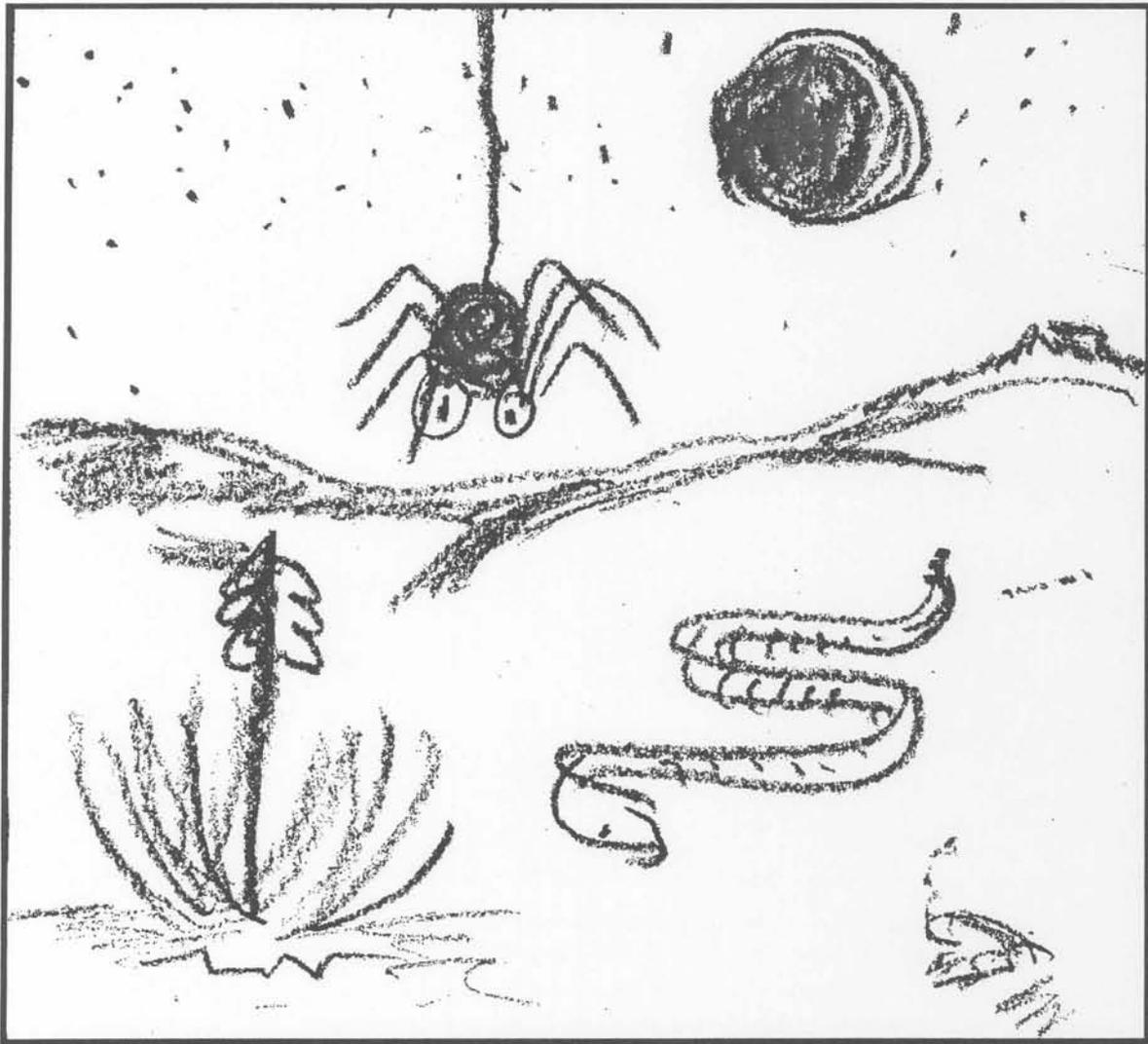


Selman Bat Cave WMA Annual Report 2001

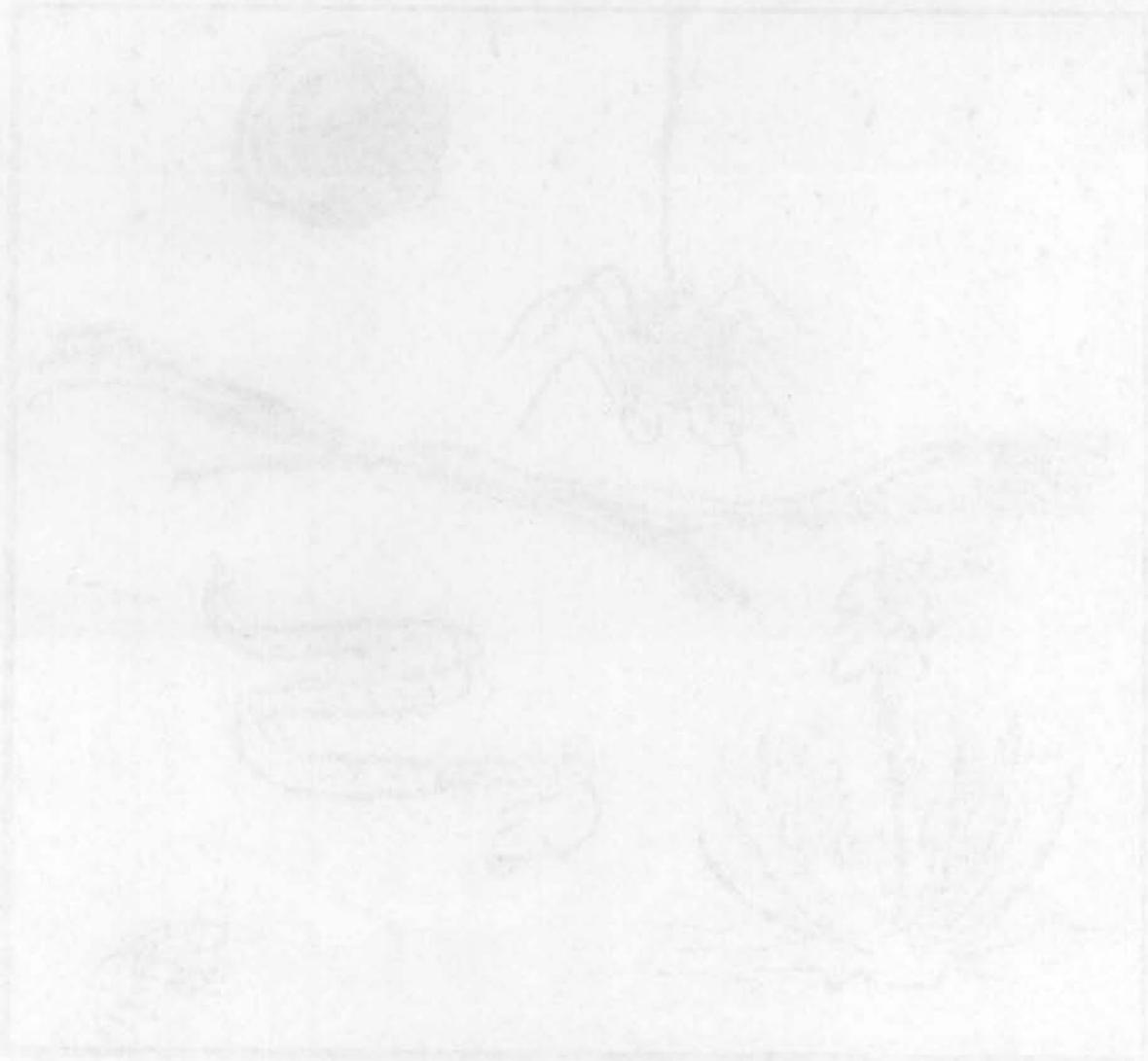


*Crayon drawing by participant
of a Nature At Night program.*

Prepared by
Melynda Hickman
Wildlife Diversity Program

Oklahoma Department of Wildlife Conservation

Belmont Bar Cave Wildlife
Annual Report
2001



Belmont Bar Cave Wildlife
Annual Report 2001

Wildlife Division
Natural Resources
Department

Oklahoma Department of Wildlife Conservation

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We wish to thank the following partners for their support to the success of the Selman Bat Watch Program:

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Betty Selman

Jay & Barbara Rankin

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Louise Beatty

Kim Foster

Amy Franklin

Mary Alice Martin

Vicki Martin

Jerry McLaughlin

Sue Mitchell

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Margaret Whipps

Duane DelVecchio

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ODWC I & E Section

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ODWC License Section

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Linda Ferguson

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ODWC Federal Aid

Andrea Crews

ODWC Wildlife Division:

Wade Free

Steve Conrady

Freedom Public School

The Freedom Call

Donna Hodgson, Editor

Dr. Bill Caire

Central Oklahoma Grotto



CONSTITUTIONAL

It is the duty of every citizen to support the Government of the United States.



Article I
Section 1
All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

Article II
Section 1
The executive Power shall be vested in a President of the United States of America.

Article III
Section 1
The judicial Power shall be vested in one Supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish.

Article IV
Section 1
The States shall have no Power to enter into any Treaty, Alliance, or Confederation; nor to engage in War, unless actually invaded, or in such imminent Danger as will not admit of delay.

Article V
Section 1
The Congress, whenever two thirds of both Houses present, shall propose Amendments to this Constitution, which, when ratified by the Legislatures of three fourths of the several States, or by Conventions in three fourths thereof, which States may be designated by the Congress, shall be valid, as part of this Constitution.

Article VI
Section 1
This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the contrary notwithstanding.

Article VII
Section 1
The Ratification of the States which shall first attain the Number of nine, shall be sufficient for the Establishment of this Constitution between the States so ratifying the same.

Article VIII
Section 1
The Congress shall have Power to make and enforce Laws, which shall be just and equitable; to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes; to borrow Money on the Credit of the United States; to fix the Standard of Weights and Measures; to coin Money, to regulate the Value thereof, and the Foreign Exchange thereon; to define and punish Offences against the Law of Nations; to define and punish Piracies and Felonies committed on the high Seas, and Offences against Commerce; to declare War, to grant Letters of Marque and Reprisal, and to make Rules concerning Captives on Land and on Water; to grant and regulate Letters of Respite, Stay of Execution, and Pardons, except in Cases of Impeachment; to grant Titles of Nobility; to establish post-offices and Post-Roads; to organize and regulate the Militia; to provide for calling forth the Militia to execute the Laws of the Union, to suppress Insurrections, and to repel Invasions; to provide for organizing, arming, and disciplining the Militia, and for governing such Part of them as may be employed in the Service of the United States; to exercise exclusive Legislation, as well as Power of Appointment and Removal, over all Districts which may be erected by the Congress; to exercise exclusive Legislation respecting the District of Columbia, which shall be as near as may be to the City of Washington, the Seat of Government, and to exercise all the Powers herein granted to the Congress within said District; to exercise exclusive Legislation over all Places purchased by the Consent of the Legislature of the State in which they may be; to exercise Power of Appointment and Removal over all Officers of the United States; to grant Reprieves and Pardons for Offences against the United States, except in Cases of Impeachment; to propose and ratify Amendments to this Constitution, on Condition that they be first approved by three fourths of both Houses of Congress, and then ratified by the Legislatures of three fourths of the several States, or by Conventions in three fourths thereof, which States may be designated by the Congress; to receive and send Ambassadors and other public Ministers; to receive and send Commissioners and Consuls; to grant Letters of Marque and Reprisal; to grant Letters of Respite, Stay of Execution, and Pardons, except in Cases of Impeachment; to grant Titles of Nobility; to establish post-offices and Post-Roads; to organize and regulate the Militia; to provide for calling forth the Militia to execute the Laws of the Union, to suppress Insurrections, and to repel Invasions; to provide for organizing, arming, and disciplining the Militia, and for governing such Part of them as may be employed in the Service of the United States; to exercise exclusive Legislation, as well as Power of Appointment and Removal, over all Districts which may be erected by the Congress; to exercise exclusive Legislation respecting the District of Columbia, which shall be as near as may be to the City of Washington, the Seat of Government, and to exercise all the Powers herein granted to the Congress within said District; to exercise exclusive Legislation over all Places purchased by the Consent of the Legislature of the State in which they may be; to exercise Power of Appointment and Removal over all Officers of the United States; to grant Reprieves and Pardons for Offences against the United States, except in Cases of Impeachment; to propose and ratify Amendments to this Constitution, on Condition that they be first approved by three fourths of both Houses of Congress, and then ratified by the Legislatures of three fourths of the several States, or by Conventions in three fourths thereof, which States may be designated by the Congress.

Article IX
Section 1
The Migration and Importation of Persons shall be subject to such Regulation as the Congress may think proper, until the Year 1808; but the Tax or Duty on such Importation, not exceeding Ten Dollars per Head, may be extended to the Year 1850.

Article X
Section 1
No State shall enter into any Treaty, Alliance, or Confederation; nor shall any State engage in War, unless actually invaded, or in such imminent Danger as will not admit of delay.

Article XI
Section 1
The Electors in each State shall have the Qualifications requisite for Electors in that State.

Article XII
Section 1
The Electors in each State shall choose Electors, in such Manner as the Legislature of each State may direct, who shall hold Office until the Meeting of the Congress to which they are appointed, and who shall have the Qualifications requisite for Electors in that State.

Article XIII
Section 1
No State shall be deprived of its equal Footing with the States.

Article XIV
Section 1
All persons born or naturalized in the United States, and who are subject to the Jurisdiction thereof, are citizens of the United States and of the State in which they reside.

Article XV
Section 1
The right of Citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of Race, Color, or previous Condition of Servitude.

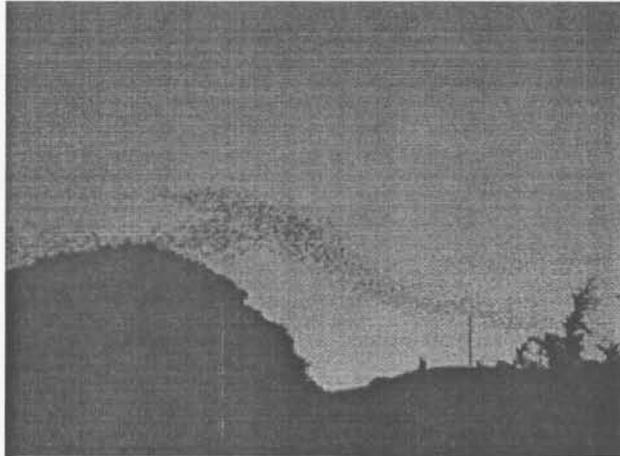
Article XVI
Section 1
The Congress shall have Power to lay and collect Taxes on Income, from whatever Source derived, and on Profits and Gains from every Trade, Commerce, or Profession, Vocation, Occupation, or Business, carried on by an individual, Partnership, Corporation, or other Entity, and on the Capital Gains from the Sale of Property, in order to pay the Debts and provide for the common Defense and general Welfare of the United States; but the Tax shall not exceed the Tax imposed in any previous Year, and shall not be so high as to lay a Burden on any Family exceeding their ability to pay the same.

Article XVII
Section 1
The Senate of the United States shall be composed of two Senators from each State, chosen by the Legislature thereof, for the Term of Six Years; but they shall have no Power to increase or decrease the Number of Senators.

Article XVIII
Section 1
The Congress shall have Power to lay and collect Taxes on the Sale of Intoxicating Liquors, in order to pay the Debts and provide for the common Defense and general Welfare of the United States; but the Tax shall not exceed the Tax imposed in any previous Year, and shall not be so high as to lay a Burden on any Family exceeding their ability to pay the same.

Article XIX
Section 1
The right of Citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of Sex.

Special Thanks to:



Venture Crew #393 for trail and bridge maintenance and for special duties performed during the special events.

Alabaster Caverns State Park for responding to numerous questions about Selman Bat Watches, providing storage, and for the use of the Park facilities during the bat watch evenings.

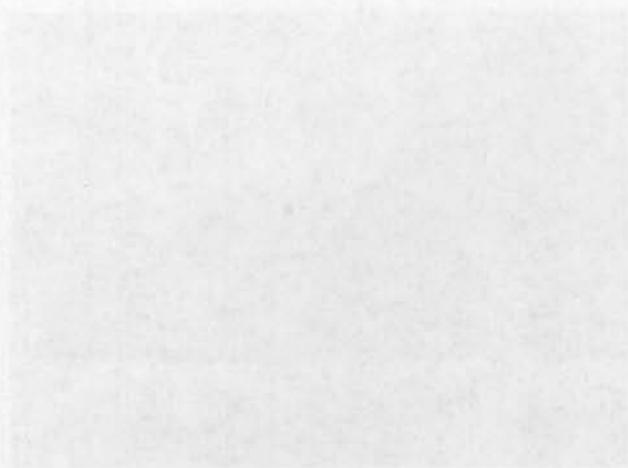
An additional thank you to Alabaster Caverns State Park for the loan of two trams for the Nature at Night Programs.

Arby's Restaurant in Woodward for donating ice and cups throughout the Selman Bat Watch season.

Betty Selman for always making me feel at home during the Bat Watch season.

Duane DeVecchio for promoting Selman Bat Watches through his website.

Karla Beatty of the Oklahoma Conservation Commission for creating the mom and pup free-tailed replicas we use in the bat watch program.



Special Thanks to

Venture Group 888 for all and under maintenance and for special
cases and maintenance and special events.

Alphabet 7 years, State Park for responding to numerous questions
about Delta, Gil, Wilton, and for the level of the
Park facilities during the wet water levels.

An additional thank you to Michael, Cavens State Park for the
collaboration for the future of Delta Wetlands.

And a special thank you to the staff for donating ice and bags throughout
the Delta Wetlands.

Delta Wetlands for always making me feel at home during the Delta
Wetlands.

Delta Wetlands for donating Delta Wetlands throughout the
Delta.

Delta Wetlands of the Delta Wetlands Commission for donating
to the Delta Wetlands and for the Delta Wetlands.



Why we do it...

The Oklahoma Department of Wildlife Conservation receives letters and emails from some visitors after returning home from their experience at a Selman Bat Watch. All correspondence is greatly appreciated by all those involved in the Program. Following is one such letter:

Andrew Allen
1314 E. Maine
Enid, OK 73701

Selman Bat Tour Organizers
c/o Alabaster Caverns St. Park
Route 1, Box 32
Freedom, OK 73842-9618

July 28, 2001

To whom it may concern,

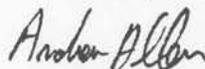
Our family took part in the Selman Bat Flight experience last night (7-27-01), and I wanted to write and let you know that we were delighted to be able to participate in this unique experience which was educational as well as thoroughly enjoyable. The professional staff and volunteers impressed us with both their knowledge and their willingness to address any and all questions, even those of my 8 and 10 year old children.

Being able to view such vast numbers of wild and somewhat exotic creatures is truly a remarkable opportunity, and one that my wife, myself, and our children will remember and cherish for some time to come.

Perhaps it is unnecessary, or even foolish, to send a letter of appreciation for something like our evening of bat watching, but it gives me pleasure as well as satisfaction to be able to thank and encourage all of the people who make such a thing possible. Opportunities to do simple, inexpensive, and worthwhile things as a family are all too uncommon, and I genuinely appreciate being able to take advantage of this venue for doing that.

Thank you for your attention.

Your's sincerely,



The following information was obtained from the records of the Department of Health and Human Services, Office of Inspector General, regarding the activities of the [redacted] in the [redacted] area.

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We are especially gratified when the local community of Freedom receives correspondence from visitors after spending time in their area. Following is an excerpt from *The Freedom Call*:

From *The Freedom Call*, July 26, 2001

Selman Bat Cave Tour (from a Tourist's Point of View!)

The following is an email I received from Steve Nesmith and his son, Reagan (age 7). They toured Alabaster Caverns and the Selman Bat Cave. I found Steve's story so interesting I thought some of you might enjoy it also. So here goes:

We left Tulsa and drove west nearly to the panhandle and arrived at Alabaster Caverns State Park on Saturday, July 21st. We toured the caverns and learned lots of interesting facts, including that black alabaster was found in this cave. This black alabaster is only found in three places worldwide and is on rotation at the Smithsonian in D.C. And, we saw it's source!

The purpose of our expedition was to tour the Selman Bat Cave, where over one million Mexican Free Tail bats depart a particular cave at dusk to go hunting, returning around 4:00 a.m. Our adventure, however, started at Alabaster Caverns about 6:30 p.m. with a fascinating presentation about the area, the caves, the bats and the flora and fauna. Buses from two local school districts took us from the State Park to the Selman Bat Cave area.

Every spring these bats follow a specific moth from Mexico to the middle of Texas. The males then go into bachelor groups of 100 or so, and the females continue north. Female maternity colonies such as the Selman colony, exist in 5 caves in Texas, Oklahoma, Kansas, and Colorado. Two of the five caves are in Oklahoma. The biggest colony is in the Texas cave where over twenty million bats hang out! The pregnant bats return to their birth cave every year.

Oklahoma's bat visitors come in late April and leave in September. While here, they give birth to and nurse their baby bat. These young bats start flying and hunting for themselves at about age 5 – 6 weeks.

Reagan and I and the rest of the group were deposited in a place about 7:00 p.m. It was 103 degrees in this prairie, but with the breeze and very low humidity, it wasn't so bad. While there we took a hike and this gave us a chance to see the prairie up close, to see some wildlife, learn about the tiny little thermoclines of the prairie, and smell some of the wild grasses.

Finally we arrived in a meadow at the mouth of a canyon. In the back of the canyon sits the bat cave. Shortly after our arrival the bats came out. Soon an entire uninterrupted stream of bats flew out of the canyon. The sun was behind the bluffs, but we could see the bats for about 45 minutes. We were told the bats take about 1 ½ hours to get out of the cave. Once aloft they can travel up to 60 miles to feed and return to the cave. The return begins about 4:00 a.m. and is finished before sunrise.

At one point the bats were within 8 to 10 feet of us. Our guides brought bat detectors which picked up the high frequency sounds the bats made and transformed these sonar sounds into an audible frequency. We knew then the bats were hunting for dinner!

The days activity was described by my 7 year old son, Reagan, as being "the best day of his life!"

...need we say more?

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INTRODUCTION

Selman Bat Cave Wildlife Management Area, owned and operated by the Oklahoma Department of Wildlife Conservation, was established in 1996 primarily to provide protection to a maternity colony of approximately 1 million Mexican Free-tailed bats (Appendix A). The cave is situated amongst gypsum bluffs surrounded by a landscape of mixed grass and sandsage prairie dissected by several spring-fed creeks and tributaries that converge to flow into the Cimarron River about 3 miles downstream. This 340-acre Wildlife Management Area (WMA) is located in the northeast corner of Woodward County in northwest Oklahoma.

Mexican Free-tailed bats are a migratory species. Pregnant female Mexican Free-tailed bats arrive at the Selman Cave in April and give birth in June. During the remainder of the summer the female bats nurse and care for their pups. Beginning in late September/early October, the adult and young bats migrate south to their wintering grounds in Mexico and Central America.

While the bats are in residence on the Selman Bat Cave WMA, they emerge nightly from the cave to forage for food. This nightly emergence is at its peak during July and August which provides an excellent opportunity for visitors to view this spectacular sight. With this in mind, the Wildlife Diversity Program developed the Selman Bat Watch Program with the goal to educate visitors about Mexican Free-tailed bats and the prairie community. Educating visitors is accomplished through interactive and passive exhibits, presentations, hand-outs, trailside kiosk and interpretive markers, children's activities and a guided nature walk. The strength of this program is centered in partnerships and the Selman Bat Cave Volunteer organization. Our primary partner, Alabaster Caverns State Park, provides location, maintenance and staff support, storage and much more. The Jim Selman Ranch provides storage, program support, and a strong link to surrounding communities. The Wildlife Division of the Oklahoma Department of Wildlife Conservation (ODWC) provides technical support in management and area maintenance. The Conservation Education Program of ODWC's Information and Education Division provides support and staffing for the Nature at Night events.

Educational outreach is accomplished primarily through the Selman Bat Cave volunteers. These dedicated, enthusiastic volunteers donate time to training as well as to the actual bat viewing event. Volunteers serve in a variety of ways including visitor check-in, setting up and taking down exhibits, answering visitor questions, making presentations on the buses and conducting the nature walks. One very special component of the volunteer organization is Venture Post #393, chartered by Alabaster Caverns State Park and the Northwest Chapter of the American Red Cross. These young men and women represent a branch of the Boy Scouts of America and are trained specifically in search and rescue. They provide a sense of security to the program. All of the volunteers represent the Oklahoma Department of Wildlife Conservation admirably and reflect positive attitudes about the agency's mission.

The Selman Bat Watch Program is always seeking ways to improve and enhance the visitor's viewing experience. At the conclusion of each season, the program is reviewed by the Wildlife Diversity staff, the partners, and the volunteer organization. Based on the experiences of each season, the program is revised and refined to enhance the bat watch experience for the next season. The following report summarizes the 2001 Selman Bat Watch season.

2001 SELMAN BAT WATCHES

Overview

The fifth season of Selman Bat Watches was held on weekends beginning 6 July 2001 and ending 4 August 2001. A total of 10 watches were conducted by an ODWC biologist and 21 volunteers. Beginning at 6:00 pm, visitors checked in at a designated pavilion at Alabaster Caverns State Park. At check-in, one member of each visitor group was given a boarding pass to present to a volunteer as the group boarded the bus. In the upper right hand corner of the pass was the name, "moth", "bat", or "owl". The name designated which of the three smaller groups the visitors would be in for the rest of the evening. Each group included a group leader and at least 3 volunteers. By dividing the visitors into three smaller groups we were able to provide a more quality experience. Visitors kept the boarding pass which included ODWC's logo, website address, and the Wildlife Diversity Program's phone number and e-mail address. While waiting for orientation, visitors were given the opportunity to watch a video about Selman Bat Cave, participate in the "Bat Aptitude Challenge", pick up hand-outs, view exhibits, and purchase sale products (Appendix B).

At 6:30 pm, visitors were led to an amphitheater where they received an introduction to Mexican Free-tailed bats and were oriented to the evening's activities. Visitors were also entertained and educated by a live, native prairie animal program interpreting the role the animals play in the prairie community. Buses from the Freedom and Waynoka schools were loaded and visitors were transported to Selman Bat Cave WMA. Once on site, visitors were given the opportunity to experience the mixed grass/sandsage prairie via a guided nature walk. Three viewing areas provide the best possible viewing of the bat emergence. Throughout the evening, volunteers continued to relate more information on the Mexican Free-tailed bat through children's activities, one-on-one conversations with visitors and small group discussions. When it became too dark to see the bats, visitors were reloaded onto the buses and transported back to Alabaster Caverns State Park. Children, as they disembarked from the bus, received a gold foil "I saw 1,000,000 bats at Selman Bat Cave" sticker. This was a new addition this season and based on the children's response, they really liked the stickers!

In addition to the regular Bat Watches, the Wildlife Diversity Program, with help from ODWC's Conservation Education Program, offered two "Nature At Night" experiences. These events included a bat watch and then continued until midnight. In order to provide a quality experience, attendance was limited to 20 adults. The activities included learning about animal adaptations to the night, animal tracking, night life in the creek, night scents, and a one-on-one experience with the night, to name just a few. Alabaster Caverns State Park provided the use of their trams to transport participants during the event. An astronomy program was provided by Steve Maier, a Physics Professor at Northwestern OSU, and Paul Barby. This program was very popular with the participants!

New at the Selman Bat Cave WMA this year was a trailhead arbor designed and built by Venture Crew #393. It not only marks the beginning of the trail for the guided nature walk but the message on the arbor:

"One touch of nature makes all the world kin..."

serves to bring the group a sense of togetherness.

Also new this year was the availability of "Get a Bat Attitude" post cards for sale. Four different designs are available and sell for 50¢ each. The post cards sold better than any other items we offer.

Selman Bat Watch 2001 can boast many high spots. Over 700 visitors from Oklahoma, Missouri, and Kansas attended the bat watches and, according to the evaluations, 99% ranked their experience as good or excellent! Staff from both the Tulsa Zoo and Oklahoma City Zoo each had a special night at Selman and were so impressed both Zoos expressed an interest in helping with wildlife conservation efforts next year. Seventy high school students attended a special bat watch through the efforts of local 4-H organizations. The young people were overwhelmed with the bat emergence and later raised funds to contribute to the Program. To many of us, however, the highlight of the bat watch season was the Four State Workshop the Oklahoma Wildlife Department hosted along with the Oklahoma Conservation Commission and Forestry Services of the Oklahoma Department of Agriculture. This workshop was attended by 40 educators from Arkansas, Missouri, Kansas, and Oklahoma. During the workshop, participants learned about the prairie ecosystem and how the Mexican Free-tailed bats were an integral part of the system and they took back to their respective states teaching ideas for their students. Many of these educators expressed to us that this was the most memorable experience they had ever had!

Attendance

A total of **704 visitors** watched the bat emergence from Selman Bat Cave. This total includes Nature At Night (39), 4-H students (70), OKC Zoo staff (20), and the 4-State Educators' Workshop (44). Table 1 provides information on the 2001 attendance.

There was a total of 64 visitor no-shows compared to last year's total of 49. On average, there were 6.4 no-shows per watch night.

A comparison of attendance data between 1998 through 2001 can be found in Table 2. A comparison between the years does reflect some differences. It should be noted that the 1998 and 1999 bat watches included 15 nights each whereas the 2000 and 2001 bat watches offered 10 nights each. Attendance at the 2001 bat watch was down from the previous years.

Table 1. Selman Bat Cave Bat Watches, 2001. Overview of attendance. Does not include Nature at Night (39 Adults) or other attendees from special events (134). (A= Adults; C= Children)

Date	Total # A registered	Total # C registered	Total # registered	Total # no-shows	Total # register at check-in	Total # Attending
Fri., July 6	24	14	38	6	0	32
Sat., July 7	44	9	53	2	14	65
Fri., July 13	16	8	24	0	1	25
Sat., July 14	54	8	62	0	0	62
Fri, July 20	52	23	75	7	3	71
Sat, July 21	59	15	74	12	0	62
Fri, July 27	64	8	72	10	2	64
Sat, July 28	55	15	70	7	3	66
Fri., Aug 3	21	5	26	5	3	24
Sat., Aug 4	54	18	72	15	3	60
TOTAL	443	123	566	64	29	531

Table 2. Comparison of Attendance Data (Includes Nature at Night)

Criteria	1998	1999	2000	2001
Attendance	799	772	714	570
Total # of no-shows (% of total pre-registered)	125 (13%)	147 (16%)	49 (6.8%)	64 (11.3%)
Average no-shows/bat watch season	8.9	10.5	4.9	6.4

Visitor's Bat Aptitude

During check-in, visitors have the opportunity to take the "Bat Aptitude Challenge". Eight statements were posted on a free-standing sign-holder. Visitors were asked to put a check in the "true", "false" or "haven't a clue" column next to each statement. Our purpose was twofold: 1) while listening for the right answers, our visitors would be more receptive to all the information provided and 2) it would provide us with an idea of how much prior knowledge our visitors already possessed concerning Mexican Free-tailed bats. Table 3 summarizes the results from the 10 bat watches.

Table 3. Bat Aptitude Challenge (Shaded cells are the correct answer)

Statement	# Visitors marked "true"	# Visitors marked "false"	# Visitors marked "haven't a clue"
MFTB = Mexican free-tailed bat			
1. MFTB eat fruit and insects.	104	28	2
2. MFTB do not hibernate.	94	33	5
3. MFTB prefer caves that are hot.	25	100	7
4. Female MFTB nurse the first pup they come to when returning to cave.	50	71	12
5. Male MFTB participate in rearing the pups.	53	64	17
6. MFTB eat 1/2 their body weight every evening.	104	26	8
7. MFTB can travel up to 60 miles and back in one evening.	118	10	5
8. MFTB can live up to 30 years.	75	34	25

The results shown in Table 3 indicates that most of our visitors did not know that Mexican free-tailed bats eat only insects and that they prefer to raise their pups in

caves that can become hot. It was interesting to observe that our visitors seemed to have some doubt regarding which gender participated in raising the pups. On the return bus trip to Alabaster Caverns State Park, group leaders repeated the statements and visitors called out the answer. All statements were answered correctly, and with seeming confidence. Group leaders provided further information to the answers and responded to any questions. It appeared to us that our visitors enjoyed being tested on their bat aptitude.

Evaluation

Visitors were asked to complete a participant survey before leaving the park in order to monitor the success of the program, get a sense for the economic impact of the event on the local economy, and to learn more about the backgrounds and recreational activities of the visitors. Each group was asked to complete one survey. The adult in the group with the most recent birthday was asked to complete the majority of the survey. All but one visitor group (99%) rated the bat viewing experience as excellent or good. Results were similar to those found during the 1997, 1998, 1999, and 2000 season, where 98%, 99%, 99% and 100% of the visitors, respectively, rated the experience as excellent or good. Completed surveys were compiled and summarized by Andrea Crews, Responsive Management Specialist for the Department. A copy of the report is included in Appendix C.

Bat Emergence Data

During the 2001 Selman Bat Watches, a variety of data was recorded at the time of each bat emergence. At the beginning of the main emergence, data recorded included the time of emergence, direction of flight and weather data. Weather data was supplied by a NOAA weather radio, an electronic weather monitor that included wind speed and direction, temperature, relative humidity and the barometric pressure trend, and an electronic altimeter/barometer. New this year was comparing the time of emergence to official sunset. The purpose for recording the information was to determine if there is a correlation between the time of emergence to official sunset and any weather variable. Table 4 categorizes dates and weather data by emergence times as compared to official sunset between the years 1996 through 2001. This type of categorizing allowed a comparison between weather data for the same emergence time to official sunset. To date, the most frequent time of bat emergence is between 11 to 15 minutes after official sunset. Many more years of data collection are needed before any determination of a correlation between times of bat emergence to official sunset and/or weather variables can be made.

Year	Emergence Time (min after sunset)	Number of Emergences	Weather Conditions
1996	11-15	10	Clear, 75°F, 50% RH
1997	11-15	12	Clear, 78°F, 55% RH
1998	11-15	15	Clear, 80°F, 60% RH
1999	11-15	18	Clear, 82°F, 65% RH
2000	11-15	20	Clear, 85°F, 70% RH
2001	11-15	25	Clear, 88°F, 75% RH

Table 4. A Comparison of Emergence Times to Official Sunset and Weather Data during Selman Bat Cave WMA Bat Watches (1996-2001). °F - temperature at start of bat emergence; RH% - Relative humidity; WS mph - wind speed and direction at start of bat emergence; BP - barometric pressure trend within an hour of the start of bat emergence (S - steady; R- rising; F- falling).

Bat Emergence before Official Sunset:

Date	Temp °F	RH %	WS mph	BP
July 15, 1998	97	66	8	
July 17, 1998	95	57	9	
July 18, 1998	101	43	9	
July 19, 1998	104	36	14	
July 23, 1998	96	65	10	
July 10, 1999	72		calm - N	rising
July 11, 1999	69	48	calm	rising
July 16, 1999	89	42	12 SW	steady
July 29, 2000	80	NA	Light - E	rising
August 5, 2000	91	NA	5 mph	steady

Bat Emergence 1 - 5 minutes after Official Sunset

Date	Temp °F	RH %	WS mph	BP
July 24, 1998	95	68	11	
July 31, 1998	79	84	9	
August 3, 2001	87		calm	rising to 1011
July 28, 2000	85	NA	light - E	rising

Bat Emergence 6 - 10 minutes after Official Sunset

Date	Temp °F	RH%	WS mph	BP
August 1, 1998	84	82	6	
August 2, 1998	95	64	8	
August 9, 1998	102	42	9	
July 15, 1999	87	43	10 S	steady
July 17, 1999	88	60	7	steady
August 6, 1999	90	50	calm	falling
July 15, 2000	80	NA	light	steady
July 21, 2000	77	NA	light	rising
August 4, 2000	89	NA	light	rising
Aug 12, 2000	86	NA	calm	rising
July 27, 2001	89	≥5 mph	south	steady at 1009

Bat Emergence 11 - 15 minutes after Official Sunset:

Date	Temp °F	RH %	WS mph	BP
July 18, 1997	95	61	13 SE	
July 19, 1997	89	71	15 SE	
Aug 7, 1998	90	65	5	
Aug 8, 1998	101	51	11	
Aug 13, 1998	89	76	4	
June 10, 1999				
July 23, 1999	90	39	calm	steady
July 24, 1999	88	32	calm	rising
July 31, 1999	86	40	10 N	rising
Aug 5, 1999	77	78	7 E	
Aug 7, 1999	86	35	5 N	Rising

Bat Emergence 11 - 15 minutes after Official Sunset (Con't.):

June 24, 2000				
July 14, 2000	76	NA	light	rising
July 22, 2000	78	NA	calm	rising
July 20, 2001	81		calm	steady at 1007
July 21, 2001	86		calm	steady at 1004
July 28, 2001	87		5 -15 mph E	steady at 1010
Aug 4, 2001	88		calm	rising to 1009
Aug 11, 2001	76		calm	steady at 1014

Bat Emergence 16 - 20 minutes after Official Sunset:

Date	Temp °F	RH %	WS mph	BP
July 26, 1997	104	44	11 S	
July 27, 1997	104	42	10 S	
Aug 15, 1998	92	62	5	
July 25, 1999	94	29	15 SE	falling
July 29, 1999	88	31	20 - 28 SE	falling
July 30, 1999	88	35	calm	rising
July 7, 2000	79	NA	light	rising
July 8, 2000	80	NA	5 mph - S	rising
June 23, 2001	82		calm	steady at 1009
July 13, 2001	77		calm	steady at 1011

Bat Emergence more than 20 minutes after Official Sunset:

Date	Temp °F	RH %	WS mph	BP
July 15, 1997	102	65	12 SSE	
July 16, 1997	103	54	11 S	
Aug 14, 1998	90	70	4	
July 8, 1999	85	48	17 S	steady
July 6, 2001	75		calm	rising to 1007
July 7, 2001	83		calm	steady at 1011
July 14, 2001	79		calm	steady at 1006

Wildlife Observations

There are numerous wildlife species present on the Selman Bat Cave WMA and surrounding areas including mammals, birds, reptiles, amphibians and fish. During the 2001 bat watch season, a log was kept of wildlife observations during the actual bat watches. Observations included actual sightings, tracks, sounds, and other evidence. A detailed list of species observed in 1999 through 2001 can be found in Table 5. A checklist of wildlife species that might possibly occur in the area can be found in Appendix D.

Unlike past watches, the Great Horned owls were not as active. During only two of the bat watches were visitors able to observe a Great Horned Owl perched on the utility pole located on the bluff above the cave entrance. Without a doubt, the bird species that most impressed our visitors were the large number of Common Nighthawks "hawking" and swooping over the prairie. On some evenings there were as many as twenty nighthawks entertaining the visitors with their hunting tactics and vocalizations.

Table 5. Animal Species Observed during bat watches at Selman Bat Cave WMA.

Species	1999	2000	2001
BIRDS			
American Crow	X	X	X
American Kestrel	X	X	X
American Robin	X		X
Blue Grosbeak	X		X
Carolina Chickadee			X
Chuck-will's-widow	X	X	X
Common Barn Owl	X		
Common Nighthawk	X	X	X
Eastern Meadowlark	X		X
Field Sparrow	X		X
Grasshopper Sparrow			
Great Blue Heron	X		X
Eastern Screech Owl		X	X
Great Horned Owl	X	X	X
Great-crested Flycatcher	X	X	X
Killdeer	X		
Mississippi Kite	X		X
Mourning Dove	X	X	X
Northern Bobwhite	X	X	X
Northern Cardinal	X	X	X
Painted Bunting	X	X	X
Poor-will	X		X
Red-tailed Hawk		X	
Turkey Vulture	X	X	X
Bewick's Wren	X		
Upland Sandpiper	X		
Yellow-billed Cuckoo	X		
Barn Swallow		X	X
Blue Jay		X	
Green Heron			X
INSECTS			
Bumblebee	X	X	X
Cicada, Dog Day	X	X	X
Damselfly, Ruby-spot	X	X	X
Damselfly, Black-winged	X	X	X

Species	1999	2000	2001
INSECTS (Con.-t.)			
Dragonfly, skimmer sp.	X	X	X
Grasshopper, Am. Bird	X	X	X
Velvet Ant	X	X	X
Common Wood Nymph	X	X	X
Gnats	X	X	
Beetle, ground	X	X	X
Beetle, tiger	X	X	X
Monarch	X		X
Red Satyr			X
Hackberry Emperor			X
MAMMALS			
Bat, Big Brown	X	X	X
Bat, Mexican free-tailed	X	X	X
Coyote	X	X	X
Deer, Mule	X		
Deer, White-tailed	X	X	X
Eastern Cottontail	X	X	X
Eastern Mole	X	X	X
Gopher, Plains pocket	X	X	X
Nine-banded Armadillo	X		X
Opossum		X	X
Hispid Cotton Rat		X	X
REPTILES			
Lizard, Fence			
Lizard, Texas horned			X
Ornate Box Turtle	X		X
Racer, Yellow-bellied	X		
Rattlesnake, W. Diamondback	X		X
AMPHIBIANS			
Frog, Blanchard's cricket	X	X	X
Frog, Plains Leopard	X	X	X
Toad, Woodhouse's	X		
FISH			
Minnow, Suckermouth	X		X

Publicity

In May 2001, a press release packet was sent to 30 television stations and newspapers around the state. The packet included a news release about the 2001 Selman Bat Watches, a bat fact sheet, and the registration brochure for the 2001 watches. In May and June 2001, a news release was also included in the Department's weekly news packet as well as appearing on the Department's website and TV program, *Outdoor Oklahoma*.

Media coverage of the 2001 Selman Bat Watches included primarily newspapers, radio, and television. Newspaper coverage included articles in the *Edmond Sun*, the *Freedom Call*, the *Oklahoma Gazette*, and the *Woodward News*. The article in the *Woodward News* included two large, color photographs. A local National Public Radio station promoted the Selman Bat Watch this year, however, they were unable to give us a monetary value for the time as they are a noncommercial radio station.

The Wildlife Diversity Program purchased an advertisement space for the 2001 Bat Watch Season in the January/February issue of *Oklahoma Today* magazine. Each issue of *Oklahoma Today* includes a reader response page on which every display advertiser is listed. A direct response card is attached to this page. Readers pull out the card and circle the number that corresponds with the advertisers they would like to receive more information from. The Selman Bat Watch Program received numerous requests.

Table 6 shows the publicity value for the 2001 Selman Bat Watch season. Television segments and newspaper and magazine articles listed in this report (Table 6) include known media coverage and therefore, does not necessarily represent the full media coverage given to the 2001 Selman Bat Watch season. It does, however, give some idea of the value associated with television, magazine, and newspaper coverage of an event or program. The few segments and articles listed here had an estimated value of **\$1,694.31**. Values were based on general rates for advertising. Media contacts cautioned that the actual publicity value is higher than the advertised rate because people read articles more than advertisements.

This type of publicity or "free advertising" is essential to this program because there is limited financial resources allocated for advertising. It is important to note, too, that most of the publicity given to the Selman Bat Watches is free, positive publicity for the Oklahoma Department of Wildlife Conservation.

Table 6. Publicity Value for Selman Bat Cave Bat Watch -- 2001. The total amount of publicity value for the 2001 bat watches represents the minimum value as we are not aware of all of the media coverage for this event.

Media	Length of Article	Amount
Woodward News (newspaper)	25.25"	188.62
Oklahoma Gazette (newspaper)	36"	1,302.00
The Edmond Sun (newspaper)	16.5"	176.88
Freedom Call (newspaper)	7.0"	26.81
	TOTAL	\$1,694.31

Budget

A total of 10 watches were conducted by an ODWC employee and 21 volunteers. The ODWC employee contributed 294 work hours; volunteers contributed 582.0 hours. Table 7 shows the overall budget for the 2001 Selman Bat Watch season. A detailed budget is included in Appendix E.

Table 7. Selman Bat Cave WMA Bat Watch 2001 -- Budget

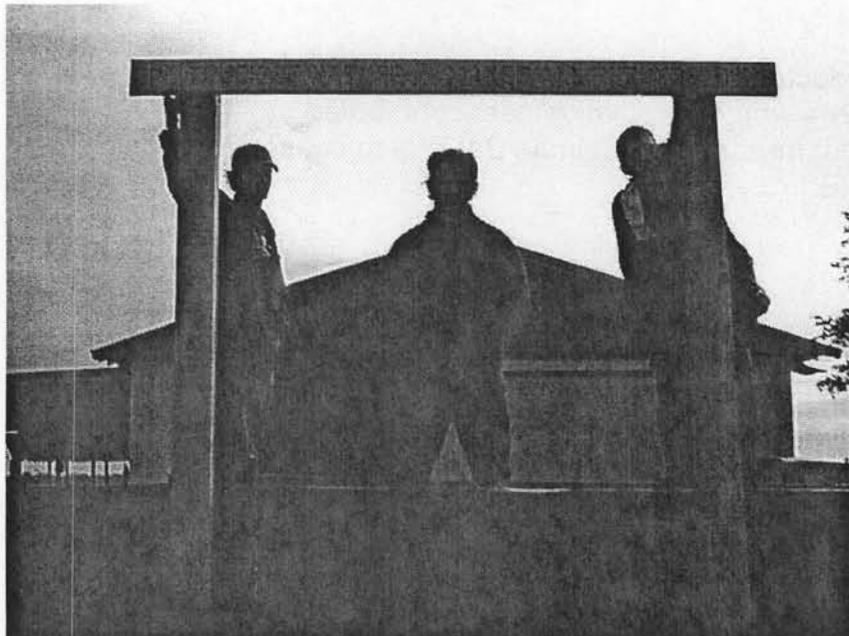
Expenses		Income	
Direct Expenses	\$ 3,612.58	Deposits (includes registration collected on-site & sales)	\$ 5,132.50
In-Kind Expenses	4,458.86	Direct Contributions	135.00
		In-Kind (volunteers)	3,579.30
Total Expenses	\$ 8,071.44	Total Income	\$ 8,846.80

Registration fees for the 2001 bat watch season were \$8 for adults (13 & over) and \$5 for youth (12 & under). Registration fees for regular bat watches, Nature at Night and registration fees collected on-site resulted in direct income of \$ 5,132.50. In addition, two contributions were made resulting in a direct donation of \$ 135. Cash collected on-site was used to buy batteries, chairs, and other incidentals throughout the bat watch season. Total **direct income** for the 2001 bat watch season was **\$ 5,267.50**.

Direct expenses incurred for the 2001 bat watch season totaled **\$3,612.58** and included items such as transportation for visitors, rental of a portable toilet, equipment and supplies, and a volunteer appreciation reception. Materials for the construction of a portable kiosk were included in direct expenses to the program.

In-kind support provided by ODWC and volunteers included such budget items as postage, travel, ODWC salaries (expenditures) and donation of volunteer time (income). In-kind support, considered income, totaled **\$3,579.30** while in-kind expenditures totaled **\$4,458.86**.

A comparison of budgets from 1999 through 2001 can be found in Table 8. It should be noted that without the contribution of the in-kind support from the volunteers, the Wildlife Diversity Program would not have the adequate resources to conduct the Selman Bat Watches.



New for the 2001 Bat Watch season was this **arbor** designed and built by **Venture Crew #393**. The arbor marks the start of the nature trail with its inspiring quote, *“One touch of nature...makes all the world kin...”*

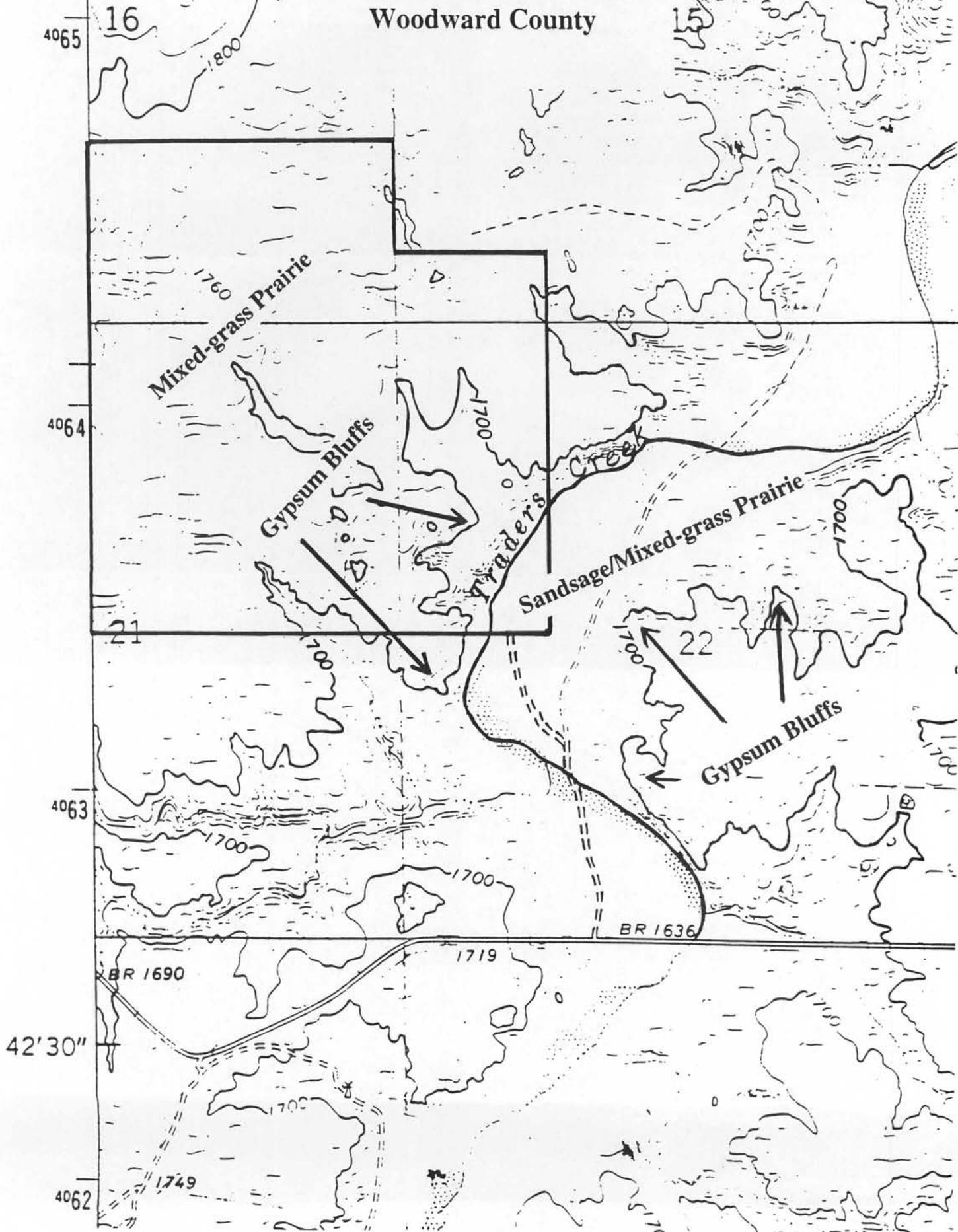
Table 8. Comparison between Budgets for 1999 through 2001 Selman Bat Watches

	1999	2000	2001
Direct Expenses			
Office	\$300.00	\$300.00	0
Chem-can	\$85.00	\$157.00	132.00
Buses	\$920.40	\$828.00	810.00
Bus Drivers	\$520.00	\$605.00	340.00
Equipment	\$707.53	\$202.25	451.33
Supplies	\$113.75	\$45.98	27.90
Volunteer Training	\$995.00	\$45.90	0
Volunteer Appreciation	\$395.88	\$753.69	158.81
Exhibits	\$216.23	\$138.90	745.40
Bat Cave Management	\$289.74	0	0
Trail/ site enhancements		996.19	0
Advertisement		900.00	250.00
Items for resale		0	697.14
Total	\$4,543.53	\$4,972.91	\$3,612.58
In-Kind Expenses			
Postage	\$200.00	\$200.00	300.00
Travel: Mileage	\$1,537.90	\$1,118.00	924.30
Lodging	\$0.00	\$0.00	0
Per diem	\$875.25	\$497.00	668.00
Salary	\$4,038.86	\$3,254.76	2,566.56
Total	\$6,652.01	\$4,869.76	\$4,458.86
Total Expenses	\$11,195.54	\$9,842.67	\$8,071.44
Income			
Deposits (direct income)	\$7,493.94	\$5,375.00	5,132.50
Direct Contributions	0	0	135.00
In-Kind (Volunteers)	\$4,581.75	\$4,836.97	3,579.30
Total Income	\$12,075.69	\$10,211.97	\$8,846.80
Grand Total (Total Income - Total Expenses)	\$880.15	\$369.30	\$775.36

**Appendix A
Map of Selman Bat Cave WMA**

Section	Area	Notes	Remarks
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Selman Bat Cave WMA
Woodward County



**Appendix B
Exhibits**

Almond
Eating

Check-In Exhibits at Selman Bat Watches - 2001

“Animals of the Prairie Community” Exhibit features large 8 x 10" pictures of 22 common animals that can be found at Selman Bat Cave WMA. Brief text related some item of interest about each animal. Icons beside each picture tell the visitor if they have a chance of seeing, hearing, smelling and/or seeing evidence of this animal while on site.

“Bat Aptitude Challenge” A “Challenge” sign listed eight statements and was posted inside a free-standing sign-holder. The “Challenge” page was laminated and visitors were asked to put a check in the in the “true”, “false” or “haven’t a clue” column next to each statement using an erasable marker.

Bat House Exhibit A real bat house was mounted on a free-standing pole. Labels on the house and pole offer instructions on how to determine bat house placement and identify features of a biologically sound bat house.

Children’s Activity Table

Habitat coloring pages and bat cave pages are provided with markers and bat stamps. Children can color and stamp bat pictures on these sheets and take them home.

Hand-out Table

A variety of ODWC free brochures and booklets and fact sheets are available as well as some free publications from Bat Conservation International.

Selman Bat Cave Video

Benches arranged in front of the TV/VCR offer visitors a chance to sit and watch a video that offers a brief preview of Selman Bat Cave WMA. The video was produced by ODWC for the “Outdoor Oklahoma” TV program. Video is about 6 minutes in length and is shown many times through the check-in time.

Merchandise Table

Some products from ODWC’s “Outdoor Store” are available for purchase. Products include the *North America Bird Field Guide*, Wildscape Certification Packet, “Bat House Builder’s Handbook” and bat house kits. We also offered a “Get A Bat Attitude” tee-shirt and post cards that promote the Oklahoma Department of Wildlife Conservation and the Selman Bat Cave WMA.

Appendix C Participant Survey Results

Survey of Visitors to the 2001 Selman Bat Watch

**Andrea K. Crews
Responsive Management Specialist
Oklahoma Department of Wildlife Conservation**

Survey of Visitors to the 2001 Selman Bat Watch

Andrea K. Crews

During the summer of 2001, the Natural Resources Section of the Oklahoma Department of Wildlife Conservation (ODWC) organized the fifth annual Selman Bat Watch. Visitors to Selman Wildlife Management Area (WMA) observed the evening emergence of the Mexican Free-tailed bat maternity colony roosting on the property.

Bat Watch visitors were surveyed to monitor the success of the program, discover how visitors knew about the program, get a sense for the economic impact of the tour on the local economy, and to learn more about the backgrounds and recreational activities of visitors. Each group was asked to complete one survey (Appendix). Several questions pertained to the experiences and demographics of the entire group of visitors. In order to investigate the interests and activities of individual visitors, the adult with the most recent birthday was asked to complete the majority of the survey, based on his or her individual experiences and interests. Many of the same questions were used in previous years, allowing for comparisons.

Who visited the Selman Bat Watch?

During the 2001 viewing season, 531 visitors were documented in attendance at the Bat Watch. Total public visitation was comprised of 121 visitor groups. An additional 173 visitors attended the two Nature at Night programs and other special events, but were not surveyed using the same form. Visitors were instructed to complete one survey per group. One hundred one surveys were completed, accounting for 410 visitors.

According to the survey, 70% of the visitors were sixteen years of age or older, as compared to 75% in 2000, 97% in 1999, and 65% in 1998. The average visitor

group in 2001 included 4 people, but ranged from 1 to 14. Visitors to the Bat Watch during 2001 lived all across Oklahoma, although the greatest number traveled from Oklahoma county (Figure 1). Twenty-seven visitors indicated that they lived in another state.

How did visitors feel about the Bat Watch?

All but one visitor group (99%) rated the bat viewing experience as excellent or good (Figure 2). Results were similar to those found during the 1997, 1998, 1999, and 2000 viewing seasons, where 98%, 99%, 99% and 100% of visitors, respectively, rated the experience as excellent or good.

How did visitors learn about the Bat Watch?

More than two-thirds of visitors learned about the Bat Watch through the newspaper (37%) or by word of mouth (36%) (Figure 3). Additional sources of information included *Outdoor Oklahoma* magazine (17%), the *Wildlife Diversity* newsletter (13%), and television (12%). "Other" ways that visitors learned about the

Bat Watch included:

- Wildlife Department website (2 groups)
- Internet (2 groups)
- Oklahoma Outdoor Net website
- Alabaster Caverns visit last year
- Previous visit
- Oklahoma Travel Guide
- Visiting Alabaster Caverns
- Showed up to tour Caverns and just joined the group

What was the visitor impact on the local economy?

Bat Watch visitor groups fell into three categories: local residents living within 60 miles of the tour (13%), those living further away and staying overnight in the area (57%), and those living further away but not staying in the area (30%). The distribution

Oklahoma Visitors to the Summer 2001 Selman Bat Viewing

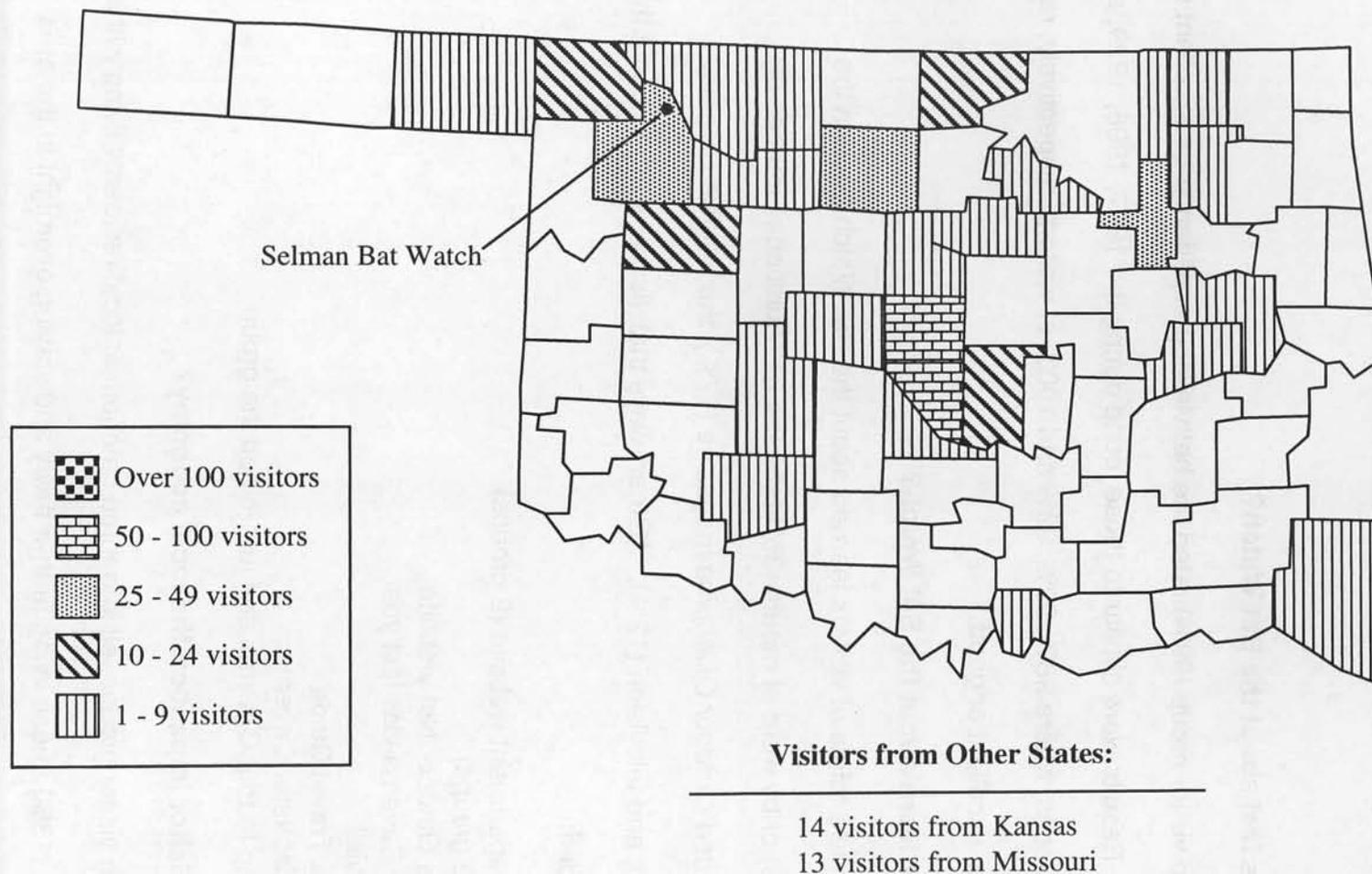


Figure 1. Distribution of hometowns of visitors to the 2001 Selman Bat Watch ($n = 361$).

Overall Rating of the Bat Viewing Experience

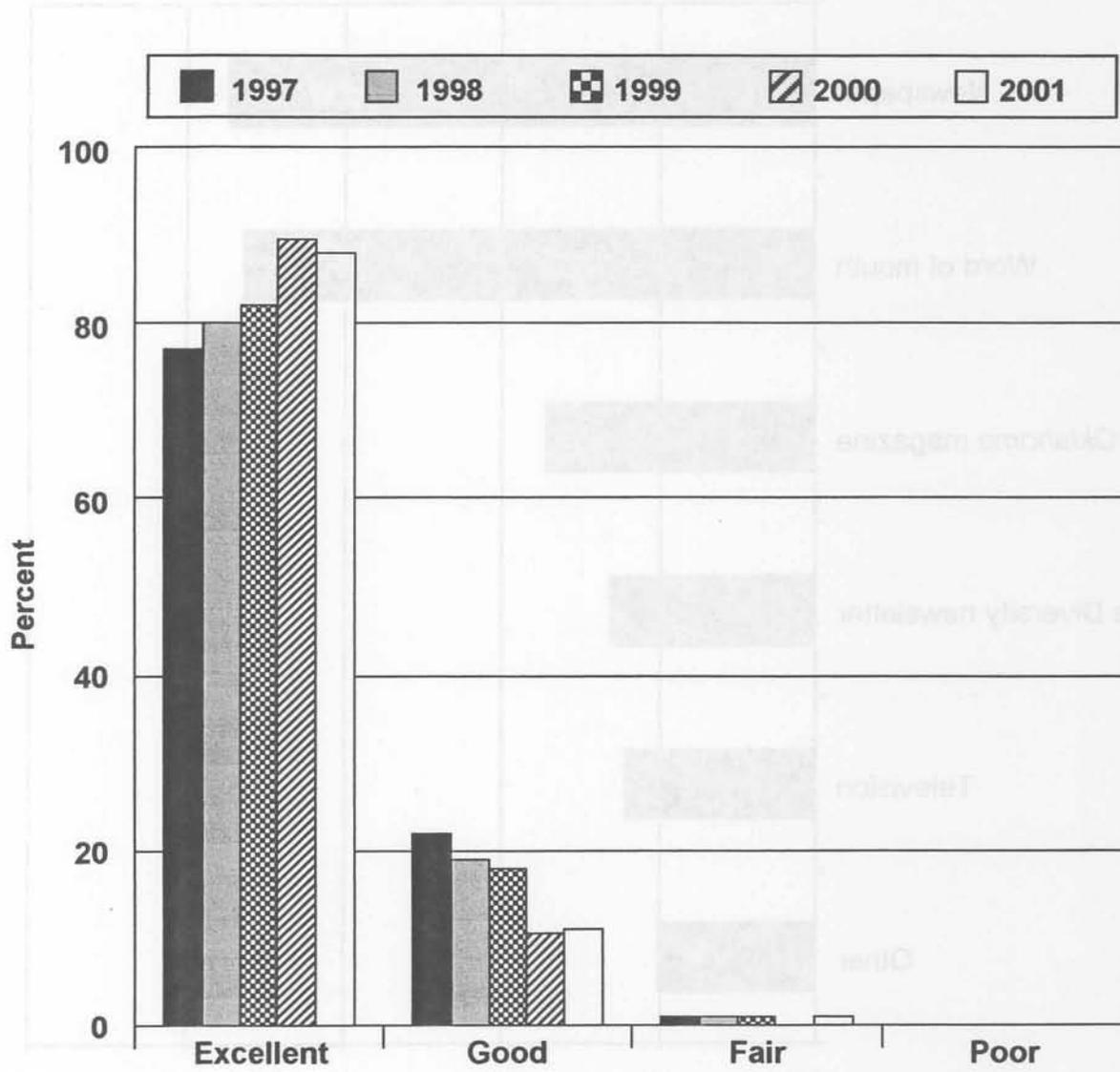


Figure 2. Visitor evaluation of the Selman bat viewing experience (1997: $n = 129$ surveys; 1998: $n = 158$; 1999: $n = 182$; 2000: $n = 117$; 2001: $n = 99$).

How did you learn about the 2001 Selman Bat Watch?

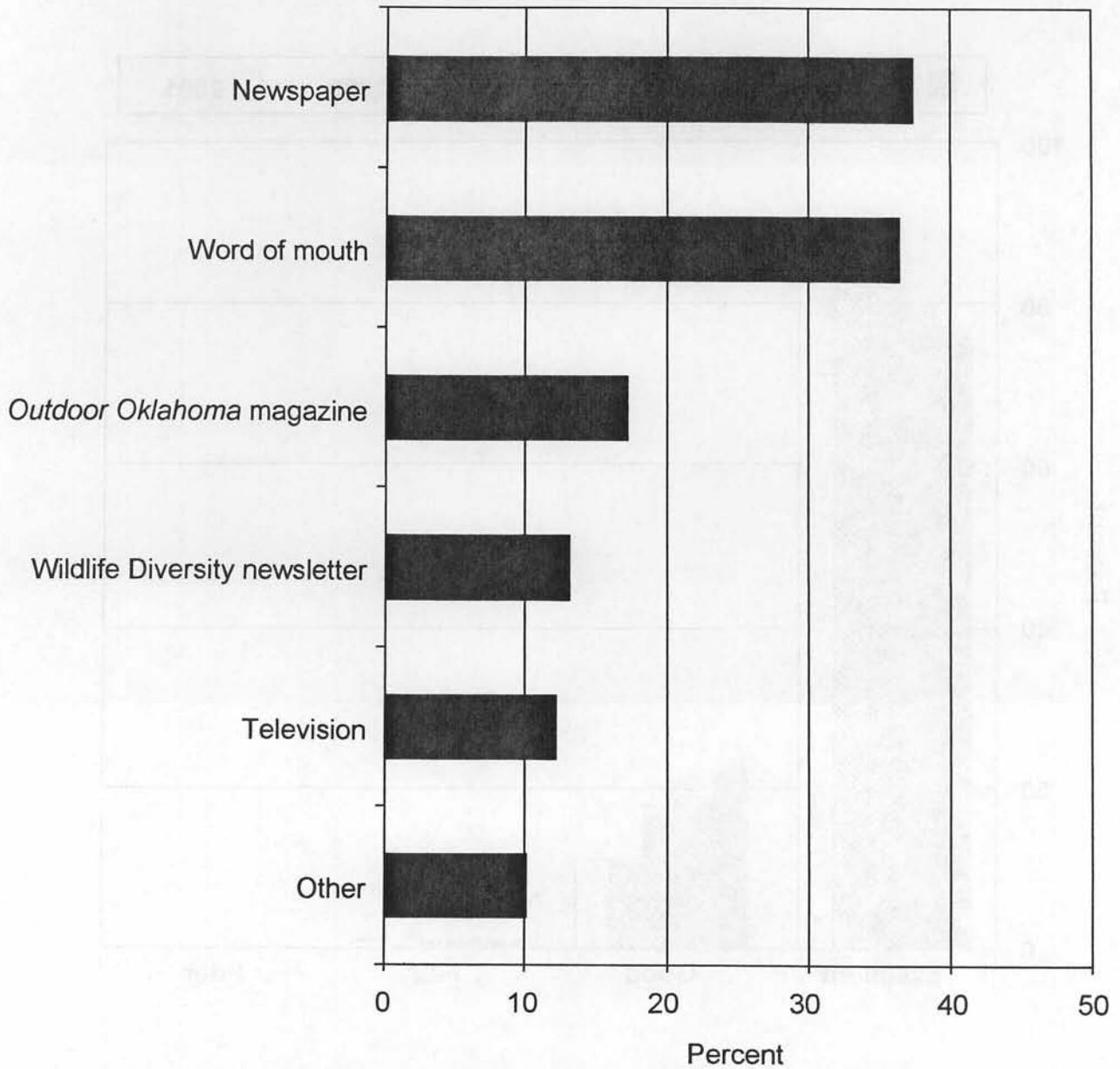


Figure 3. Distribution of sources of information that visitor groups used to learn about the 2001 Bat Watch ($n = 99$).

was different from 1997 when the same question was presented to visitors (Figure 4).

Of the overnight visitors in 2002, 60% stayed in a hotel or lodge, 25% camped, and 15% made "other" arrangements, such as staying with friends or relatives. This yielded 101 hotel guests and 68 campers, as compared to the 131 hotel guests and 95 campers identified in the 1997 survey.

Sixty-eight percent of Bat Watch visitor groups indicated that they visited other local attractions within 60 miles of the tour during this trip. When asked what attractions they visited, Bat Watch visitors gave the following responses:

- Alabaster Caverns (only; 13 groups)
- Great Salt Plains (only; 7 groups)
- Great Salt Plains (I volunteer at BWVA)
- Salt Flats, Little Sahara
- Alabaster Caverns, Boiling Springs, Woodward
- Woodward, Alabaster Caverns, Little Sahara, Great Salt Plains
- Woodward, Plains museum
- Two other state parks
- Boiling Springs, Little Sahara, Sod House
- Little Sahara, Alabaster Caverns, Boiling Springs
- Restaurants, Alabaster Caverns
- Salt Plains, Freedom Museum, Great Salt Lake St. Park
- Alabaster Caverns, Waynoka, Enid
- Freedom Rodeo
- Little Sahara, Red Rock Canyon
- Fort Supply
- Little Sahara, Boiling Springs
- Various museums along the way
- Glass Mountain, Alabaster
- Alabaster Caverns, Sahara
- Salt Plains, Little Sahara, Boiling Springs
- Sod House, Little Sahara, Salt Plains
- Plains Museum
- Salt Plains, Little Sahara, Alabaster Caverns, Sod House, Glass Mountain
- Alabaster Caverns, Salt Plains, Sand dunes
- Little Sahara
- Woodward museum, rodeo
- Little Sahara, Great Salt Plains
- Boiling Springs, Salt Plains

Did you stay overnight within 60 miles of the Bat Watch?

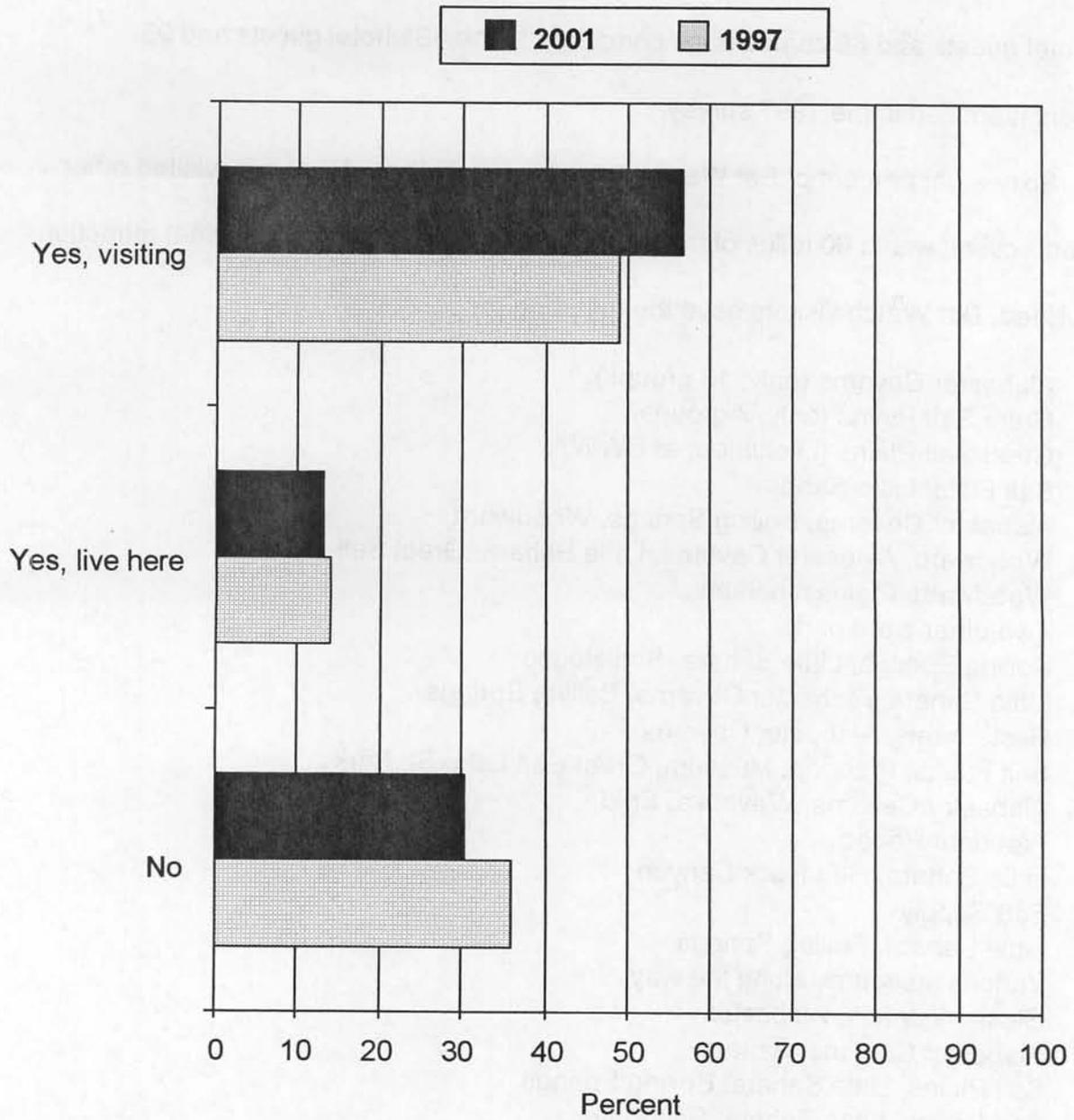


Figure 4. Distribution of overnight status of visitor groups to the 2001 and 1997 Bat Watch ($n = 99$).

- Little Sahara, Glass Mountain
- Restaurant near here
- Tall Grass Prairie
- Salt Flats, Crystal Dig, Sod House
- Sand Dunes, Salt Plains, garage sale - Alva
- Boiling Springs, Alabaster Caverns
- Salt Plains, Glass Mountain
- Sand Dunes, Great Salt Plains, Alva
- Little Sahara, Alabaster Caverns
- Boiling Springs, Pioneer Museum
- Little Sahara, Boiling Springs, Freedom
- Foss Lake
- Little Sahara, Roman Nose

Did the program introduce new customers to ODWC?

Thirty percent of visitors over the age of 16 had an Oklahoma fishing or hunting license the previous year, up slightly from 24% in 2000. Forty-six percent of the visitors listed hunting or fishing as a personal outdoor interest (as compared to 52% in 2000, 55% in 1999, and 64% in 1998).

What activities interested the visitors?

Adult visitors were asked to indicate their wildlife-related interests among a variety of options (Figure 5). The most popular activities included wildlife viewing or bird watching (67%), backyard wildlife feeding (65%), hiking (58%), and camping (56%). Forty-seven percent of the adult visitors fished and 21% hunted. Visitors enjoyed an average of 4.8 of the 11 activities in question, similar to the 2000, 1999 and 1998 averages of 5.3, 5.3 and 5.8 activities, respectively. Other activities enjoyed by visitors included:

- Astronomy
- Landscape design
- Field trials
- Golfing

[Asked of adult in group with most recent birthday]
Which of the following outdoor interests do you have?

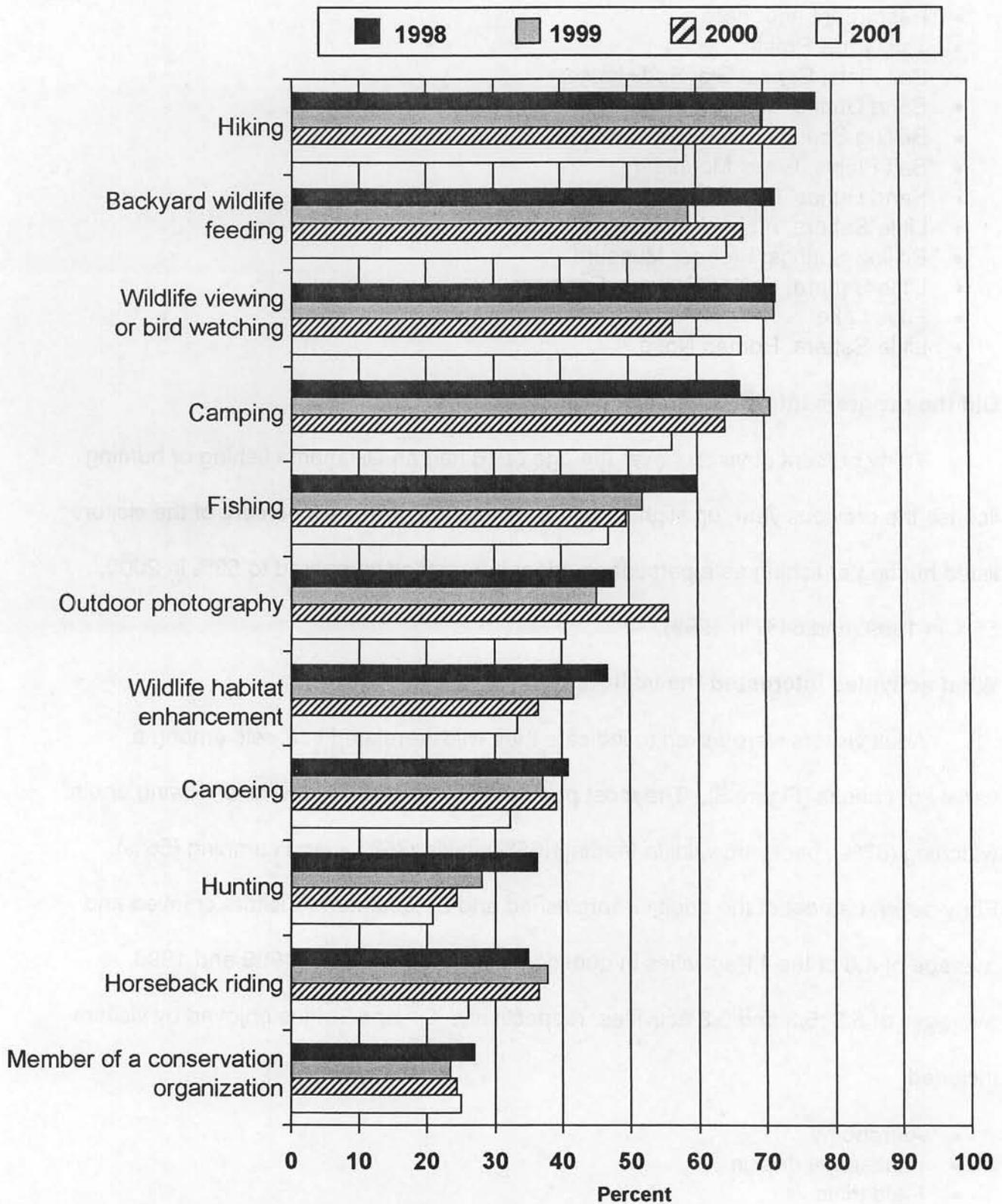


Figure 5. Distribution of adult visitor interest in wildlife-related activities (1998: $n = 159$ surveys; 1999: $n = 175$; 2000 = 117; 2001= 96).

Visitors comments

Space was provided on the survey for visitors to make additional comments.

Common topics included praise for the viewing experience, appreciation for the guides, and various suggestions for improvements. Comments included:

- Cool close-up vision of bats. Binoculars work for very close bat watching.
- Most pleasant experience. Good organization of data; good delivery for all to understand.
- Loved it, thank you.
- Enjoyed the tour.
- I thought it was a unique experience and plan to bring other family members next year.
- Very cool! Will be back!
- The education aspect of the evening was outstanding. The discussion of the grassland was an added bonus.
- Group leader was very good. Appreciated info on native habitat and inter-dependence.
- Excellent evening, the staff is wonderful and their enthusiasm about bats is great.
- Don't let the bats guano themselves out of the cave. Please develop a way to clean the cave so they come back. Thanks.
- Thanks – the information was presented in a very easy-to-remember way. Hurray for the quilt!
- Thanks, it was great!
- Anything Mel is involved with has to be good!
- Had a fantastic time, thank you.
- Very nice. I felt like the orientation was a little too long, but overall it was a good experience.
- Want to give recognition and praise to the Venture Volunteers who help Mike the Naturalist who is competent and interesting with his "discoveries." Thank you Mike and your helpers. Melynda is a dedicated biologist and I enjoy watching her and the volunteers commit.
- Amy was excellent! She did a great job of including all age groups. She was enthusiastic – full of information. She invited questions and comments. She would be excellent with school groups!
- It was very informative and very interesting! Guide did a great job.
- Very informative! Thanks!
- Too much weed watching before bat watching.
- Maybe get a tour that has a sack supper or something like that.
- All the staff were very helpful!
- Great job. Really enjoyed the experience.
- Excellent!

- Great!
- Wonderful.
- Outstanding! Very enjoyable. We are fortunate to live in a state that embraces conservation so affectionately. Kudos to the volunteers – an outstanding experience.
- Had a great time!
- Very nice people and facilities.
- Last here 2 years ago – better information pre-viewing tour now and more in-depth information on bats and environment without being too technical.
- Great! Thanks!!!
- Great staff/program.
- Very informative and interesting for children and adults – well organized.
- Wonderful!!
- Awesome!
- Good information – very well organized. Worth the trip and heat!
- This was an awesome experience and we plan to tell all of our friends!
- Great! Volunteers were very helpful.
- Great experience. Guides were excellent.
- Thank you very much!
- We really enjoyed this experience and learned about high plains as well as Mexican F. T. bats. All the staff were excellent and very knowledgeable.
- Would have been better if boys (young) in our group had behaved! Guide was excellent! (Duane)
- Very pleased with our guide. She made the overall experience wonderful. Everyone else had lots of energy.
- We all learned much and thoroughly enjoyed this. Educational and entertaining.
- This was a good experience.
- This was a very enjoyable experience. Thank you!
- Excellent, especially enjoyed seeing the bats up close. I would like to see what the guano looks like!
- Great fun. Enjoyed. Volunteer and employees very knowledgeable.
- A truly remarkable experience. Well presented and educational as well as enjoyable.
- Thank you. Very educational. Interesting, good family activity. Appreciate volunteers.
- Enjoyed it. The four of us wished the people would be a little quieter. Might would be hard to regulate, however. Guides were great! Nice song at the end.
- The event could have been over 30 minutes sooner.
- Enjoyed the very knowledgeable staff.
- Great job.
- Loved the Bat Watch.
- Great observation!
- Great evening.
- Great time. Don't think there were enough benches at the viewing area.

- Wonderful time tonight!
- This is our fourth year to come.
- Excellent job being done by everyone in this organization. Keep up the good work.
- I had trouble seeing the bats at that distance.
- Outstanding – very well-kept "secret," but an excellent evening tour. Very educational.
- This is a wonderful and well-organized event. We have been several years and it only gets better. Can you do anything about the heat???
- Great program! Keep it up.
- Thanks for your kindness.
- The program was first class – much more than we expected. All the personnel were super nice. Thanks.
- Great.
- Great outing. We loved the nature walk before the bats came out.
- It was great! Keep it going!
- Didn't think our young kids would do well but it went wonderfully. We will go back to Tulsa with something to brag about.
- Great time – Paul was wonderful, an expert to be sure, and a terrific ambassador for this program.
- Paul was an outstanding guide. I would like to come back many more times.
- A once-in-a-lifetime experience!
- This was great! Keep it up – thanks.
- Great program.
- Wonderful experience! Want to do it again next summer.
- This was one of the most informative, enjoyable and best-organized adventures we have ever done in Oklahoma and beyond. The information presented was very complete. We were fully prepared. The wealth of information was staggering – that provided by Mel, our guide, and Paul and Jason as well. The overall enthusiasm of everyone of the "partners" involved was quite impressive and unequalled in my experience. Your love for your subject and your passion to share it with others made this truly an evening to remember and recommend.

Conclusion

The 2001-season Selman Bat Viewing was as much of a success as the previous seasons. Visitor satisfaction with the viewing experience remained high. Overall, complaints about the tour come from very few, while the praises come from many. The continued success of the Selman Bat Viewing may be monitored by future surveys as deemed necessary.

Appendix

Selman Bat Watch Visitor Questionnaire

The Oklahoma Department of Wildlife Conservation is very pleased that you could attend this year's Bat Watch. We need your assistance in determining additional outdoor activities our agency can provide. ***Please have the adult in your group with the most recent birthday complete this survey.***

We have a free Wildlife Viewing Guide for each group that completes the survey before leaving Alabaster Caverns State Park this evening. Just hand your survey to one of the volunteers as you leave the pavilion. Thank you for your cooperation!

A. Questions regarding your entire group of visitors.

1. Overall, how would your group rate the bat watch experience? (Check one).
 Excellent Good Fair Poor

2. How many people, including children, were in your visitor group? _____

3. How many of the people in your group were 16 years of age or older? _____

3a. How many of those 16 years of age and older, if any, had an Oklahoma fishing or hunting license last year? _____

4. How did you learn about the Selman Bat Watch? _____ Newspaper _____ Television
_____ Wildlife Dept. Magazine _____ Wildlife Diversity Newsletter _____ Word of Mouth

Other: _____

5. Did you stay overnight within 60 miles of the Bat Watch?
_____ Yes, visiting _____ Yes, live here _____ No
If visiting, are you: _____ Camping _____ Staying in hotel _____ Other: _____

6. On this trip did you/will you visit other attractions within 60 miles of the Bat Watch?
_____ Yes _____ No **If yes**, where? _____

☞ ☞ ☞ ☞ ☞ **More Questions on Back** ☞ ☞ ☞ ☞ ☞

B. Questions regarding your individual interests (adult with most recent birthday).

1. Which of the following outdoor interests do **YOU** have? Check all that apply.

- | | |
|-------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Hiking | <input type="checkbox"/> Wildlife Viewing/Birdwatching |
| <input type="checkbox"/> Horseback Riding | <input type="checkbox"/> Camping |
| <input type="checkbox"/> Backyard Wildlife Feeding | <input type="checkbox"/> Canoeing |
| <input type="checkbox"/> Hunting | <input type="checkbox"/> Fishing |
| <input type="checkbox"/> Wildlife habitat enhancement | <input type="checkbox"/> Member of a conservation organization
(Nature Conservancy, Ducks Unlimited, etc.) |
| <input type="checkbox"/> Outdoor photography | |
| <input type="checkbox"/> Other: _____ | |

2. Where do you live? _____ , _____
County State

C. Comments.

**If you are unable to complete this survey on the night of the Bat Watch,
please complete it as soon as you can and mail it to:**

Wildlife Diversity Program
Oklahoma Department of Wildlife Conservation
1801 N. Lincoln Blvd.
Oklahoma City, OK 73105

Thank you for your cooperation!

Appendix D
Possible Occurrence of Wildlife Species at Selman Bat Cave WMA

WILDLIFE CHECKLIST FOR SELMAN BAT CAVE WMA

(based on historic records)

MAMMALS

Virginia Opossum	Black-tailed Jackrabbit	Hispid Cotton Rat
Least Shrew	Spotted Ground Squirrel	Southern Plains Woodrat
Desert Shrew	Thirteen-lined Ground Squirrel	Porcupine
Eastern Mole	Plains Pocket Gopher	Beaver
Pallid Bat	Plains Pocket Mouse	Coyote
Eastern Pipistrel	Silky Pocket Mouse	Gray Fox
Red Bat	Hispid Pocket Mouse	Raccoon
Cave Myotis	Ord's Kangaroo Rat	Badger
Mexican Free-tailed Bat	Western Harvest Mouse	Eastern Spotted Skunk
Big Brown Bat	Plains Harvest Mouse	Striped Skunk
Nine-banded Armadillo	White-footed Mouse	Mountain Lion
Desert Cottontail	Deer Mouse	Bobcat
Eastern Cottontail	Northern Grasshopper Mouse	White-tailed Deer

BIRDS

American Bittern	Pectoral Sandpiper	Northern Flicker
Great Blue Heron	Buff-breasted Sandpiper	Eastern Wood Pewee
Great Egret	Least Sandpiper	Least Flycatcher
Snowy Egret	Long-billed Dowitcher	Eastern Phoebe
Cattle Egret	Common Snipe	Great Crested Flycatcher
Green-backed Heron	American Woodcock	Western Kingbird
Black-crowned Night-Heron	Franklin's Gull	Eastern Kingbird
Turkey Vulture	Black Tern	Scissor-tailed Flycatcher
Mississippi Kite	Mourning Dove	Horned Lark
Northern Harrier	Rock Dove	N. Rough-winged Swallow
Sharp-shinned Hawk	Black-billed Cuckoo	Cliff Swallow
Cooper's Hawk	Yellow-billed Cuckoo	Barn Swallow
Swainson's Hawk	Greater Roadrunner	Blue Jay
Red-tailed Hawk	Common Barn Owl	American Crow
Ferruginous Hawk	Eastern Screech Owl	Carolina Chickadee
Rough-legged Hawk	Great Horned Owl	Rock Wren
Golden Eagle	Barred Owl	Canyon Wren
Prairie Falcon	Short-eared Owl	Bewick's Wren
American Kestrel	Common Nighthawk	House Wren
Merlin	Common Poorwill	Marsh Wren
Wild Turkey	Chuck-will's-widow	Golden-crowned Kinglet
Northern Bobwhite	Ruby-throated Hummingbird	Ruby-crowned Kinglet
Killdeer	Black-chinned Hummingbird	Blue-gray Gnatcatcher
American Avocet	Belted Kingfisher	Eastern Bluebird
Upland Sandpiper	Red-headed Woodpecker	
Long-billed Curlew	Red-bellied Woodpecker	
Greater Yellowlegs	Downy Woodpecker	

Mountain Bluebird
Swainson's Thrush
Hermit Thrush
American Robin
Northern Mockingbird
Brown Thrasher
Water Pipit
Sprague's Pipit
Cedar Waxwing
Loggerhead Shrike
Bell's Vireo
Warbling Vireo
Tennessee Warbler
Orange-crowned Warbler
Nashville Warbler
Yellow Warbler
Yellow-rumped Warbler
Black-and-white Warbler
American Redstart
Northern Waterthrush

Common Yellowthroat
Wilson's Warbler
Northern Cardinal
Blue Grosbeak
Indigo Bunting
Painted Bunting
Dickcissel
Rufous-sided Towhee
Cassin's Sparrow
Rufous-crowned Sparrow
American Tree Sparrow
Chipping Sparrow
Clay-colored Sparrow
Field Sparrow
Vesper Sparrow
Lark Sparrow
Lark Bunting
Savannah Sparrow
Grasshopper Sparrow
Fox Sparrow

Song Sparrow
Lincoln's Sparrow
White-throated Sparrow
White-crowned Sparrow
Harris' Sparrow
Dark-eyed Junco
Chestnut-collared Longspur
Red-winged Blackbird
Eastern Meadowlark
Western Meadowlark
Yellow-headed Blackbird
Brewer's Blackbird
Great-tailed Grackle
Common Grackle
Brown-headed Cowbird
Orchard Oriole
Northern Oriole
Pine Siskin
American Goldfinch
House Finch

REPTILES

Common Snapping Turtle
Yellow Mud Turtle
Red-eared Turtle
Ornate Box Turtle
Midland Smooth Softshell
Spiny Softshell
Earless Lizard
Fence Lizard
Texas Horned Lizard
Racerunner
Southern Prairie Skink
Great Plains Skink
Western Slender Glass Lizard
Blind Snake

Ringneck Snake
Plains Blackhead Snake
Ground Snake
Racer
Coachwhip
Plainbelly Water Snake
Diamondback Water Snake
Western Hognose Snake
Eastern Hognose Snake
Great Plains Rat Snake
Black Rat Snake
Kansas Glossy Snake
Bullsnake
Prairie Kingsnake

Texas Night Snake
Speckled Kingsnake
Texas Longnose Snake
Lined Snake
Western Ribbon Snake
Western Plains Garter Snake
Common Garter Snake
Checkered Garter Snake
Copperhead
Western Massasauga
Western Diamondback
Rattlesnake
Prairie Rattlesnake

AMPHIBIANS

Barred Tiger Salamander
Smallmouth Salamander
Woodhouse's Toad
Great Plains Toad
Red Spotted Toad

Plains Spadefoot
Great Plains Narrowmouth
Toad
Blanchard's Cricket Frog

Spotted Chorus Frog
Strecker's Chorus Frog
Bullfrog
Plains Leopard Frog

FISH

Gizzard Shad
Plains Minnow
Bullhead Minnow
Suckermouth Minnow
Stoneroller
Goldfish
Carp
Golden Shiner
Red Shiner
Emerald Shiner

Sand Shiner
River Carpsucker
Smallmouth Buffalo
Channel Catfish
Black Bullhead
Yellow Bullhead
Plains Killifish
Mosquito Fish
Largemouth Bass
Green Sunfish

Bluegill
Longear Sunfish
Redear Sunfish
Orange-spotted Sunfish
Arkansas Darter
Orangethroat Darter

Appendix E
Detailed 2001 Budget

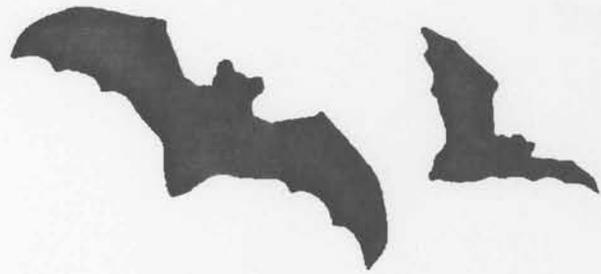
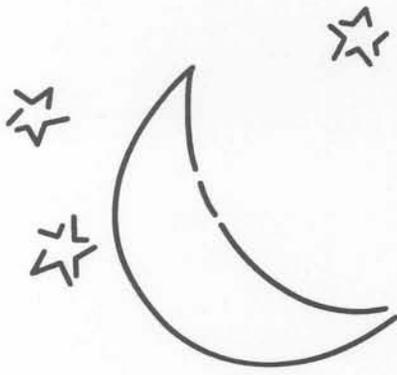
EXHIBIT A
GENERAL INVESTIGATION

2001 Selman Bat Watch Program Budget

Direct Expenses		
Office/House		\$0
Buses	Freedom School District	\$270.00
	Waynoka School District	\$300.00
	Buffalo School District	240.00
Bus Drivers	Freedom School District	\$340.00
Chem-Can	Porta-potty	\$132.00
Equipment	Collapsible Chairs (20)	\$116.40
	Nature at Night: predator call; decoy rabbits; supplies for scent stations; ingredients for s'mores including ziploc bags; batteries	\$334.93
Exhibits	Portable kiosk	\$721.40
	Bat Fact Cards (BCI publication)	\$24.00
Supplies	"I saw 1,000,000 Bats at Selman Bat Cave" stickers for children	\$27.90
Items for Resale	4 "Get a Bat Attitude" Post card styles (total of 2,000 post cards)	697.14
Volunteer Appreciation	food, tablecloths, napkins, etc.	\$47.61
	<i>Sand County Almanac</i> (gift for each volunteer)	\$111.20

Advertisement		\$250.00
Total Direct Expenses		\$3,612.58

In-Kind Expense			
Postage			\$ 300.00
Travel	Mileage	Per diem	Hours worked
	Mel	668.00	\$2,251.56
	Lisa Anderson		315.00
	Motorpool Vehicles (2,844 miles)	\$924.30	924.30
Total In-Kind Expenses			\$4,458.86
Total Direct Expenses			\$3,612.58
Total Expenses			\$ 8,071.44



Tour's End Song

(Sung to the tune, "Oh, Christmas Tree")

As the Selman's tours end,
The last group comes from around the bend.
Silently we load the bus,
We all have questions that we discuss.
We answer them the best we can,
Hoping that they come again.
We thank them as they start to roam,
And wish them all a safe trip home.

Lyrics written by and beautifully sung at the end of every bat watch by

Jason Caywood



