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LION - HUMAN INTERACTIONS IN BIG BEND NATIONAL PARK

ABSTRACT

Two mountain lion attacks on park visitors (August 2, 1984 and April 19, 1987) prompted park management to take steps to reduce future potentially serious lion-human interactions: (1) signing which informs park visitors of the presence of mountain lions and the need to check with a Ranger before hiking; (2) developing a brochure which discusses actions to take upon encountering a mountain lion; and (3) publishing an article in the park newspaper El paisano relating to lion-human interactions. Standard procedures upon notification of an attack, include: (1) sealing off the attack area; (2) requesting the nearest available lion hunter to respond to the scene of the attack; and (3) assuming that the offending lion will still be at the scene of the attack and removing the lion if the opportunity presents itself.

Texas is the only state east of the Rocky Mountains that still has a viable population of mountain lions: and, of the North American states inhabited by mountain lions, only Texas still classifies the mountain lion as a predator. Protection of lions is totally lacking from the legislative process. The mountain lion inhabits primarily privately owned land and its fate is in the hands of the landowners (McBride, 1976).

On only three occasions did McBride encounter lions showing aggressive behavior: (a) a trapped lion in 1961; (b) a dog caught lion in 1970; and (c) while approaching a collared lioness with kittens during a collar removal operation in 1973 (McBride, 1976).

McBride (1976), closes his thesis with the following statement: "On the basis of these experiences, I feel that lions should be handled with respect, but I do not feel that they are dangerous or a threat to man when they are undisturbed in the wild, and I have crawled into narrow caves with them many times with their displaying no more aggression than growling".

Since 1952, there have been over 600 sightings/observations of mountain lions by the visiting public and park staff within Big Bend National Park. The first recorded "serious" lion-human interaction occurred in 1953 when a lion apparently bit the pants cuff of a visitor on the Lost Mine Trail. The Assistant Superintendent and Chief Park Ranger responded and shot a lion at the site of the encounter.

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Park Rangers, in 1956, shot a lion which hunters had apparently chased into the park. The lion was reported to have been attacking livestock on a neighboring ranch.

Several minor lion-human interactions occurred in 1957 such as:.. a lion ran toward visitors on the Lost Mine Trail..; ..a large cat approached visitors on the southwest slope of Casa Grande mountain..; ..two lions followed visitors along the Juniper Flats area for one-half mile..; ..a lion approached a park employee, while in the lower Basin area, ready to spring..; three other minor lion-human interactions were recorded that year.

Only general sightings/observations were reported or documented until 1978/1979, when the following lion-human interactions were documented: ..a lion chased two boys down the Lost Mine Trail..; ..a lion ran toward a small boy on the Lost Mine Trail..; ..a young boy was attacked by a mountain lion in Laguna Meadows..(the attack consisted of a lion tearing the jacket of the young camper sleeping in an open tent)..; a lion followed hikers, growling and snarling, on the Laguna Meadows Trail..; ..a lion followed a hiker on the Juniper Flats Trail...

Signs were posted on all the Basin trailheads on 11/25/78 warning of a fearless, aggressive mountain lion on trails and advising parents to keep children under control.

Interactions continued into 1979; ..three lions approached campers at Laguna Meadows..; ..hikers were followed by lion on the Laguna Meadows Trail..; ..lion approached hikers near the Basin campground, growled and approached to within six feet..; ..a lion was shot, by the horse concessioner, in the Chisos Ramuda corral as the horses were going berserk... The interactions dropped off until a report in 1980 stated:.."a lioness was seen teaching two juvenile lions to hunt in the vicinity of the Chisos Ramuda corral..". A later report documented Rangers attempting to scare a juvenile lion out from under a park pickup where the lion had apparently unsuccessfully attacked a pet dog.

A lion chased a Park Ranger, in 1981, near Lone Mountain. The circumstances were quite unusual, involving a runaway horse. An employee was being given riding instruction when her mount bolted. Another employee gave chase on horseback and a Ranger gave chase on foot when he noticed a lion come out of the brush and take a swipe at his leg. The Ranger got a shrub between himself and the lion and finally hit the lion with a large rock. The lion lost interest and strolled away.

Doug Waid, a PhD candidate from Texas Tech. University, was looking for an area in which to study mountain lion ecology and after a meeting in Carlsbad, New Mexico, between Park Service representatives from Big Bend National Park, Carlsbad National Park and the Southwest Regional Office and researchers from Texas Tech. University, Big Bend National Park was selected for the study area. The project was to serve as a follow-up and expansion of the data

developed by McBride's thesis work on lions of the Texas-Mexico border completed in 1976.

The Park Service agreed to radio collaring wild lions in Big Bend National Park as it was hoped that the collaring operation would sensitize lions to humans and increase lion avoidance of humans.

Interaction between lions and humans occurred again in 1984 when a young lion knocked a Park Ranger down while the Ranger was performing an evening fire patrol. The lion was apparently startled by the Ranger and as the lion attempted to escape, the Ranger was struck and knocked down. The Ranger reported that the lion did not appear to be aggressive, only startled.

In August of 1984, the park recorded its first "very serious" lion-human interaction which resulted in an eight-year-old boy being severely mauled. The lion was tracked and shot by the researcher and a local lion hunter. The boy has since undergone several episodes of plastic surgery. The juvenile lion responsible for the attack was judged to be a released pet because of its relatively uncalled, soft foot pads and unusually white teeth.

An "old" lion jumped a back yard fence in the Panther Junction developed area in January of 1985 and unsuccessfully attacked a pet dog before being run off by residents.

The park experienced its second "very serious" lion-human interaction in 1987 when an adult female hiker was attacked by a juvenile radio collared lion. The woman received only superficial wounds. The lion was wounded by investigating Rangers and was later shot and killed by a lion hunter within 100 yards of the attack site.

The premise that a collaring operation would instill human avoidance was invalidated as a result of the second "very serious" lion-human interaction. The lack of long-term effect of collaring was again made evident by a young cat which was collared in February of 1988, when it approached to within six feet of park visitors in May of 1988. This cat was shot with rock salt and avoided humans for a couple of weeks. This cat was later live captured and sent to Florida as it displayed a distinct lack of fear for humans.

Since the initial radio collaring of eleven lions during the Waid study (Pence, Et. Al., 1987), the park has arranged for collaring seven additional lions and re-collaring five lions.

Roy McBride and Toni Ruth completed a lion behavior study in response to changes in visitation in the park, monitoring seven radio collared lions. They determined that lions are relatively unaffected by changes in park visitation. Current research is being carried out by investigator's from Texas A&M University.

Researchers and park staff have learned much about the parks' lion

population and are beginning to gain insight into "potential problem lions" which visitors may encounter (Table 1). It appears that potential problem lions include: (a) lions which are pets and which have been released in the park; (b) young lions which are in the process of dispersal; and (3) old lions which have a problem taking normal prey.

The following information has been provided by the park to inform the visitor about mountain lions:

1. A one page article about mountain lions is printed in the parks' newspaper El Paisano.
2. A safety brochure that includes a short section on mountain lion-human interactions.
3. A sign has been installed on the main road into the Chisos Mountains and Basin area warning the visitor that they are entering mountain lion country and advising them to check with a Ranger before hiking.
4. Lion-human interaction is discussed at evening interpretive programs and guided walks in the Basin area.
5. A handout is made available to all hikers in the Basin and High Chisos Mountains.

Appendix A is the current Interim Lion Action Plan relating to "unusual" lion-human interactions.

There remain many questions concerning the mountain lions of Big Bend National Park. The following list is but a few which have been identified concerning lion behavior, management and research:

1. Do mountain lions change their behavior in response to changes in visitation? McBride and Ruth, 1988, found that lions are relatively non-pulsed by changes in visitation.
2. Are all mountain lions potential problems or just certain age groups?
3. Is sex a factor in identifying potential problem lions?
4. Can a released pet lion be absolutely identified as such?
5. How many lions need to be monitored so that researchers/park staff can remain abreast of changing patterns/situations?
6. How often does monitoring of radio collared lions need to occur?
7. Can lions be monitored by other means than the use of radio collars?

8. Can lions be sensitized so that they respond to humans by avoidance?
9. Can lineage be determined from blood samples?
10. Are small insertable long-term transmitters available to reduce costly re-collaring operations?
11. Are collars available which are capable of electronically controlled injection mechanisms to facilitate the re-collaring process?
12. Can a remote electronic shock serve as a sensitization method in lions?
13. Is poor physical condition a possible common factor of problem lions?
14. Do strong odors (especially food odors) serve as an attractant to young lions or lions in poor physical condition?
15. Do activities where children are present tend to excite "attack" behavior from problem lions to a greater degree than when children are not present?
16. Are elastic/expandable collars available so that if young cats were collared, the collars would not have to be re-adjusted periodically?
17. Do park visitors object to temporary closures?
18. Do the presence of mountain lions affect the park visitors itinerary?
19. Are food habit studies still needed?
20. Are prey base studies still needed?

It would appear that there are several high priority questions that need to be addressed over the next three years if we expect to reduce potentially serious lion-human interactions in Big Bend National Park.

Park Sponsored Specific Lion Research

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McBride, R.T. and Ruth, T.K. 1988. Mountain Lion Behavior in Response to Visitor Use in the Chisos Mountains of Big Bend National Park, Texas. Contract # CX 7130-7-0002. Big Bend National Park, Texas. 54 pp.

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