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Field Trip Report
Bat Survey and Inventory - Shoshone Ponds

Submitted by: Peter V. Bradley, Nevada Division of Wildlife, Elko Field Office, Region II, September 2, 1997. *Peter V. Bradley*

LOCATION: N 4312963 E 723768 - T12N R67E sec2 - Area 11, Unit 115 - Shoshone Ponds - Spring Valley - White Pine Co.

DATE: August 20-21, 1997.

PURPOSE: Determine species composition and abundance of bat fauna.

FIELD PARTY: Cristi Baldino, Rebecca Mills (NPS), Jedediah Bradley, Pete Bradley (NDOW).

NARRATIVE:

The Shoshone Ponds are a series of artesian wells located in a Rocky Mountain Juniper woodland (JUSC)/ mountain brush (CHVI, ARTR) ecotone at 1765 m elevation. Some ponds are protected from livestock grazing by fenced exclosures. Some are not. Protected ponds are surrounded by a fence stand of sedge/rush/grass species. Unprotected ponds support little or no riparian vegetation.

Three spring ponds were surveyed for bat activity in the Shoshone Ponds area of Spring Valley on the night/morning of August 20/21, 1997. Temperatures ranged from 7°C to 5°C during the survey period. Winds were 0-5 mph and the sky was clear. Six mist nets were set at 2000 hr and removed at 0530 hr. Thirty-five individuals of 4 bat species were caught in the fenced exclosures (Table 1). None were caught on the spring head outside of the exclosure.

Fifty percent of the female catch of three species had attempted to produce young this year. No lactating female hoary bats were caught. Ninety percent of the male catch of three species was reproductively active. In addition, 14% of the catch was made up of juvenile animals (4 long-legged Myotis and 1 small-footed Myotis). Bats were caught at a fairly regular rate the entire night from 2053 to 0430.

Additional Notes

The capture of 3 hoary bats in one night's trap effort is unique in

northeastern Nevada. This tree-roosting species made up only 0.5% (3 total) of the entire catch in this 4-county region in a 14 year effort (1980-1994) (Ports and Bradley 1996). This is also one of the first attempts to inventory bats in the Rocky Mountain Juniper habitat type in this Region. This habitat type may be a good place to start in our attempt to define the life history and resource needs of this species.

Table 1. Results of Shoshone Ponds bat survey, 8/20-21/97.

<u>Species</u>	<u>Male</u>	<u>Female</u>	<u>Unclass.</u>	<u>Total</u>
<i>Myotis ciliolabrum</i> Small-footed Myotis	1*	2*	0	3
<i>Myotis evotis</i> Long-eared Myotis	0	1*	0	1
<i>Myotis volans</i> Long-legged Myotis	17**	8***	3	28
<i>Lasiurus cinereus</i> Hoary Bat	2****	1	0	3
TOTAL	20	12	3	35

* 1 reproductively active.

** 14 reproductively active.

*** 4 reproductively active.

**** 2 reproductively active.

Wildlife Species List: Ferruginous Hawk (1), Red-tailed Hawk (2), American Kestrel(0), Turkey Vulture (1), Common Raven (4), Common Nighthawk (10), Vesper Sparrow (3), Lark Sparrow (2), Mule Deer (sign), Long-legged Myotis (28), Long-eared Myotis (1), Small-footed Myotis (3), Hoary Bat (3).

Literature Cited

Ports, M.A. and P.V. Bradley. 1996. Habitat affinities of bats from northeastern Nevada. Great Basin Natur. 56(1):48-53.

FIELD TRIP REPORT

LOCATION: Shoshone Ponds; Spring Valley; Unit 115; White Pine Co.; Nevada

DATE: 21 May 2003

PURPOSE: Bat survey

PARTICIPANTS: Jason Williams (NDOW)

NARRATIVE:

The largest pond at Shoshone Ponds was surveyed for bat use. Two 18m mist nets were set up over the water surface, approximately one meter from the shore line. One net was placed on the south edge, while the other net was placed on the east edge of the pond. Nets were opened before official sunset (1951 hrs) and closed at 2245 hours. Temperature was not recorded. Winds were too high for a good night of bat captures, as the high winds certainly affected netting success. Nine bats were caught, consisting of:

Lasionycteris noctivagans (1M)

Myotis ciliolabrum (3M)

Myotis volans (4F)

Myotis sp. (1) - escaped before identification

An Anabat acoustic monitoring device was placed at the southwest end of the pond and surveyed passively from before sunset to after sunrise the following morning. Approximately 900 acoustic files were recorded and will be identified. As determined by the Anabat system, bat activity began at 2016 hours and ceased at 0434 hours. Acoustic voucher specimens were collected for three of the captured bats.

Acoustic file notes:

D5212309.23 – bag 3, 40kHz *Myotis*

D5212312.52 – bag 5, 40kHz *Myotis*, also 30kHz bats free flying

D5212314.45 – bag 4 is first part of file and is 40kHz, 30kHz bats free flying

SUBMITTED BY: Jason A. Williams, Wildlife Diversity Biologist, Nevada Division of Wildlife, Region II, 10 June 2003.

Report #2713-13

From e-mail dated 29 June 2006

Regarding the Spring Valley Water Rights hearings that you requested this data for, attached is 1 field trip report for bat surveys at Shoshone Pond in Spring Valley. The attached report (21 May 2003 field work) includes data from both capture and acoustic surveys. I will fax you a copy of the 20 August 1997 report, which contains data from capture surveys only.

To summarize, here is a list of species that are confirmed to utilize Shoshone Ponds:

Antrozous pallidus
Corynorhinus townsendii
Eptesicus fuscus
Lasionycteris noctivagans
Lasiurus cinereus
Myotis ciliolabrum
Myotis evotis
Myotis lucifugus
Myotis volans
Tadarida brasiliensis

Feel free to reference this with the state and federal protected and sensitive list. As you likely know, we elevated several species of small mammals (including bats) to State Protected last year. The current list can be found at <http://www.leg.state.nv.us/nac/NAC-503.html#NAC503Sec030>

<http://www.leg.state.nv.us/nac/NAC-503.html#NAC503Sec030>.

Please be aware that there are other wildlife resources in that geographic vicinity that may be appropriate to include in your analysis. Of great concern is the 100,000+ Brazilian free-tailed bats that roost in Rose Guano Cave in Spring Valley (just a few miles north of Shoshone ponds). This is by far the state's largest known population of naturally roosting *Tadarida brasiliensis*, and it is unknown how these 100,000+ bats will respond to changes in the insect and floral community that could occur with ground water pumping and springs drying up. This species and other species that utilize this roost are state protected species. Another species that utilize this roost and the surrounding landscape for roosting and foraging opportunities is *Corynorhinus townsendii*, a State Protected-Sensitive and Fed. Sensitive species. It is unknown how the multiple populations of *Corynorhinus townsendii* in that area might be affected by the biotic changes mentioned above.

If there's anything else I can help you with, please don't hesitate to ask. It's my understanding that it's not available in final draft yet, but I know SNWA has contracted with Mike O'Farrell and together they have been doing acoustic based bat surveys at several spring sources in the larger project area for two years now.

Handwritten text at the top of the page, possibly a date or reference number, which is mostly illegible.

I'll be in the office today and tomorrow, then out until 13 July. Please let me know if you get this email, as I am uncertain whether or not I wrote it down correctly from your voice mail.

Cheers,

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