



Polar Bear Interaction Plan

Introduction

This plan is meant to help guide researchers and Battelle ARO staff in dealing with polar bears should they encounter them while working or living in the Arctic. It is important that personnel understand the protected status of polar bears and know how to avoid and/or manage encounters with these animals.

Researchers and Battelle ARO staff must follow the legal guidelines established by the United States to protect polar bears. In other countries, the National Science Foundation (NSF) strongly recommends compliance with the policies of the host nation as researchers and Battelle ARO staff may be subject to enforcement by the cognizant foreign government.

Polar Bears, the MMPA and the ESA

In the United States, polar bears are protected under the Marine Mammal Protection Act (MMPA) and are listed as a threatened species under the Endangered Species Act (ESA). Both Acts prohibit the “take” of polar bears without authorization. “Take” includes disturbance and harassment, as well as physical injury and killing.

Certain actions may be taken to deter a bear as long as they meet the guidelines outlined in this document and do not cause any harm or injury to the animal. Under the MMPA, a polar bear may be killed only if such action is imminently necessary in defense of life. The MMPA and ESA apply to all personnel working in Alaska. In other countries, the relevance of the Acts to activities funded by the U.S. Government (i.e., work done by NSF grantees and contractor employees) is open to interpretation; therefore, we recommend compliance regardless of location, with the understanding that host country laws governing the protection of polar bears take precedence.

Minimizing encounters

General methods for minimizing human-bear conflicts:

- 1) Minimize attractants.
- 2) Detect bears early and avoid close encounters.
- 3) Recognize and respond appropriately to polar bear behavior.

Larger groups will generally be safer than smaller groups. Working and/or traveling alone is highly discouraged.

1. Minimize attractants

When traveling: Avoid carrying bear attractants such as strongly scented foods, fish, meat, or other aromatic products with you. If you must carry attractants, store them in air-tight containers or bags to minimize odors. Consider carrying all foodstuffs in “bear-resistant” containers.

When camping:

- Keep food, garbage and other attractants in bear-resistant containers and maintain a clean camp. Wash kitchen equipment after every use, minimize excess food waste, and properly dispose of garbage.
- Remove unnecessary attractants from camp on a regular basis (e.g., garbage, animal carcasses, excess anti-freeze, petroleum products etc.).
- Locate latrines away from camp; and consider using an electric fence and/or trip wires as additional protection in and around camp.
- Never allow a bear to receive food as a reward. Food-rewarded bears will become problem bears for you or someone else in the future.

2. Detect bears early and avoid close encounters

Avoid camping or lingering in high-use polar bear areas such as river drainages, coastal bluffs, and barrier islands. Any travel on sea ice warrants heightened awareness.

When in polar bear habitat, look out for bears. Sighting a bear far in advance of an encounter provides more options for avoiding it.

- Before landing a plane, watch for bears from the air. Land elsewhere if bears are present.
- Before disembarking a boat, spend time scouting the coast for bears.
- Before stopping a vehicle, scout the area around you.
- If leaving a building or shelter, survey the surroundings to make sure a bear is not nearby.
- If pack ice moves on or close to shore, be especially aware. Think of it as a conduit for bears. Bears will frequently move off pack ice and onto land in search of food or may become stranded if the ice shifts offshore.

When traveling, all personnel should continuously be on the lookout for bears. If a bear is spotted, adjust your route to avoid it or backtrack to the safety of your camp, vehicle or boat.

When at a work or camp site, one or more persons may be assigned to scan the area for bears. Other persons at the site should also stay aware and examine their surroundings even if they are not the official lookout. Diligence is everyone’s responsibility. This monitor position can be rotated among personnel and, depending on several factors such as likelihood of bear encounters, visibility, and the accessibility of bear-proof shelters, the assigned bear lookout can either be on continuous watch or sweep the area at arranged intervals.

The lookout may also patrol the periphery of an area in a vehicle to see more. The noise created by the vehicle can also act as a deterrent to a bear.

Consider using binoculars. They improve the ability to spot bears at a distance, increasing the probability you will detect a bear before a bear detects you, thus giving the group an advantage in reacting to the presence of a bear.

Be aware of current and prevailing wind direction. A bear down wind of you can detect you or your camp from miles away. Also, curious bears will often approach from the down wind direction. Avoid spending much time in a location where the area down wind is obstructed visually by rough ice, a knoll or other barriers.

If you spot a bear, observe its behavior. This will help you determine what actions to take. Actions may include:

- Further observation of the bear.
- Alerting others to the bear's presence.
- Leaving the area and/or moving to a safe location, shelter or vehicle.
- Creating noise i.e. starting a motor or sounding a horn, to deter the bear from approaching.

If a bear is sighted at a Battelle ARO-supported camp:

- Alert everyone in camp – using airhorns, radio, and siren as available
- Everyone musters in hard sided buildings, when possible.
- Follow emergency phone tree procedures and await guidance.

Avoiding bears should always be your first option. If the bear is unaware of you, leave the area. If it is aware, stay together and leave or go to a safe spot such as a vehicle or hard-sided building. Do not run from a bear as this could trigger a predatory response.

Once you've reached safety, immediately notify police or the local wildlife officer. Obtain contact information from your primary Battelle ARO point of contact.

3. Recognize and respond appropriately to polar bear behavior

If a polar bear is sighted, it is important to observe its behavior, as this will determine your actions. A bear that becomes aware of your presence may stop what it was doing and begin turning its head and sniffing the air in your direction. Typically, polar bears exhibit the following behaviors:

- *Curious* polar bears will move slowly and stop frequently to sniff the air. They will move their heads around to catch a scent or hold their heads high with ears forward. They may also stand up.
- *Threatened or agitated* polar bears may huff (exhale heavily or loudly), snap their jaws together and stare at you or the perceived threat. Their head will be lowered below

shoulder level, swaying from side to side with ears pressed back. This is a signal for you to begin backing away and withdrawing from the area. Ignore this behavior, and the polar bear may charge. A bear protecting young or a carcass is likely to display this type of behavior. Threatened animals may also retreat.

- A *predatory* bear may be encountered in rare instances. It may be found sneaking or crawling up on the object it considers prey, or it may approach in a straight line at a constant speed without exhibiting curious or threatened behavior. This suggests the bear may attack. In this case you should stand your ground, group together, shout, and wave your arms to halt the bear's approach. You should also be prepared to deploy any other deterrents you have available.

Never run from a bear, as running can trigger the animal's prey response. Experts also believe that if attacked, you should always fight back with a polar bear no matter its behavior. Use any deterrents and concentrate on hitting the nose and eyes since they are the most sensitive. There are stories of bears retreating after having been hit in the nose. If a surprised female attacks to defend her cubs, remove yourself as a threat if possible.

Deterring polar bears

Any time you are in an approaching bear's path, your first choice of action should be to get out of the way. The same is true should you find yourself between a mother and her cubs. If it is not possible to move or the bear follows you, stand your ground. Attempt to make yourself look bigger by waving a jacket or other objects above your head. Group up, discuss your course of action and make noise to discourage the approach. Prepare your deterrents should the bear continue to approach. Have back-up shooters ready if the primary person is involved in deterring the bear with nonlethal means.

Bear deterrents include:

- Grouping together and/or trying to look bigger by holding a large staff or clothing up
- Shouting or making other loud noises – air horns, engine noises, bear bangers, etc.
- Pencil launchers for flares or bangers
- Pistol launchers for flares, bangers, screamers, sparklers or blanks (cracker shells)
- Bear spray
- Firearms

Nonlethal deterrents or hazing may only be conducted by certified bear guards. In defense of life, anybody may use lethal force to defend themselves. Lethal deterrents such as firearms may only be used in defense of life. Anyone planning to carry a gun in polar bear terrain shall be properly trained.

Deterrents with the potential to harm or injure a bear, such as pencil and pistol launchers, should only be used by people trained and practiced in their use. Misuse of these devices can potentially harm a bear or person. Properly used, these devices may protect life and property.

Training

Battelle ARO provides inbriefs and pre-season training that includes polar bear awareness training. Training is based on curriculum from the US Fish and Wildlife Service (USFWS), Marine Mammals Management.

Bear Guards

Researchers may choose to hire a local guard to accompany their field teams. Researchers are responsible for identifying, hiring, and paying bear guards; Battelle ARO does not provide these services except in northern Alaska where bear guards are available through UIC Science.

If researchers do not have funding in their logistics grant to hire bear guards, they may be reimbursed via expense report if their request has prior approval through Battelle ARO/NSF. The researcher must provide an invoice and proof of payment submitted on an expense report.

Research groups may act as their own bear guards if they have proper firearms and polar bear awareness training. The use of deterrents requires an extra level of training and certification from the USFWS.

Specific reporting guidelines

Firearms may only be used against a polar bear in self-defense. It is generally considered illegal to shoot polar bears and actions should be taken to avoid killing the animals. Warning shots are authorized in some instances (check with local agencies) if there is a bear in the area. No one is authorized to shoot at a bear without Program Manager and NSF approval.

If a polar bear is killed, notifications depend upon the location. A detailed report, including photos and a description of events, shall be compiled and sent to the Program Manager and appropriate company leadership.