45:100 (21)	130-150
Little Hatchets	43:100 (13)	60-80?
Big Hatchets	32:100 (17)	135-155
Sierra Ladron		90-105*
San Andres		220-260*
Totals		1075-1255 Midpoint=1165

*did not survey—added 10% to fall estimates