

## BEARS AND MENSTRUATING WOMEN

On the evening of 13 August 1967, two women were attacked and killed by grizzly bears (*Ursus arcto*) in separate incidents within Glacier National Park (GNP). Following these incidents, there was speculation that due to odors associated with menstruation, women may be more prone to attack by bears than are men (Rogers et al. 1991).

The objective of this paper is to present the data available on this subject so that women can make an informed choice when deciding whether or not to hike and/or camp in bear country during their menstrual period.

### ***Polar Bears***

In a study designed to test the hypothesis that bears are attracted to the odors of menstruation, Cushing (1983) reported that when presented with a series of different odors (including seal scents, other food scents, non-menstrual human blood, and used tampons), four captive polar bears (*Ursus maritimus*) elicited a strong behavioral response only to seal scents and menstrual odors (used tampons). Cushing (1983) also reported that free-ranging polar bears detected and consumed food scent samples and used tampons, but ignored non-menstrual human blood and unused tampons. This suggests that polar bears are attracted to odors associated with menstrual blood.

### ***Grizzly Bears***

Herrero (1985) analyzed the circumstances of hundreds of grizzly bear attacks on humans, including the attacks on the two women in GNP, and concluded that there was no evidence linking menstruation to any of the attacks. The responses of grizzly bears to menstrual odors has not been studied experimentally.

### ***Black Bears***

Rogers et al. (1991) recorded the responses of 26 free-ranging black bears (*Ursus americanus*) to used tampons from 26 women and the responses of 20 free ranging black bears to four menstruating women at different days of their flow. Menstrual odors were essentially ignored by black bears of all sex and age classes. In an extensive review of black bear attacks across North America, no instances of black bears attacking or being attracted to menstruating women was found (Cramond 1981, Herrero 1985, Rogers et al. 1991).

### ***Yellowstone National Park Bear-Inflicted Human Injury Statistics***

Prior to 1980, most bear-inflicted human injuries in Yellowstone National Park involved human food conditioned bears aggressively seeking human foods and injuring people in the process. By 1980, human foods and garbage were no longer readily available to park bears and most human food conditioned bears had been removed from the population in management actions. During the 26 year period from 1980 through 2005, over 71 million people visited YNP. These visitors spent over 16.8 million user nights camping in developed area roadside campgrounds and over 1 million use nights camping in backcountry areas within the park. Although actual statistics are not available, many menstruating women undoubtedly visit, hike and/or camp within Yellowstone National Park each year. From 1980 through 2005, 37 people (30 by grizzly bears, 4 by black bears, and 3 by unidentified species of bear) were injured by bears within Yellowstone National Park, an average of only 1.4 bear-inflicted human injuries per year (Gunther 2006). Of these 37 injuries, 29 (78%) were men, and only 8 (22%) were women. Of the 8 incidents where women were injured, most (75%, n=6) involved surprise encounters (5 while hiking, one while jogging) with bears and were therefore probably unrelated to menstruation. One incident involved a female park ranger (not menstruating at the time) moving an injured bear that had been hit by a car, off of the roadway. In one incident a grizzly bear pulled a woman out of her tent at night and killed and consumed her. However, the woman was not menstruating at the time of the attack. There was no evidence linking menstruation to any of the 8 bear attacks on women. It is difficult to accurately compare the ratio of males to females that are injured by bears because the park does not keep records of visitor use of the park by gender. However, the injury data for Yellowstone National Park does not suggest that females are more likely than males to be attacked by bears (Gunther and Hoekstra 1996).

## **Precautions**

Although there is no evidence that grizzly and black bears are overly attracted to menstrual odors more than any other odor, certain precautions should be taken to reduce the risks of attack.

The following precautions are recommended:

1. Use pre-moistened, unscented cleaning towelettes.
2. Use internal tampons instead of external pads.
3. Do not bury tampons or pads (pack it in - pack it out). A bear may smell buried tampons or pads and dig them up. By providing bears a small food "reward", this action may attract bears to other menstruating women.
4. Place all used tampons, pads, and towelettes in double zip-loc baggies and store them unavailable to bears, just as you would store food. This means hung at least 10 feet above the ground and 4 feet from the tree trunk.
5. Tampons can be burned in a campfire, but remember that it takes a very hot fire and considerable time to completely burn them. Any charred remains must be removed from the fire pit and stored with your other garbage. Also, burning of any garbage is odorous and may attract bears to your campsite.
6. Many feminine products are heavily scented. Use only unscented or lightly scented items. Cosmetics, perfumes, and deodorants are unnecessary and may act as an attractant to bears.
7. Follow food storage regulations and recommendations so you can avoid attracting a bear into your camp with other odors. All odorous items that may attract bears, including food, cooking and food storage gear, toiletries, and garbage, must be kept secured from bears. Proper methods for storing bear attractants include: 1.) in a vehicle (the trunk of a car or cab of a truck), 2.) in a solid camping trailer that is constructed of non-pliable material (**never** in a tent or tent trailer), 3.) in a food storage box (provided at some campgrounds), or 4.) suspended at least 10 feet above the ground and 4 feet horizontally from the tree trunk.

The question whether menstruating women attract bears has not been completely answered (Byrd 1988). There is no evidence that grizzly bears are overly attracted to menstrual odors more than any other odor and there is no statistical evidence that known bear attacks have been related to menstruation (Byrd 1988). In Yellowstone National Park, the probability of being injured by a bear for both men and women combined, is only 1 in 1.9 million (Gunther 2006), so the risks are very low. Although the risks are very low, visitors have been injured and killed by bears in Yellowstone National Park (Gunther and Hoekstra 1996). If you are uncomfortable hiking and camping in bear country for any reason, you should probably choose another area for your recreational activities.

## **Literature Cited**

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