



U.S. Fish & Wildlife Service

Polar Bear Source Book for the Kaktovik Area

Arctic National Wildlife Refuge



June 2016

USFWS

Polar Bear Source Book for Kaktovik Area

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Polar Bear Source Book for Kaktovik Area

Arctic National Wildlife Refuge (Arctic Refuge, Refuge) surrounds Kaktovik, Alaska. The Refuge's lands and waters provide habitat important to polar bears for denning, feeding, resting, and seasonal movements. Arctic Refuge has regulatory responsibilities for commercial activities on waters surrounding Kaktovik. The U.S. Fish and Wildlife Service (USFWS) oversees the National Wildlife Refuge System, and has regulatory responsibilities for protecting polar bears wherever they exist in the United States, including within Arctic Refuge. With increasing numbers of people interested in viewing polar bears in Alaska, USFWS has developed this Polar Bear Source Book for the Kaktovik area. This source book is intended to insure that polar bears are not disturbed, so that opportunities for the public to enjoy, observe, and photograph these bears in the wild can continue. Whether you are a resident, researcher, commercial filmer, visitor, or employee, it is each individual's responsibility to insure that their activities around polar bears are safe and remain lawful. **This source book compiles in one location useful information that will help you understand your legal requirements and your stewardship obligations while in polar bear habitat.**

This source book is divided into six sections: Orientation (page 2), Safety (page 10), Viewing (page 18), Management (page 28), Contacts (page 47), and Appendix (page 48). If you have suggestions to improve this source book, contact Arctic National Wildlife Refuge Visitor Services Coordinator Jennifer Reed by phone (directly at 907-455-1835, or toll-free at 800-362-4546) or by email (directly at jennifer_reed@fws.gov or by contacting the Refuge at arctic_refuge@fws.gov).

Part I: Orientation

This section of the source book provides the basis for understanding your responsibilities to polar bears when using the north coast of Alaska in the Kaktovik area. Polar bears are protected by federal laws wherever they occur in the United States. Primary federal laws and regulations that influence how people use areas where polar bears may be encountered include Coast Guard regulations, the Endangered Species Act, the Marine Mammal Protection Act, and the National Wildlife Refuge System Administration Act.

Federal laws and regulations are implemented in ways that a) enhance collaborative management; and b) encourage public participation in addressing concerns about polar bears.

Municipal laws that influence how people use areas where polar bears might be encountered may apply as well. Local governments should be contacted directly for this information. Though Arctic Refuge lands surround a broad area outside of the community of Kaktovik, private lands surround the immediate area. Maps are available at <http://www.fws.gov/alaska/nwr/realty/map/> that illustrate where Arctic Refuge jurisdiction applies (on bays and lagoons surrounding Kaktovik), and where local municipal decisions apply. The diagram on page 4 and key on page 5 illustrate, for the Kaktovik area, the diverse range of entities with decision-making responsibilities concerning people and polar bears.

The "Kaktovik Visitor Information" pamphlet on pages 6 and 7 provides a convenient list of community resources, contact information, and a map for locating the City of Kaktovik, Kaktovik Inupiat Corporation, and the Native Village of Kaktovik offices.

A basic set of guidelines and polar bear information has been developed by local authorities for people visiting the community of Kaktovik. These "Kaktovik Guidelines" appear on pages 8 and 9. In addition, German and Japanese language versions are available in the appendix at the end of this booklet (pages 49-56).

What general activities are allowed near polar bears?

A- General recreational viewing. It is legal to view and photograph polar bears for recreational purposes. It is illegal to disturb them. Information appears on page 19.

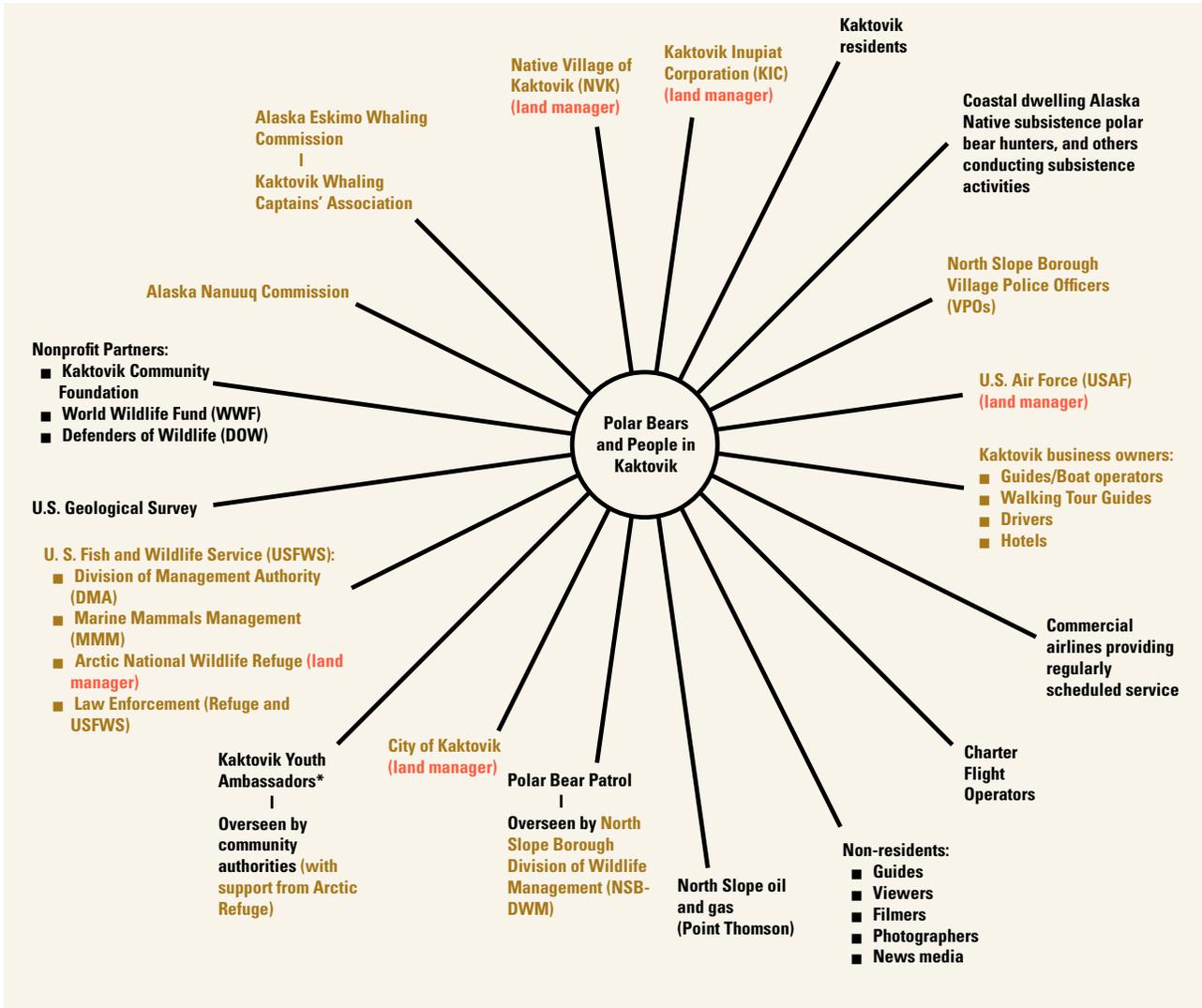
B- Commercially-led viewing. It is legal to provide polar bear viewing guide services on Refuge waters if authorization is obtained before activities occur. Information appears on page 20. For land areas, contact land owners to seek authorization.

C- Commercial or educational photography. A and B above apply; a permit may be required from U. S. Fish and Wildlife Service. Information appears on page 21.

D- Subsistence harvest of polar bears. It is legal for coastal dwelling Alaska Natives to harvest polar bears as outlined under the Marine Mammal Protection Act (see page 24).

Polar bear mother and yearling - USFWS





Entities and authorities with direct decision-making responsibilities for issues affecting polar bears and people:

Native Village of Kaktovik (NVK) (land manager), the governing body of the Kaktovik Village (aka Barter Island) Tribe, offers local services through the tribal government, non-profit Native organizations such as the **Kaktovik Community Foundation**, and by grants and contracts with state and federal agencies. NVK helps oversee the **Kaktovik Youth Ambassadors** program, which provides education to visitors about polar bear safety and community concerns.

Kaktovik Inupiat Corporation (KIC) (land manager) develops economic opportunities for its shareholders and has a role in decision-making about managing filming/viewing occurring on Corporation lands.

North Slope Borough Village Police Officers (VPOs) respond to calls for service, provide community education, and are often the first personnel notified of a crisis, and the first to respond. When the **Polar Bear Patrol** (coordinated by the North Slope Borough Department of Wildlife Management) cannot respond, community members contact the VPOs.

U.S. Air Force (USAF) (land manager), seeks a community-based approach to monitoring public use of U.S. Air Force property. They have an interest in supporting education about human-bear conflicts and community-led efforts to manage polar bear filming/viewing in and around Kaktovik.

Kaktovik business owners orient, house, feed, and transport visitors. Business owners distribute information from U. S. Fish and Wildlife Service and local entities about polar bear viewing.

North Slope Borough Department of Wildlife Management (NSB-DWM) helps involve residents in management of local wildlife. They work to keep wildlife resources at healthy population levels so residents can continue subsistence activities. The NSB-DWM coordinates the **Polar Bear Patrol**.

The **City of Kaktovik (land manager)** is a municipal government that passes ordinances that benefit Kaktovik residents, funded primarily through grants and gaming profits. The City of Kaktovik engages local leaders/businesses in collaboration to achieve effective management of filming/viewing, and helps oversee the **Kaktovik Youth Ambassadors** program.

The **U. S. Fish and Wildlife Service (USFWS)** works with others to protect and conserve wildlife and their habitats. Within the Service:

Arctic National Wildlife Refuge (land manager) surrounds Kaktovik. Refuge staff conducts biological studies, manages Refuge wildlife and habitats, develops public information about polar bear viewing, helps orient visitors who come to see polar bears, and helps oversee the **Kaktovik Youth Ambassadors**.

Marine Mammals Management (MMM) is responsible for conservation/management of sea otters, walrus, and polar bears. The Marine Mammal Protection Act and the Endangered Species Act provide direction for MMM's activities.

Division of Management Authority (DMA) implements domestic laws and international treaties to promote long-term conservation of global fish and wildlife resources. Because the polar bear is protected by laws and treaties, some human activities such as marine mammal filming/photography are regulated by DMA.

Law Enforcement is conducted by officers working primarily to preserve Refuge resources, and by officers whose priority is to enforce national/international treaty laws for protected species including polar bears.

The **Alaska Nanuuq Commission** is a partner to the USFWS in the co-management of polar bears. The Commission represents Alaska Native people from coastal communities, including Kaktovik, on matters related to polar bear subsistence and conservation.

The **Alaska Eskimo Whaling Commission** represents subsistence whalers in Alaska. Locally, the **Kaktovik Whaling Captain's Association** makes decisions concerning bowhead whale harvest, including management of whale remains which attract polar bears to Kaktovik.

Visitors to Arctic Refuge:

Arctic Refuge lands and waters are managed for all Americans by the U.S. Fish and Wildlife Service, a federal agency within the U.S. Department of the Interior:

The Refuge was created in 1960 “For the purpose of preserving unique wildlife, wilderness and recreational values...”

Wildlife- and wilderness-oriented public uses at the Refuge include hiking, camping, river floating, wildlife viewing, photography, fishing and hunting.

Please **minimize your impacts on the Refuge by following the guidance provided in the Refuge’s pamphlet “Strategies for Minimizing Your Impacts.”** Leave natural objects and artifacts where you find them unless you have a pre-approved collecting permit from the U.S. Fish and Wildlife Service.

For more information about planning your trip to Arctic Refuge please visit <http://arctic.fws.gov/> or call 800-362-4546.



Mixed flock of waterfowl on Arctic Refuge coastal plain.

Visitors to Kaktovik:

The community of Kaktovik on Barter Island is managed by various governing groups. Each plays a key role addressing community and visitor needs.

Recent increases in the number of visitors, and the number of polar bears using coastal habitat, are straining the community. The peak visiting season coincides with community-based whaling activities, exacerbating the burden on the community.

Visitors and their service providers should minimize their demands on the community by learning about orientation opportunities, by reading the public notifications that provide guidance to visitors, and by following respectful practices. “Kaktovik Guidelines for Community Visitors” and other information sheets are widely available throughout the community.

For more information, see the “Polar Bear Source Book for Northeast Alaska.”



September 2015

Artwork by Flora Rexford of Kaktovik

Kaktovik

Visitor Information



There are no youth hostels, home stays or public campgrounds available on Barter Island. Limited options exist for visitors to purchase rooms, meals and showers. Tent spots may be available seasonally and on a limited basis. Please be respectful of the community by being aware of private lands in and surrounding Kaktovik, and by removing your trash. If you are on private lands, get permission to set up camp. It is prudent to ask a resident of Kaktovik for an appropriate camping location.



Governmental Organizations:

City of Kaktovik Office and Community Center 1

640-6313
Office hours 8:30-5 (public hours vary)

Kaktovik Inupiat Corporation (KIC) Administrative Offices 2

640-6120
Office hours 9-5 (closed for lunch)

Native Village of Kaktovik (NVK) 3

640-2042
Office hours 9-5 (closed for lunch)

North Slope Borough (NSB) Public Works 4

640-6128
Office hours 8:30-5 (closed for lunch)

U.S. Fish and Wildlife Service Residence 5

(Fairbanks office 1-800-362-4546)
No permanent staff in Kaktovik

Medical and Emergency Information:

NSB Fire Department 6

640-6212 (non-emergency)
call 911 after hours (rings in Barrow)

NSB Police Department 7

640-6911 (non-emergency)
call 911 after hours (rings in Barrow)

NSB Tom Gordon Health Clinic 8

640-6413
Clinic hours 1-4 walk-ins Monday-Friday
call 911 after hours (rings in Barrow)

Places of Worship:

Assembly of God Church 9

Sunday Services 11am and 7pm
Wednesday Service 7pm (All in English)

Presbyterian Church 10

Sunday Services 11am (English)
and 7:30pm (Inupiaq)

Services available during summer season:

City of Kaktovik 1

640-6313
Services: sale of clothing and local artwork

Ravn Alaska 18 (located at Waldo Arms Hotel)

640-7902 (local agent)
or 800-866-8394 (reservations)
Services: flight services

KIC Fuel Office 11

640-6011
Services: fuel, machine parts, camping supplies

KIC Kikiktak Store 12

640-6520
Services: general store, groceries, some clothing

KIC Marsh Creek Inn 13

640-5500
Services: hotel rooms, meals, showers, baths

NSB Kaktovik Mayor's Office & Planning Dept. 14

640-6329
Services: public internet access (first priority to
Ilisagvik College students)

NSB School District Kaveolook High School 15

640-6626
Services: open gym, library

Sims Store 16

640-6615
Services: general store, groceries, some rentals,
local artwork

U.S. Post Office 17

Window hours: 8:30-4 (closed for lunch)
Mail drop: 24 hours

Waldo Arms Hotel 18

640-6513
Services: hotel rooms, meals, showers, equipment
rental, flight services (air charters and
commercial airline agent)



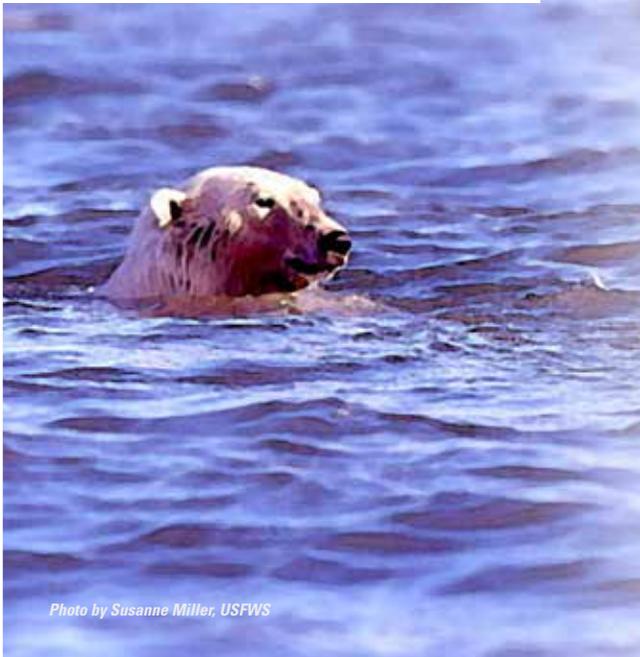


Photo by Susanne Miller, USFWS

Kaktovik Guidelines for Viewing Polar Bears

**It is legal to view and photograph polar bears.
It is unsafe and illegal to disturb polar bears.**

- Review bear safety information before coming to bear country (at <http://arctic.fws.gov/visitors.htm>).
- View bears only during daylight hours. Be in a group and in a vehicle or boat.
- Respect bears' personal space—avoid close encounters.
- Approach slowly with minimal noise, lights, or movement.
- Stop your approach if a bear notices you. Allow it to resume what it was doing before you proceed.
- Do not herd, follow, or chase bears.
- Do not feed or otherwise attempt to attract bears.
- Do not get between a mother and her cubs.
- Allow swimming bears to pass.
- Do not allow bears to make contact with you or your vehicle or boat.

Respect bears. Your proper conduct will ensure that polar bear viewing opportunities can continue in the future. Thank you for your efforts!



Photo by Susan Gordon
Kaktovik Polar Bear Committee drawing by Flora Rexford

Kaktovik Guidelines for Community Visitors

- Please be conscientious when visiting our community. We welcome safe and respectful viewing of polar bears and whaling activities.
- Take photos from a distance. Obey barriers set to ensure safe viewing.
- To continue the community's traditional food-gathering activities, federal law permits community members to hunt bowhead whales. Please respect these traditional activities by staying out of the way during butchering.
- When you view polar bears, use a trained guide. This will ensure safe conduct that obeys federal polar bear protection laws.
- It's OK to purchase handcrafted items made from marine mammals. The Marine Mammal Protection Act allows only Native Alaskans to sell handcrafted items made of marine mammal parts. Except for these handcrafted items, it is illegal for non-Natives to possess, transport, or sell marine mammal products. Check to ensure that *import* of marine mammal parts into your country is legal.

Respect our community. Your proper conduct will ensure that polar bear and whale viewing opportunities can continue in the future. Thank you for your efforts!

About Polar Bears

Polar bears have an important place in the cultural traditions of Alaska Natives, who recognize the bears' amazing strength, hunting ability and stealth.

Residents and visitors have a unique opportunity to see polar bears in Kaktovik. These bears are part of the Southern Beaufort Sea population, estimated at 1,500 animals. This population uses an area extending more than 800 miles along the north coast of Alaska and Canada. Polar bears prefer to be on ice but as it diminishes each summer and fall the bears come to the coast surrounding Kaktovik to rest, feed, wait for the ice to re-form, and sometimes to den and give birth.

At Barter Island, polar bears on land may encounter brown bears. Polar bears are much larger than brown bears. Adult male polar bears typically measure 8 to 9 feet from nose to tail and can weigh up to 1,320 pounds. Adult female polar bears are typically about half the size of males. Despite their larger size, polar bears are often displaced by brown bears when feeding at the bone pile.

Polar bears are specially adapted to the Arctic environment. Bears have white coloration for camouflage; water repellent guard hairs and dense underfur; black skin for absorbing warmth; small "suction cups" on the soles of their feet for traction on slippery ice; teeth specialized for a meat-eating rather than a meat-and-plant diet; and the ability to store large amounts of fat when food is available and then use it later when food is scarce. Polar bears primarily eat ringed seals but they also hunt bearded seals, walrus, and beluga whales, and will scavenge beached carcasses they find along the coast.

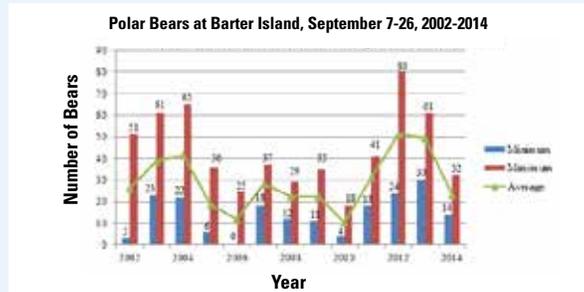
Polar bears generally live alone except when concentrating along the coast during the open water period, or when mating or rearing cubs. Pregnant females spend late October or November until late March or April in winter dens. Other polar bears do not usually den, and are active year-round. Polar bear dens are often located on land in areas where snow accumulates, such as along the coastal bluffs and river banks surrounding Kaktovik. Dens may also be excavated in pressure ridges on sea ice.

Pregnant bears give birth to 1 to 3 tiny, helpless and almost hairless cubs in mid-winter. Mother and cubs are protected within a snow den that provides relative warmth and stable temperatures, where the mother nurses and cares for her young until March or early April. Once the family emerges they move onto sea ice, where the cubs learn to hunt. Cubs stay with their mother for approximately 2½ years.

Denning is an important time for the developing polar bear cubs. Winter den disturbance can cause den abandonment and cub death. Viewing polar bears within winter denning habitat is not recommended.

A warming climate is causing the disappearance of arctic sea ice, leaving wide stretches of open water the bears must swim across when traveling between ice and land. It is common for bears to rest on land without moving for days after completing such long-distance swims. Stay away from such bears and let them rest undisturbed.

Polar Bear Numbers on Barter Island



- Polar bear counts from 2002 to 2014 are variable. They don't show a clear trend at this time.
- Polar bears of all ages and both sexes use Barter Island. This area may be especially important for nutritionally stressed bears.
- Polar bears typically arrive at Barter Island in August and remain until October when the ocean freezes. Count dates were established in 2002 to estimate the number of bears using subsistence-harvested whale remains.
- Continued monitoring is needed and is on-going.

Why Polar Bears Visit Barter Island

- During fall, the highest density of polar bears along the north coast of Alaska and western Canada occur around Barter Island.
- The number of polar bears on shore seems to be closely correlated to the distance of ice from shore. Reductions in sea ice could result in increasing land use by polar bears.
- One reason polar bears are attracted to Barter Island is because of the subsistence whale carcasses here.
- Another reason polar bears are attracted here may be because the density of ringed seals, one of their preferred foods, is higher here than elsewhere along the coast. The ice freezes here first in the fall, providing a good platform from which they can hunt for the seals.

Part II: Safety—Reducing Conflicts Between Humans and Polar Bears

This section of the source book contains three documents providing general information useful to travelers and residents in northeast Alaska about how to minimize conflicts with polar bears. Whether you need to become aware of bear behaviors and learn how to respond to bears in the event of a close interaction (pages 11-12), are seeking trip planning advice (pages 13-14), or are curious about how people working in polar bear habitat minimize interactions and conflicts with polar bears (pages 15-17), this section summarizes best practices for safety.





U.S. Fish & Wildlife Service

Polar Bears and Humans Safety Guidelines

Polar bear density in Alaska is highest during fall months when polar bears aggregate along the coastline. Due to changing ice conditions the U.S. Fish and Wildlife Service (FWS) anticipates that polar bear use of the coast will increase during open-water seasons (June through October). During this time many villagers engage in subsistence activities, and more people are engaging in polar bear viewing opportunities. Increasing numbers of visitors to Barrow and Kaktovik to view polar bears increase potential interactions between humans and polar bears. Polar bears are naturally curious and predatory which are factors that increase risk to humans.

The purpose of these guidelines is to minimize polar bear-human interactions and maximize the safety of both humans and polar bears, so each can continue to live safely in the Arctic environment.

FEDERAL LAW REGARDING POLAR BEAR-HUMAN INTERACTIONS

Polar bears are protected under the Marine Mammal Protection Act (MMPA) which prohibits take of any marine mammal.

Take is defined under the MMPA as: "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal." This includes feeding or attempting to feed a marine mammal in the wild.

Level A Harassment is: any act of pursuit, torment, or annoyance which has the potential to injure a polar bear.

Level B Harassment is defined as: any act of pursuit, torment, or annoyance which has the potential to disturb a polar bear by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.

This means that any change in a polar bear's natural behavior that is a result of your presence in proximity to the animal can be considered level B harassment, and is unlawful.



A mother protecting her cubs may display defensive behavior by huffing or snapping her jaws.

Some exceptions are:

- Take for subsistence purposes, as long as take is not wasteful. The hunter is required to have the hide and skull tagged within 30 days. Harvest taggers are located in coastal villages to help.
- Authorized harassment of bears (deterrence) by government officials (i.e. North Slope Borough Polar Bear Patrol) is permissible as long as it is done in a humane manner and is for the welfare of the bear, the public, or non-lethal removal of nuisance animals that pose a risk to public safety.
- Defense of life take is only permissible if such taking is imminently necessary in self defense or to save the life of a person in immediate danger, and such taking is reported to FWS within 48 hours. Public officials have the authority to use lethal methods to protect the public from polar bears, and may do so when all reasonable steps to avoid killing the bear(s) have been taken.
- Scientific research such as polar bear population surveys, ecology studies etc. can be authorized.

- Photographing polar bears in the wild is permissible if no take occurs. If such activity is for educational or commercial purposes and could result in Level B harassment (disturbance), a permit is required.

Polar bears are also listed as a "threatened" species under the Endangered Species Act. This designation does not alter the definitions or exceptions of take outlined above under the MMPA.

GUIDELINES FOR LIVING IN POLAR BEAR COUNTRY

Most polar bears avoid people and have historically inflicted few human injuries and fatalities. However, the combination of curious and occasional sudden aggressive behavior creates the potential for human injury. In addition, polar bears spending extended periods of time on land without an adequate food source may be nutritionally stressed animals and potentially more dangerous.

In general, polar bears will react to humans by avoiding them, exhibiting curious behavior, treating them as other bears, or attempting to prey on them. The closer that humans are to polar bears, the more dangerous the situation because of the increased likelihood that the polar bear(s) will feel threatened. This could result in an attack. Unprovoked predatory attacks on humans are rare but do occur. The following guidelines may help reduce the risk associated with living in polar bear country.

Remain undetected

The best way to avoid detection by a polar bear is to be alert and detect the animal before it detects you. Be particularly alert in areas where bears are likely to occur: near open water leads, at whale or other marine mammal carcass sites, along coastal and river bluffs, or in the vicinity of fresh tracks.

- Avoid traveling alone;



SUSANNE MILLER, USFWS

Sub-adults may display curious behavior: moving head around to catch scents, ears forward, stopping frequently.

- When in coastal areas, remain vigilant and be aware of your surroundings;
- Stay down-wind from known polar bear aggregation sites to avoid detection.

Avoid close interactions

Viewing animals should be accomplished without the animal's awareness of your presence. Little information is available regarding what constitutes a safe viewing distance. Polar bears are individualistic and react differently to both noise and human presence. A general rule of thumb is that the closer you are to the animal, the more likely you are to disturb it.

- Use binoculars and high powered scopes to avoid approaching too closely;
- Be aware that when on land bears typically rest during day and become more active during dusk, night, or dawn hours.

Avoid pursuing polar bears

Harassment or pursuit of polar bears is prohibited by law.

- Never attempt to herd, chase, or separate groups of polar bears;
- Using motorized vehicles, including boats, to view bears should be avoided if it results in unnatural behavior by bears.

Minimize attractants

Polar bears will investigate anything out of the ordinary as a possible food item. The presence of attractants are likely to increase the chances of having close bear-human interactions. If a bear learns to associate food with humans, it is likely to attempt obtaining food from humans in the future. A polar bear that receives a food reward is very likely to return.

- Do not let bears associate food with humans;
- Maintain a clean camp or residence; remove attractants such as food, garbage, animal carcasses, sewage, gray water, anti-freeze, or petroleum products;
- Store food or attractants in bear-resistant containers or locations;
- Avoid carrying food or items with strong odors when traveling in bear country.

Be Aware of Bear Behavior

Ensure that your actions do not cause a change in behavior of a polar bear. Since individual animal's reactions will vary, carefully observe all animals and leave the vicinity if you see signs of disturbance. Polar bears that stop what they are doing to turn their head or sniff the air in your direction may have become aware of your presence. These animals may exhibit curious, threatened, or predatory behavior.

- Curious polar bears typically move slowly, stopping frequently to sniff the air, moving their heads around

to catch a scent, or hold their heads high with ears forward.

- A threatened or agitated polar bear may huff, snap its jaws together, stare at you (or object of threat) and lower its head to below shoulder level, pressing its ears back and swaying from side to side. These are signals for immediate withdrawal. If ignored, the polar bear may charge. Threatened animals may also retreat, withdraw, or run away.
- Predatory behavior may involve a polar bear that is sneaking or crawling up on an object it considers prey. Another form of predatory behavior is a bear that is approaching in a straight line at a constant speed without exhibiting curious or threatened behavior. This behavior is indicative of a bear about to attack.

WHAT TO DO IF YOU HAVE A CLOSE ENCOUNTER WITH A POLAR BEAR

If a polar bear detects and approaches you, get out of the way if you are in the bear's path, or between a mother and her cubs. If the animal continues to approach and you are in a vehicle, leave the area. If no vehicle is available, slowly move to a safe shelter. If no safe shelter is available, do not run; stand your ground. Gather people together in a group and/or hold a jacket over your head to look bigger. If the bear continues to approach, shout or make noise to deter the bear.

If a polar bear attacks in a predatory manner and no safe shelter is available, defend yourself. If the attack is by a female defending her cubs, remove yourself as a threat to the cubs; fight back if the attack turns predatory.

The future of polar bears is uncertain due to the combination of climate change effects and human-caused mortality. We encourage everyone to seek non-lethal methods of avoiding bear-human conflicts. This may help ensure polar bears are here in the future.

U.S. Fish & Wildlife Service
1 800/344 WILD
<http://www.fws.gov>

December 2009

For more information please contact:
Craig Perham or Susanne Miller
1 800/362 5148
Craig_Perham@fws.gov
Susanne_Miller@fws.gov

U.S. Fish & Wildlife Service
Marine Mammals Management Office
1011 East Tudor Road
Anchorage, AK 99503

Visit the Marine Mammals home page:
<http://alaska.fws.gov/polarbear>



U.S. Fish & Wildlife Service

Traveling Safely Along the Northeast Alaska Coast:

Sharing the Land with Polar Bears while visiting Arctic National Wildlife Refuge

Polar bear viewing can be a dangerous activity. It is safest to view bears where bear viewing is an expected and managed practice, such as guided excursions from Kaktovik on Barter Island. For information about best practices for polar bear viewing near Barter Island, Alaska, see <http://go.usa.gov/39Zg5>.



*Polar bears on the Arctic Refuge coast
- USFWS photo*

Polar bears should always be treated with respect and caution. They are large, powerful carnivores that can injure and kill people. Media images of people behaving inappropriately around bears can mislead visitors into thinking risky human actions are safe and have no detrimental impacts on bears. Such mistaken impressions can pose a risk to people and to bears.

This information page helps recreational visitors think about ways to avoid interactions with polar bears while passing safely through the bears' coastal habitats. Visitors to Arctic Refuge are generally aware of the risks associated with wildland pursuits, and commonly plan long, remote routes allowing them to test their mettle in extreme wilderness. Yet there are some difficulties no one should willingly face—such as interacting with a polar bear—no matter how energetic and resilient they are.

Because polar bears are protected under the Marine Mammal Protection Act and Endangered Species Act, every recreational visitor has a responsibility to try to avoid encounters with polar bears. Travelers along the coast of northeast Alaska may now encounter polar bears any month of the year. If you are planning a visit to Arctic Refuge that includes travel along the coast away from structures, use the following practices to minimize your chances of disturbing polar bears; to increase the chances of your safe passage; and to prevent having to kill a polar bear in defense of life.

Be aware of the situation:

- Encountering polar bears is likely while traveling along the Refuge coast because polar bears are increasing their coastal use due to arctic warming and loss of sea ice. (For information about the life history of polar bears, their status, threats to the species, and their management, see <http://go.usa.gov/39Z44>.)
- Polar bears are protected from disturbance by the Endangered Species Act and the Marine Mammal Protection Act. Minimizing your interactions with polar bears is key to avoiding their disturbance and to enjoying an adventure free of human-bear conflicts.
- Close proximity to bears may lead to the injury or death of people or bears. These outcomes are tragic for people and harmful to bear conservation goals.
- Proper conduct around bears requires sorting through inaccurate information and false notions about bears, and using practices recommended by human-bear conflict management specialists based on their observations of bear behavior. Responsible reactions to bears will vary across bear species, among different areas for the same species, among individual bears at the same location, and even at different times for the same individual bear.

Before you go:

- Learn about responsible trip preparation, practices recommended by human-bear conflict management specialists, and characteristics of bear behavior. An educational video about safety in polar bear country can be viewed on request in Fairbanks, Alaska. Contact Arctic Refuge (call 800-362-4546) if you'd like to arrange a time to view the video before you embark on your trip. For web-based safety guidelines and information about bear behaviors see <http://go.usa.gov/39Z4k>.
- Plan your route to avoid camping in coastal areas mid-July through October. Polar bears are increasing their use of the shoreline. It may no longer be possible to avoid polar bear encounters if you plan a coastal trip during these months.
- Increasing your distance from Barter Island when traveling the coast may reduce

your likelihood of encountering bears. (For information about minimizing interactions with polar bears at Barter Island, see <http://go.usa.gov/39ZDG>.)

- If you must rely on coastal access or egress to accomplish your intended route, make arrangements to minimize the group's time in coastal areas. Travel on the coast only when absolutely necessary.
- If you are committed to using coastal areas, plan a group size that minimizes surprises by allowing for 24 hour bear monitoring, and incorporate camp and travel practices that heighten the group's situational awareness.
- Before your trip, develop and review a group safety plan, and make sure each participant knows how to respond if a bear approaches in a curious, nervous, threatening, or aggressive manner.
- Bring, and know how to properly operate and maintain, bear-resistant storage containers and other equipment, such as binoculars, noise makers, and bear pepper spray, that will help you avoid or end interactions. Use caution when relying on electric fences. They often fail when placed in the dry, unstable soils found along the coast.

While on land at or near the coast:

- Avoid attracting bears. Use bear-resistant storage containers for food and trash to prevent bears from becoming food-conditioned. Food conditioning is generally dangerous for both people and bears. The bear can become more aggressive in its search for food, and nearby people are more likely to find themselves in conflict with the bear.
- Avoid camping on bear travel routes such as beaches, barrier islands, or areas of decreased visibility like fresh water outlets or bluff-edges.
- Locate overnight camps inland. Based on known patterns of land use by polar bears, camping just a mile or two inland will dramatically decrease the chance your camp will be in the path of a polar bear. Be aware, however, that camping inland or along the coast can result in an encounter with a brown bear. Therefore, take bear awareness and conflict-avoidance precautions regardless of where you camp.

- Regularly discuss and rehearse among your group how to interpret and respond to polar bear behaviors, such as how to respond if you spot a bear one mile, 100 meters, or 10 meters away; how to respond if you spot a bear while you are traveling versus a bear coming into camp; and what to do if a bear repeatedly comes into camp.
- Stay within earshot of your group; talk, watch, and listen frequently; be aware of wind direction; and be prepared to respond if your group surprises a bear. Be aware of near-shore ice conditions and the presence of seals, beachcast carcasses, or other attractants that may influence bear movements.
- Consider assigning a dedicated observer to watch for bears if your group is active during low light conditions. Consider sleeping in shifts and posting a guard who will alert others to a nearby polar bear when your group rests. Cooler evening temperatures correlate with more active bear activity, and bears may be more apt to move into your area during night-time hours.

If you have an interaction with a polar bear:

When a person and bear are both aware of each other, how you react can either attract or deter a bear's curiosity. Your group's goal should be to prevent any interaction from escalating into an incident.

Depending on the circumstances, the interaction may require nothing more than your patient and calm attentiveness to the situation, allowing the bear to wander away from your area. Or, your group may simply change its travel path to increase the distance between you and the bear.

When interaction turns into incident:

An incident occurs when you need to take actions to respond to a bear's behavior. Your group's goal should be to protect human life while minimize the duration and negative consequences of the incident. Resolve the situation non-lethally if possible.

Consider the range of actions you could take. Start with the least aggressive options, such as using noise makers, grouping together, yelling or clapping, or deploying air horns. Bear pepper spray is effective—but only at close range and with favorable wind conditions. With wise use of deterrents, your group may

be able to de-escalate the incident by keeping bears from making contact with your camp items, and by eventually increasing distance between you and the bear.

If defense of life becomes necessary:

It is legal for you to kill a polar bear in self-defense or to save the life of a person in immediate danger. However, polar bears are protected by laws to minimize their disturbance. If you kill a polar bear, you will be required to document the circumstances leading up to, and immediately surrounding, the death of the bear, including documentation of the preventive methods you used to de-escalate the conflict in advance of killing the bear.

You must report the defense of life killing of a polar bear to the U.S. Fish and Wildlife Service (USFWS) within 48 hours by calling 800-362-4546 and asking to speak to the Arctic Refuge Manager; calling 800-362-5148 to reach USFWS Marine Mammals Management and asking to speak to someone in the Polar Bear Program; or calling 907-883-9409 to speak to a USFWS law enforcement officer. If you must leave messages at any of these numbers, provide your name, contact information and location so you can be reached to provide additional information about the incident.

Did you know?

- The Endangered Species Act and Marine Mammal Protection Act allow Native coastal-dwelling peoples to harvest polar bears for subsistence, recognizing the cultural importance of this traditional use. The Marine Mammal Protection Act also designates Alaska Native co-management partners for polar bear conservation. Their involvement helps ensure a responsible harvest.
- The North Slope Inupiat and Canadian Inuvialuit peoples have a voluntary agreement to harvest polar bears in a responsible manner.
- If, while traveling the coast you encounter a dead polar bear, learn what you can do at <http://go.usa.gov/39ZZ9>.
- Federal law identifies wildlife viewing as a priority public use on Refuges if it does not disturb wildlife. Polar bear biologists and land managers work to accommodate public uses while supporting polar bear conservation.
- Authorized commercial photographers, and commercial service providers who offer guided polar bear viewing on waters surrounding Barter Island, are required to adhere to Refuge permit conditions. These conditions ensure polar bears are not disturbed, and require permit-holders to comply with recommended viewing practices.



Camping inland from the coast of Arctic Refuge - USFWS



Threatened and Endangered Species **Human-Polar Bear Safety and Interaction Plans**

Site-specific human-polar bear safety and interaction plans are an essential project component for those working in polar bear habitat. Goals of these plans are to 1) minimize the occurrence of human-polar bear interactions at a particular camp or work site; 2) minimize the chance that human activities interfere with the essential life functions of polar bears (e.g., breeding, feeding, denning); 3) minimize the severity of interactions should they occur; and 4) ensure the safety of humans and polar bears (*Ursus maritimus*).

What legal statutes protect polar bears?

In the United States, the polar bear is protected under the Marine Mammal Protection Act (MMPA). Additionally, due to threats to its sea ice habitat, on May 15, 2008 the Service listed the polar bear as threatened throughout its range under the Endangered Species Act (ESA). The polar bear also receives protection under the Convention on International Trade in Endangered Species of Wildlife Fauna and Flora (CITES) of 1973.

When and where do polar bears occur most frequently on land in Alaska?

In Alaska, polar bears occur on land and barrier islands most frequently during fall and winter when some abandon melting sea ice, search for food, (e.g., whale carcasses), or search for suitable den sites (pregnant females). Most polar bears occur along the coasts of the Beaufort and Chukchi Seas, but polar bears can occur infrequently along the Bering Sea south of Nome and on Saint

Lawrence Island. Polar bears may remain along the coast or on barrier islands for several months until sea ice returns. From about October through April, snow drifts on bluffs and in drainages within approximately five miles from the Beaufort and Chukchi Sea coasts provide denning habitat for females and their offspring.

What factors influence the likelihood and severity of human-polar bear interactions?

A *human-polar bear interaction*, defined as an occurrence when a person and polar bear are mutually aware of each other, can occur at any time within polar bear habitat. Several factors such as project location, timing, and duration contribute to the likelihood of a human-polar bear interaction occurring. The likelihood is greatest for long-term activities occurring on the Beaufort and Chukchi Sea coasts or barrier islands during autumn. Other factors that may influence the likelihood of interactions are the breeding status, age, and health of a bear.

If a polar bear does not avoid humans it has detected, a *human-polar bear conflict* could occur. A *human-polar bear conflict* is defined as a situation in which when a polar bear exhibits stress-related or curious behavior that causes a person to take extreme evasive action, makes

physical contact with a person, exhibits clear predatory behavior, or is intentionally harmed or killed by a person. This is especially true of polar bears that have learned to associate humans with food. Human-polar bear interactions can escalate to conflicts in situations where bears approach people that cannot shelter in hard-sided structures, such as while camping in a tent.

Who needs a human-polar bear safety and interaction plan?

We recommend those working within five miles of the Alaskan arctic coast from the Canadian border to Point Hope or one mile of the western coast from Point Hope to Nome develop a human-polar bear interaction plan; those working on the coast of St. Lawrence Island should also form a plan.

Components of a Human-Polar Bear Safety and Interaction Plan

The goal of a human-polar bear safety and interaction plan should be to *first* minimize the likelihood of



interactions occurring, *then* to minimize the severity of such interactions should they occur. Implementation of these plans, therefore, can help minimize the frequency and consequences of human-polar bear interactions.

Effective plans consider appropriate site/camp placement and design, best management practices for operations/activities, and polar bear interaction and deterrence procedures. Plans should be developed for each work or camp site and provide direction for safely performing on- and off-duty activities. Potential plan components are described below.

Site Placement

- Place camps and work areas one mile from polar bear high-use areas such as coastal beaches and barrier islands. If camps have to be placed on the coast, develop a site design that minimize human-bear interactions (see below).
- From October through April (denning season), place camps one mile from river drainages with

steep banks and bluffs.

Site Design

- Have a designated safe area to gather if a bear approaches camp or work areas.
- If work and camp activities are co-located (e.g., on a pad) ensure living quarters are centrally located.
- Avoid creating corners and areas where bears may feel trapped or workers may become trapped by a bear.
- Design and orient pads to minimize snow drifts.
- Devise snow management and lighting strategies that ensure good visibility and facilitate early bear detection.
- Use electric or other fences that exclude bears from work and living areas, but recognize that fences are not fail-safe and awareness within or outside fences is necessary.
- Store food (camp pantry) in a protected area away from the living quarters.
- Locate incinerator outside of

living area, and incinerate appropriate trash on site.

Best Management Practices

Attractants management

- Sewage/waste, garbage, food, deliberate feeding, animal carcasses, and oil/fuel/anti-freeze can attract polar bears.

To minimize attractants:

- Maintain a clean camp and/or worksite;
- Devise an attractants management strategy such that their storage, handling, and disposal minimizes access by bears (on-site incineration, use of bear-proof containers, dumpsters, etc.);
- Fly unnecessary attractants out on a regular basis (i.e., garbage, animal carcasses, excess anti-freeze or petroleum products); and/or
- Avoid carrying bear attractants (such as strongly scented snacks, fish, meat, or dog food) while away from camp; if you must carry attractants, store them in air-tight “bear-resistant” containers.

If a polar bear is encountered:

- Do not approach polar bears. Remain calm and avoid making sudden movements. Seek the shelter of a hard-sided enclosure such as a vehicle or building. Stay downwind if possible to avoid allowing the bear to smell you. Allow bears to continue what they were doing before you encountered them. Slowly leave the vicinity if you see signs that you’ve been detected. Generally, the closer you are to the animal, the more likely you are to change its behavior, and “safe” distances will vary with each bear and situation. If a polar bear detects you, observe its behavior. Polar bears that stop what they are doing to turn their head or sniff the air in your direction have likely become aware of your presence. These animals may

exhibit various behaviors:

- *Curious* polar bears typically move slowly, stopping frequently to sniff the air, moving their heads around to catch a scent, or holding their heads high with ears forward. They may also stand up.
- A *threatened or agitated* polar bear may huff, snap its jaws together, stare at you (or the object of threat) and lower its head to below shoulder level, pressing its ears back and swaying from side to side. These are signals for you to begin immediate withdrawal by backing away from the bear without running. If this behavior is ignored, the polar bear may charge, especially if you are between a mother and its cubs. Threatened bears may also retreat.

- In rare instances you may encounter a *predatory* bear. It may sneak or crawl up on an object it considers prey. It may also approach in a straight line at constant speed without exhibiting curious or threatened behavior. This behavior suggests the bear is about to attack. Standing your ground, grouping together, shouting, and waving your hands may halt the bear’s approach.
- If a bear continues to approach after you have attempted to withdraw from the situation, stand your ground. Gather people together in a group and/or hold a jacket over your head to look bigger. Shout or make noise to discourage the approach. If a single polar bear attacks, defend yourself by using any deterrents available.



In spring, females create “push ups” when emerging from dens. Family groups may use den sites for several weeks before abandoning them.

Increasing Awareness in Polar Bear Habitat

- Devise protocols for safely performing on- and off-duty activities in polar bear habitat.
- Polar bears typically rest during day and become more active during dusk, night, or dawn. Plan activities with this in mind.
- Avoid surprising a bear. For example, prior to landing/docking on barrier islands or other coastal areas, survey the area to ensure polar bears are not present. Be vigilant, especially on barrier islands, in river drainages, along bluffs, near whale or other marine mammal carcasses, or near fresh tracks.
- Develop a site-specific safety education/training program for all site/camp members with a guide to bear behavior (curious, predatory, defensive, etc.). Plan components can include:
- A buddy system for activities away from buildings or outside of fences for on- and off-duty activities;

- Guidelines/protocol or flow chart for a specific site/camp on “what to do if you encounter a bear” (individual responsibilities, buddy system, camp communication plan, audio warnings, safe meeting place, etc.); and
- Polar bear safety drills.

Detection and deterrence

- Service guidelines for passive (e.g., rigid fencing, bear exclusion cages, bear-resistant waste containers) and preventative deterrence measures (e.g., use of acoustic devices and vehicles) are described in the Federal Register (See link in Other Resources section below) are appropriate for safely and non-lethally deterring polar bears, and can be performed by anyone without written authorization or supervision.
- While the passive and preventative measures mentioned above can be performed by anyone, use of other deterrence tools (e.g., projectiles from a firearm, pepper spray) require training to ensure effective use and safety of humans and polar bears. See Agency contact below.
- Incorporate polar bear detection into camp and work site design.
- Detection types/tools include human monitors or “bear guards,” physical barriers, trip wire systems, alarms, and/or motion detectors/cameras. Prepare to respond appropriately during human-polar bear interactions.
- Devise a communication plan for camps and other locations that



An electric fence can help minimize the chance of a human-polar bear conflict from occurring at camp.

- alerts people when a polar bear is nearby. Communication plans should include a means of contacting outside help (e.g., a satellite phone), if needed.
- Because each individual animal's reactions will vary, leave the vicinity if you see signs of disturbance. Polar bears that stop what they are doing to turn their head or sniff the air in your direction may have become aware of your presence.
- Carry bear spray for an interaction that may turn into a conflict.
- From October through April special care is needed to avoid disturbance of denning bears. If activities are to take place during this time within five miles of the Beaufort or Chukchi Sea coasts, contact the Marine Mammals Management (MMM) Office to determine if any additional mitigation is required to avoid active den sites. Generally, no activities should take place within one mile of active dens.

Other Resources

- Polar Bears and Humans Safety Guidelines Factsheet: http://www.fws.gov/alaska/fisheries/mmm/polarbear/pdf/factsheets/pb_safety_09_final.pdf

Videos and descriptions of electric fences at camp sites:

- <https://www.youtube.com/watch?v=hDBjDVyctic>,

- <https://www.youtube.com/watch?v=3txRsJ-l5cI>,
- <http://adventures-in-climate-change.com/cooperisland/2011/07/good-electric-fences-make-good-neighbors/>

Agency Contacts

Contacts for reporting incidents:

Office of Law Enforcement:

907-786-3311 or Marine Mammals Management: 907-786-3800 or 907-786-3810

Marine Mammals Management contact for information on polar bear harassment authorizations: 907-786-3479

Created December 2015

Part III: Polar Bear Viewing in Kaktovik

This section of the source book contains information for visitors and residents when viewing polar bears in Kaktovik. Whether you are a resident, researcher, commercial filmer, visitor, or employee, these guidelines will help you understand your legal requirements and your stewardship obligations while viewing polar bears.

Everyone has a personal responsibility to prevent conflicts with polar bears. Though polar bears appear tame, these animals are wild and their behavior can change quickly. Viewing, photographing, and filming unconfined polar bears are activities with associated risks. Some of the polar bears in this area may also have learned to associate humans with food, and therefore may be less likely to avoid interactions with people. In situations when bears approach people, human-polar bear **interactions** (when a person and a polar bear are mutually aware of each other) can escalate to **conflicts** (when a polar bear exhibits behavior causing a person to take extreme evasive action, the bear makes physical contact, exhibits predatory behavior, or is harmed by a person). Knowing how interactions escalate to conflicts will help you be prepared to view responsibly.

Part IIIa: Legal Basis for Viewing

Polar bear **viewing** includes any observations, filming or photography of the animals. It is legal to view, film, and photograph polar bears as long as the bears remain undisturbed by your presence. It is illegal to disturb them. If you encounter polar bears and your viewing activities do not result in a change to their natural behavior, the viewing activity is legal.

Whether your viewing is commercially-guided or independent, any change in a polar bear's natural behavior as a result of your presence (including an attempt to attract a polar bear closer) is not legal and can be considered an illegal disturbance, also known as “take.” Under the Marine Mammal Protection Act (MMPA), “take” is defined as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture or kill” any marine mammal, including polar bears. Harassment is divided into two categories:

- 1) Level A harassment, which is defined as “any act of pursuit, torment, or annoyance which has the potential to *injure* a marine mammal or marine mammal stock in the wild.” Examples of human behavior that could cause injury to a polar bear are: separating mothers from their cubs; or allowing polar bears to make contact with a vehicle, boat, or all-terrain vehicle.
- 2) Level B harassment, which is defined as “any act of pursuit, torment, or annoyance which has the potential to *disturb* a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.” Examples of disturbance include causing a bear to stop feeding, resting, or swimming.

This means viewing is legal only when a bear's behavior remains natural (no change in their behavior due to your presence). The MMPA provides for special authorizations allowing minor changes in a bear's natural behavior. Special authorizations under the MMPA may be requested for commercial and educational photography (see page 21) and scientific research; and are established for subsistence harvest, authorized deterrence by Federal agents or their appointees for public safety, and for defense of human life. Viewing of polar bears, whether guided or on your own, is not eligible for such special authorizations from the MMPA.

Because polar bear viewing has associated risks, the U.S. Fish and Wildlife Service (USFWS) recommends that viewers follow best practices, and be accompanied by a knowledgeable guide using either a boat or vehicle as a viewing platform. Authorized guides provide knowledge, equipment, and oversight so that visitors receive a safe, legal, and professional experience. Viewing polar bears while you are on foot is not recommended.

Pages 23 and 24 outline recommended “best practices” for polar bear viewing. Pages 25 and 26 describe the work of the Kaktovik Youth Ambassadors, who share useful information with visitors about the community and about viewing polar bears. In addition, German and Japanese language versions of the “best practices” information sheet are available in the appendix at the end of this book (pages 49-56).

The following information outlines specific responsibilities for various types of viewers.

As a polar bear viewer, your choices before, during and after your viewing experience have a primary role in the welfare of polar bears. Before your trip, become aware of polar bear behaviors (see safety guidelines on pages 11-12). Be prepared to assess your effect on bears while you are viewing them. Make sure bears are not responding to your presence. Inform yourself about the risks of viewing on your own versus with a guide, and of viewing on land versus on water. Each option is accompanied by specific personal responsibilities (outlined below), and is regulated to different degrees. Your behavior could have consequences for bears and the community of Kaktovik.

If you are un-guided: You are taking on additional responsibilities when you choose to not use a guide. Without guide services, the risks are yours alone. In addition, you may unknowingly impose potential impacts to the community and to bears. You are not required to use a guide to view polar bears on Refuge lands or waters. However, encounters with polar bears can be dangerous, and using a guide for viewing polar bears can provide local knowledge which may benefit your experience and safety. Your responsibilities include:

- Before your trip, read this source book in its entirety, paying special attention to “best practices” for polar bear viewing (pages 23-24).
- Before your trip, know how to respond if a bear approaches you in a curious, nervous, threatening, or aggressive way, by reading the safety guidelines (pages 11-12).
- Before your trip, become familiar with community safety resources (see pages 6-7) and have a plan for what to do if an emergency arises.
- Make a personal pledge to act in ways that do not stress bears. For example, avoid noisy conversations and sudden movements during viewing, and do not restrict the movements of bears.
- Use extra caution if viewing during low light conditions (for example: have a dedicated observer watching for bears that may approach from all directions).
- Make sure you have the appropriate landowner permissions before you conduct your activities.

If you are seeking guide services ON WATER: Arctic National Wildlife Refuge and other federal authorities set regulations to insure viewing practices on water do not harm polar bears, are safe, and meet basic standards for professionalism. Refuge-authorized guide services have received the necessary permissions to operate and must renew them annually. The most current list is available at <http://www.fws.gov/refuge/arctic/pbguide.html>.

In addition to using authorized guides, you have the following responsibilities:

- Before your trip, read “best practices” for polar bear viewing (pages 23-24).
- Make a personal pledge to act in ways that do not stress bears. For example, avoid noisy conversations and sudden movements during viewing, and do not restrict the movements of bears.
- Before viewing, review your guide’s safety plan and equipment, and know what to do if an emergency arises (for example if there is a vehicle breakdown).

- While viewing, listen to your boat operator and guide. They will ensure your activities will not disturb bears.
- If you are randomly selected to evaluate your guide's service, please fill out and return the evaluation form that will be mailed to you. Your responses will help insure that Refuge visitors receive high quality services and experiences. Guides offering high quality services and experiences can:
 - 1) share a plan for what to do if an emergency arises.
 - 2) demonstrate a commitment to avoiding close encounters with polar bears. This indicates their ethic for professionalism and sustainable wildlife watching, and their regard for residents, who must coexist with bears after your visit.
 - 3) offer for inspection their authorization papers to operate on Refuge waters, including the special conditions they must meet to conduct viewing activities.
 - 4) discuss with you how to respond if a bear approaches you in a curious, nervous, threatening, or aggressive way.
 - 5) demonstrate a clear priority for remaining 30 yards or more from bears.

If you are seeking guide services ON LAND: Authorities (see page 5) have yet to determine business requirements for commercial operators who guide polar bear viewers/filmers/photographers on land. However, you still have the responsibility to follow “best practices” (pages 23-24) to remain in compliance with laws protecting polar bears. Guides committed to professionalism have incorporated these practices into their operations. Make a personal pledge to act in ways that do not stress bears (for example, avoid noisy conversations and sudden movements during viewing, and do not restrict the movements of bears), and pledge to use the services of land guides only if they follow “best practices.”

Part IIIb: Guidelines for Commercial Boat Operators on Waters Surrounding Kaktovik

Arctic National Wildlife Refuge is obligated by law to ensure authorized guides provide knowledge, equipment, and oversight so that their clients receive a safe, legal, and professional experience. The waters surrounding Kaktovik are within Arctic Refuge jurisdiction and special regulations apply. Read the information below and “Requirements for Motor Boat Businesses and their Boat Operators,” which explains the guidance specific to you on page 27.

- A Special Use Permit is required from Arctic Refuge. Applications must be submitted by April 15th each year.
- Your Refuge permit authorizes you to conduct commercial activity (boat operator/guide).
- Your permit authorizes only conduct that does not disturb bears. Any conduct inconsistent with “best practices” (pages 23-24) is grounds for permit revocation. Penalties imposed for permit violations or harassment of marine mammals may include fines up to \$3,000 for each incident.
- Do not “nose up” (land) your boat on shore to view bears. It is illegal trespass unless prior approval has been obtained. Even with prior approval, the action is not recommended because it compromises a safe experience for your clients by reducing your reaction time if a bear approaches.
- You have a professional responsibility to demonstrate to clients your expertise with polar bear behavior, management, and conservation, by conveying knowledge from resources such as the Polar Bear Source Book for Kaktovik Area (this document). Additionally, you should also be able to demonstrate to your clients:
 - 1) your authorization papers are on board.
 - 2) a plan for what to do if an emergency arises.

- 3) skill in detecting subtle bear behaviors (for example: Prevent your presence from affecting a bear.)
- 4) a clear priority for remaining 30 yards or more from bears. Move away from bears, as necessary, to maintain a distance of 30 yards or greater at all times.
- 5) appropriate responses if a bear approaches you in a curious, nervous, threatening, or aggressive manner.
- 6) your commitment to “best practices,” such as ensuring you and your clients proceed slowly, minimizing lights/noises; never herd, follow, chase, displace, restrict movements, or separate groups; and never attract bears.
- 7) your skill as a boat operator to minimize the potential for disturbance. If approached by a bear, move the boat away to minimize interactions. If the bear persists, leave the area while avoiding abrupt movements or sounds, such as sudden use of the engine throttle. Do not encircle or pursue a bear, and do not trap a bear between boats.

If your business is serving a filmer/photographer, be sure to read the section below. You must understand your legal role when supporting crews possessing special MMPA authorizations (known as a “take” permit) from the USFWS Division of Management Authority (DMA). In such cases, you may be allowed some limited incidents of disturbance to polar bears as long as the disturbance is non-injurious (see specific conditions of the filmer’s/photographer’s DMA permit).

Boat guides serving commercial filmers/photographers in possession of DMA permits must:

- inspect carefully the “take” allowance identified in the DMA permit and operate within those permit conditions.
- dedicate exclusive use of the vessel to only the guide’s crew members, and the filmers/photographers identified within the DMA permit. This means no recreational passenger may be on a boat that carries filmers/photographers possessing a DMA permit.

Part IIIc: Guidelines for Filmers/Photographers on Lands and Waters in and around Kaktovik

Land managing entities and authorities (see page 5) determine guidelines for filming and photographing on land. Contact land owners for specific guidance about authorizations that apply to your filming/photographing activities. Regardless of where you operate, you have the responsibility to follow “best practices” (pages 23-24) to remain in compliance with federal laws protecting polar bears. Land-based filming/photography at the bone pile requires a USFWS Division of Management Authority (DMA) permit (see MMPA information below) and U. S. Air Force authorization. Boat-based filmers and photographers using the services of Refuge-authorized guides, who prevent all instances of harassment (see page 18), do not need a federal DMA permit.

If you intend to conduct commercial filming or photography on Arctic Refuge lands or waters, contact the Refuge well in advance (at least 45 days) to discuss whether you need a Special Use Permit issued by the Refuge for commercial operations occurring within the Refuge boundary. Commercial filming/photographing crews have the following responsibilities when operating on Arctic Refuge:

- Before your trip, read “best practices” for polar bear viewing.
- Make a personal pledge to act in ways that do not stress bears. For example, avoid noisy conversations and sudden movements during viewing, and do not restrict the movements of bears.
- Choose guides who use “best practices” and therefore can:
 - 1) share a plan for what to do if an emergency arises.

- 2) demonstrate a commitment to avoiding close encounters with polar bears. This indicates their ethic for professionalism and sustainable wildlife watching, and their regard for residents, who must coexist with bears after your visit.
 - 3) offer for inspection their authorization papers to operate on Refuge waters, including the special conditions allowing them to conduct viewing activities.
 - 4) discuss with you how to respond if a bear approaches you in a curious, nervous, threatening, or aggressive way.
 - 5) demonstrates a clear priority for remaining 30 yards or more from bears.
- Before viewing, review your guide's safety plan and equipment, and know what to do if an emergency arises (for example if there is a vehicle breakdown).
 - While viewing, stay within earshot of your guide.

Unless you have a USFWS "take" permit issued by the DMA, your actions must not disturb polar bears, and must follow "best practices" to remain in compliance with laws protecting polar bears. The MMPA allows special authorization permits from DMA for Level B harassment by commercial/ educational filmers or photographers in some instances. This DMA "take" permit allows non-injurious, short term "take" (for example: a bear becomes vigilant or aware of your presence for a few seconds, and then resumes its activity). Contact DMA (page 47) to discuss whether your activities will require a permit from their office. You should allow a minimum of 90 days for DMA to process your permit application.

If you intend to conduct commercial filming or photography with a DMA "take" permit, your guide will work with you to operate within those permit conditions. You are still responsible to make a personal pledge to act in ways that minimize stress to bears.





Arctic

National Wildlife Refuge

Best Practices for Polar Bear Viewing

Hire an authorized business when viewing polar bears from the water.

If you view polar bears from the water or use a water taxi service, hire an authorized business with registered boat operators. They have participated in polar bear guide workshops and have the safety training—and knowledge of conservation laws and scientific studies—to provide professional, quality polar bear viewing opportunities. These guides are required to operate and maintain their boats and equipment to professional standards.

Arctic Refuge lists authorized businesses at <http://arctic.fws.gov/pbguide.htm>.

Legal boat operators keep a copy of their Arctic Refuge business permit on their boat. The permit also lists the name of the business's Coast Guard-licensed boat operator(s). If you request, legal boat operators will show you documentation that their business is authorized. They have worked hard to maintain this authorization.

How is Arctic Refuge involved?

The Refuge is required to oversee commercial activities on the water and Refuge lands surrounding Kaktovik to protect wildlife habitat and subsistence opportunities for local residents.

Arctic Refuge and its partners provide technical assistance and training opportunities for businesses and boat operators. To find out more contact Jennifer Reed at Arctic Refuge: **907-455-1835**, or jennifer_reed@fws.gov.

Though polar bears may appear tame, these animals are wild and their behavior can be unpredictable. Viewing polar bears has associated risks.

By law, polar bear viewing is dependent on avoiding disturbance to bears. You have an opportunity to view polar bears because people before you used responsible viewing practices. Polar bear viewing will only continue if you and other viewers are careful to keep polar bears and people safe. The U. S. Fish and Wildlife Service recommends viewers be accompanied by a knowledgeable guide, using either a boat or a vehicle as a viewing platform.

Each polar bear's tolerance to you depends on the bear itself, your location and your actions. Your responsibilities include following the guidelines below to ensure your viewing activities do not result in a change to a polar bear's natural behavior.

Before you view:

- Review the Polar Bear Source Book (<http://go.usa.gov/cQxbR>).
- Know your safety plan so it is clear what to do if an emergency arises (for example a vehicle breakdown).
- Be aware of bear behaviors, and know appropriate responses if a bear approaches you in a curious, nervous, threatening, or aggressive manner (see page 2 of <http://go.usa.gov/cQxWj>).

When you view:

- Arrive and leave your viewing area using the same route, proceeding slowly, and using minimal lights and noise. Immediately stop your approach if a bear responds to your presence.
- Prevent your actions from affecting bears. Your actions should not cause a bear to stop what it is doing, move from its initial location, or change its direction of view. A bear shows advanced signs of stress when it huffs or snaps its jaws, or presses its ears back.
- Always stay within earshot of all other members of your group.
- Avoid noisy conversations and sudden movements.
- Use extra caution if viewing during low light conditions (one way, for example, is to have a dedicated observer watching for bears that may come from all directions).
- Remain in your vehicle or boat.

Make sure you:

- Do not herd, follow, chase, or displace bears.
- Do not attract bears with food, scents, sounds, etc.
- Do not allow physical contact between a bear and a vehicle or boat .
- Never separate a mother from her cubs.
- Never restrict the movements of swimming bears.
- Obey all local signs, barriers, guidelines, ordinances etc. regarding bear viewing practices.

Continued on the back.



Polar Bears (USFWS)

Frequently asked questions

How close is “too close” to polar bears?

- Guides and viewers are expected to view bears in a manner that avoids disturbing them. Each bear’s reaction to humans is dependent on that bear’s individual tolerance and viewer’s actions. Regardless of the distance, each viewer and guide has personal responsibility to watch each bear’s behavior, and to retreat even when there are only subtle signs of stress (see front page for examples).
- Viewing polar bears safely and legally requires an in-depth understanding of bear behavior. This is why you should hire guides committed to professional standards for quality polar bear viewing.

Whose job is it to decide how we view bears: the guide’s or the viewer’s?

- It’s everyone’s job. Guides must only allow actions that protect you and the bears. Respect your guide’s decisions. However, it is also your responsibility as viewer to always act in ways that do not result in a change to a bear’s natural behavior, whether you are using a guide or not.

Why are some activities allowed that disturb bears, but bear viewing is so carefully monitored?

- The Endangered Species Act and Marine Mammal Protection Act make special allowances for subsistence hunting, scientific research, and human safety activities, as well as for some limited forms of commercial filming/photography. There are no special allowances for recreational polar bear viewing, which means that it can continue only if it is done in a way that does not disturb the polar bears.

Why are people allowed to hunt polar bears even though the bears are threatened?

- Polar bears were listed as threatened under the Endangered Species Act because of sea ice habitat loss, not because of subsistence hunting.
- The Endangered Species Act and Marine Mammal Protection Act provide for subsistence opportunities that allow Native coastal-dwelling peoples to hunt polar bears, recognizing this traditional use and its cultural importance. The Marine Mammal Protection Act also designates a number of Alaska Native co-management partners for polar bear conservation. Their involvement helps ensure a responsible harvest.
- The North Slope Inupiat and Canadian Inuvialuit peoples have a voluntary agreement to limit the number of bears that are harvested, so their hunts won’t accelerate polar bear population decline.

Do commercial photographers need a special permit?

- It depends on your activity. For further information, see the Polar Bear Source Book (<http://go.usa.gov/cQxbR>).

What should I do if I see a bear in town?

- Move to safety and then call 911 to report the location of the bear.

The Arctic Refuge coast is unique because of its polar bear viewing opportunities and the role citizens play in polar bear conservation.

You have the chance to view polar bears because of the efforts of people before you to use safe viewing practices. Please do your part by following best practices when viewing polar bears.





U.S. Fish & Wildlife Service

Kaktovik Youth Ambassadors

Alaska Native Youth take leadership role in polar bear management and conservation

Connecting visitors with community concerns

Each fall since 2012, high school students from Kaktovik, Alaska have played a major role in polar bear conservation and visitor management within Arctic National Wildlife Refuge, administered by the U.S. Fish and Wildlife Service (USFWS). Kaktovik is a remote village along the coast of the Beaufort Sea within the Arctic Ocean, and is not accessible by road. Most residents lead a subsistence-based lifestyle, depending largely on the resources of surrounding lands and waters to feed their families.

The youth are accustomed to seeing polar bears wandering outside their homes. However, polar bears and residents haven't always been living so close. While youth grew up with polar bears as neighbors, the older generations in Kaktovik remember bears staying farther out on the sea ice, and only occasionally coming to shore. Polar bears have increasingly been coming to shore all along the Beaufort Sea Coast due to factors including retreating sea ice.

But why have polar bears been congregating around Kaktovik? Late fall sea ice forms earlier around Kaktovik than other areas of the coast; seals can be found in higher density near Kaktovik, and remains from subsistence harvest consistently draw polar bears to the area.



Kaktovik Youth Ambassador Chelsea Brower in her village, Kaktovik, AK, a remote northern coastal community located within Arctic Refuge.

Increasing numbers of bears around Kaktovik, coupled with increasing international awareness of the plight of the Beaufort Sea polar bears, has rapidly expanded the local polar bear tourism industry. People come from around the world to view the magnificent bears in the wild.

Since viewing polar bears in the wild is an inherently dangerous activity, and resources in remote areas like Kaktovik are limited, there are increasing concerns about public safety, community well-being, and welfare of the polar bears.

continued on back



Kaktovik residents share habitat with polar bears along the coast of the Arctic Ocean.

In an early attempt to help resolve these concerns, a Tribal grant from the USFWS helped fund initial community-driven polar bear management efforts, including establishing the Kaktovik Youth Ambassador (KYA) program.



Kaktovik Youth Ambassadors share the visitor data they have collected with Jennifer Reed, USFWS Arctic Refuge Visitor Services Coordinator.

“The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people.”

For more information, visit www.fws.gov, or to learn more about Arctic National Wildlife Refuge programs visit www.fws.gov/refuge/arctic or connect with us through the refuge’s facebook page at: www.facebook.com/arcticonationalwildliferefuge

What do the KYAs do?

After each school day and over the weekend, these teens walk to the two hotels and greet polar bear viewing visitors. During the past three seasons, the youth reported meeting with over 500 international visitors. The youth give briefings, ensuring that visitors are respectful of their community life and of bears by explaining acceptable and safe behavior in bear country. The KYAs

advise all visitors to obtain a local guide when they go out bear viewing.

The program has given these youth leaders firsthand experience addressing complex issues in community-based conservation. One KYA reports that “polar bear viewing is growing - it allows outsiders to gain awareness of our culture and lifestyle.” There are also downsides to the tourism industry, such as visitors competing with locals for resources, for example for flights in and out of Kaktovik. The KYAs contribute suggestions for improvement to visitor services, such as their suggestion to expand resources available in certain foreign languages.

Chelsea Brower, a KYA going into the fourth year of the program, says the experience has helped her come out of her shell. “I think it is important for youth my age to be involved so they know how to bring their voice forward, so people know that young people care about issues like polar bear well-being and community control over the tourism industry,” Brower says. Brower and the other KYAs have become role models to those around them, inspiring friends to educate themselves on local conservation issues and to take on leadership roles in the Arctic.



Youth receive awards from U.S. Fish & Wildlife Services in Spring 2015 for their inspiring leadership. From left to right: Nora Jane Burns receiving award on behalf of daughter Kimberly, Tori Inlangasak, Chelsea Brower, Melanie Tikluk and Jonas MacKenzie.



U.S. Fish & Wildlife Service

Arctic

National Wildlife Refuge

Requirements for Motor Boat Businesses and Their Boat Operators



Arctic Refuge must regulate all commercial uses of Refuge lands and waters, including boat businesses around Barter Island. This helps ensure businesses protect fish, wildlife, and their habitats; use safe procedures; and obey federal laws.

If you take passengers for hire aboard a vessel, then you are participating in a motor boat business. Motor boat businesses must have a permit from Arctic Refuge, and their commercial motor boat operators must be listed on that permit. Refuge permit applications are due by April 15 each year. Refuge staff can help business owners complete the Refuge permit process. Contact Alfredo Soto (907-456-0303) or Jennifer Reed (907-455-1835) in Fairbanks.

Federal laws require that anyone taking passengers for hire aboard a vessel on inland or near-coastal waters must have at least a US Coast Guard-issued license for Operator of Uninspected Passenger Vessels (OUPV). The OUPV license allows each operator to take up to six passengers for hire, which gives the common name of a “six-pack license.”

Here are some items a Refuge permit application must include:

- A completed application form
- \$100.00 administrative fee payment
- Business license issued by the State of Alaska
- US Coast Guard license (required for each of your business’s motor boat operators)

A Refuge permit will be issued for businesses when:

- Application review is complete (can take 45 days)
- Proof of business insurance is on file at Arctic Refuge
- US Coast Guard license for each of your business’s motor boat operators is in your permit file at the Refuge

How do motor boat operators get an OUPV (six-pack) license from the US Coast Guard?

- 1) Email Ilisagvik College Community and Workforce Development Training Manager at workforce@ilisagvik.edu to see how they can help. They may be able to:
 - provide partial tuition reimbursement
 - assist with travel
 - organize local classes (if there is sufficient enrollment)
 - get you one-on-one US Coast Guard and Transportation Security Administration application assistance
- 2) You should work with person assisting you with your application to:
 - complete the US Coast Guard classes
 - document your current qualifying Sea Service (minimum of 360 days required)
 - pass written, physical, and fitness exams
 - pass drug testing
 - obtain your TWIC Card from the Transportation Security Administration
 - submit to the US Coast Guard a complete packet requesting Merchant Mariner OUPV (six-pack) license, including five forms and TWIC Card



Ilisagvik College provides workforce development support services to North Slope residents. For more information, visit their web site at <http://www.ilisagvik.edu/?p=829>.



Complete licensing requirements for a Merchant Mariner OUPV credential/ Six-pack License are outlined on the U.S. Coast Guard licensing website at <http://www.uscg.mil/STCW/>. See the “Forms” block to look over the five main required forms for the application.

Arctic National Wildlife Refuge
907/456 0250 800/362 4546
arctic_refuge@fws.gov <http://arctic.fws.gov/>
[facebook.com/arcticonationalwildlifer refuge](https://www.facebook.com/arcticonationalwildlifer refuge)

AMERICA'S NATIONAL WILDLIFE REFUGE SYSTEM...
Conserving the Nature of America



Part IV: Polar Bear Management in the Kaktovik Area

This section of the Source Book contains information about the role of the U.S. Fish and Wildlife Service (USFWS), which has management responsibilities for polar bears wherever they exist within the United States. Management efforts are based on legal responsibilities and are guided by the results of scientific research. As mentioned in Part I (page 2), polar bears are protected under both the Marine Mammal Protection Act (MMPA) and the Endangered Species Act (ESA). The listing of polar bears as threatened under the ESA in 2008 does not alter the existing MMPA requirements. Both laws prohibit take of polar bears, with few exceptions.

USFWS staff are responsible for helping to manage polar bears for the benefit of all Americans. USFWS employees help the public understand the laws and participate in polar bear conservation. They also oversee the few exceptions to the MMPA that allow “take” (see page 18). USFWS staff working at Arctic Refuge help manage the lands, waters, and wildlife—including polar bears—within its boundaries, for the benefit of all Americans. Refuge employees help enhance wildlife dependent recreation opportunities, and access to quality visitor experiences on Refuges, while conserving the wildlife and their habitats. They also work closely with residents to address shared conservation issues, and visitor management concerns.

Human-polar bear issues in the Kaktovik area can only be addressed effectively when governing authorities with varied decision-making roles, come together for the benefit of polar bears and people. Numerous information sheets describe how USFWS staff and local residents are coordinating efforts to identify problems of shared concern and potential solutions so that polar bears and people can coexist.





U.S. Fish & Wildlife Service

Minimizing Polar Bear and Human Interactions at Barter Island, Alaska

BACKGROUND

Barter Island, Alaska is home to both the Native village of Kaktovik and large numbers of polar bears that aggregate there during fall months to rest and feed prior to freeze up. A relatively unique situation exists in that unused remains of bowhead whales taken by Alaska Native subsistence hunters are available to polar bears that come to shore. The remains are deposited in a "bone pile" located a few kilometers from the village, which is accessible by vehicle for bear viewing. The availability of bowhead whale remains to polar bears has ecological implications to a species that is being affected by climate change, as well as management implications due to the potential for increasing conflicts among polar bears and humans living in close proximity.

MONITORING STUDIES

In 2002, the Marine Mammals Management Office, with support from the Arctic National Wildlife Refuge, Minerals Management Service, Alaska Nanuq Commission, and village residents, began ground-based observations to monitor the number, age, sex, and activity patterns of polar bears in the Barter Island area. Results confirmed that relatively large numbers of polar bears of all age-sex classes (adults, sub-adults, family groups) occur at Barter Island during the fall open water period. Bears were relatively inactive during day and fed mostly at night. Interestingly, a small number of brown bears also used the feeding site and provided a unique opportunity to record interactions between the two species, as well as with humans. This information is becoming increasingly important as a small bear-viewing industry develops at Barter Island.

MINIMIZING BEAR-HUMAN CONFLICTS

Active local involvement is a critical component in minimizing bear-human interactions. During the course of monitoring studies the U.S. Fish and Wildlife Service (FWS) worked together with the Native Village of Kaktovik, City of Kaktovik, North Slope Borough, Harold Kavelook School, and individual



Polar bears walking near the airstrip at Barter Island, Alaska

SUSANNE MILLER, USFWS

residents to share information about polar bears and their management, as well as to increase awareness and communication among residents and visitors regarding polar bear-human safety. This was accomplished by: 1) conducting an annual "Polar Bear Open House" during which both local polar bear observations from residents as well as monitoring study results were discussed; 2) participation at city and tribal council meetings to respond to community concerns; 3) airing of public service announcements when studies were underway; 4) conducting classroom visits at the local school; and, 5) working with a local artist, students, and residents to create polar bear safety posters, brochures, and signs.

Local residents historically have minimized bear-human conflicts by sending out verbal alerts (via phone or CB radio announcements) whenever a bear is in town, and for a number of years Kaktovik also received help from the North Slope Borough to conduct a polar bear patrol program; however funding has been insufficient in recent years to adequately maintain a program. In 2006, the Native Village of Kaktovik (NVK) received a tribal wildlife grant from FWS to develop a bear-human safety plan, in response

to a growing concern for public safety. The proposed plan consists of three primary components: 1) establishment of patrols to deter bears from the village; 2) minimizing attractants in and around the village; and 3) development of educational materials. A local "polar bear committee" has been formed and is developing additional measures to minimize bear-human conflicts, as called for in the management plan.

CONSERVATION BENEFIT

Results from monitoring studies are being prepared for publication and used to assist in environmental planning, such as oil and gas related activities. In 2008 and 2009, village residents participated in biological monitoring. FWS hopes to continue involving local residents in biological monitoring in future years.

An important benefit that has resulted from this project is the cooperative work that is occurring between FWS and Kaktovik residents to reduce bear-human conflicts over the long term. Implementation of the bear-management plan in Kaktovik will serve as a good template for other communities seeking to avoid bear-human conflicts, and serve polar bear conservation well into the future.



SUSANNE MILLER, USFWS



JENNIFER REED, USEFWS

(Above) A hungry sub-adult polar bear feeding on bowhead whale remains. (Left) Kaktovik school children getting involved in a polar bear safety poster coloring contest.

U.S. Fish & Wildlife Service
1 800/344 WILD
<http://www.fws.gov>

December 2009

For more information please contact:
Susanne Miller
1 800/362 5148
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U.S. Fish & Wildlife Service
Marine Mammals Management Office
1011 East Tudor Road
Anchorage, AK 99503

Visit the Marine Mammals home page:
<http://alaska.fws.gov/polarbear>



U.S. Fish & Wildlife Service

Arctic

National Wildlife Refuge

Community-Based Conservation for Polar Bears

Along the barren, wind-scoured coast of Alaska's icy Beaufort Sea, an unexpected mix of humanity and wildlife co-exists within a vast expanse of Arctic isolation. Barter Island, Alaska is home to Kaktovik, a small Inupiat Eskimo village of about 300 residents who maintain strong ancestral ties to the land. Like in farming communities, their lifestyle is seasonal and based on the harvest of Earth's resources, such as fish, birds, berries, caribou, Dall sheep; and marine mammals such as seals and whales. Relatively speaking, modern commodities are sparse: the village itself has a school, fire station, airstrip, store, and two hotels for visitors; and the Fish and Wildlife Service does maintain a bunkhouse there. Barter Island is located within the Arctic National Wildlife Refuge which, despite its remote location, has captivated the interest of a variety of stakeholders including the Air Force, oil and gas industry, tourists, hunters, and biologists over the years.

The Service's interest in Barter Island expanded when community residents and biologists noticed increasing use of the area by polar bears, particularly during the open water period, which occurs in late summer and fall when the Arctic Ocean's ice cover moves away from the coast. In 2002, Marine Mammals Management Polar Bear Biologist Susanne Miller set out, with the field assistance of other Service biologists, to learn more about the polar bears congregating in this area. Miller initiated a study to document the number, age, sex, and behavior patterns of these animals.



Polar bears feed on whale remains at Barter Island - USFWS



Polar bear mother leads her cubs to whale remains near Barter Island - USFWS

The most obvious reason for the bears' presence at Barter Island relates to the Inupiat subsistence lifestyle: polar bears feed on unused portions of whale carcasses that are deposited at a "bone pile" a few kilometers from the village during Kaktovik's subsistence whale harvest season. Other factors that draw the bears to the area: the presence of seals (the polar bears' major food) in marine waters near Kaktovik; and the absence of nearby Arctic Ocean sea ice (the polar bear's normal hunting grounds) causing a landward shift in polar bear distributions.

Two additional factors have made Kaktovik a unique study site: 1) brown bears were also making use of the bone pile and interacting with polar bears; and 2) an increase in tourists and visitors was starting to contribute to a small polar bear viewing industry, raising concerns regarding potential bear-human conflicts. As a result, in 2004 the Fish and Wildlife Service's Marine Mammals Management office began working more closely with Arctic Refuge staff to expand outreach and education efforts within the village. By 2005, monitoring efforts included documentation of polar bear interactions with other polar bears, brown bears and humans, so that biologists could understand social dynamics between the two bear species and to develop effective polar bear-human safety guidelines.

Results of Miller's studies (from 2002 to 2008) have shown that an average of 25

bears were present around Barter Island on any given September day, and that all age-sex classes (adults, sub-adults, family groups of mothers with cubs) can co-exist quite peacefully, contradicting the notion that polar bears are always solitary. Bears were relatively inactive during the day, then arose and traveled together to feed with the onset of darkness. Despite their larger size, polar bears were often chased from the bone pile by their tundra counterparts (brown bears). While brown bear numbers were far fewer (approximately 4-5 bears each season), they frequently dominated the feeding site and often precluded its use by polar bears. The bone pile probably plays an important role to some nutritionally stressed polar bears, but Miller believes its contribution to the Beaufort Sea polar bear population as a whole is limited by the following factors:

1. less than 10% of the region's polar bear population comes to shore to feed here, while the vast majority of polar bears still chose to remain on the pack ice;
2. the availability of this food source is finite, consisting only of remains from Kaktovik's yearly legal harvest quota limit of three whales; and
3. the presence of brown bears may continue to deter polar bears from using the bone pile.

Continued on back.

Continued from front.

Although Miller's original reason for coming to Barter Island was to conduct biological studies, it soon became apparent that Barter Island is also an important location for focusing Fish and Wildlife Service's polar bear conservation initiatives. Simultaneous with the biological monitoring effort, Miller worked with Jennifer Reed, Arctic Refuge Visitor Services Coordinator, to expand Service work with the community to exchange information and address mutual concerns. This was accomplished by:

1. each year conducting a "Polar Bear Open House" during which residents shared their bear observations and biologists explained results of their monitoring activities;
2. participating in community and tribal council meetings to respond to community safety issues and concerns and serve as technical advisors for their grassroots management efforts;
3. posting local public service announcements before studies were underway to explain the intent of that year's research and monitoring efforts;
4. conducting classroom visits at the local school to educate students about polar bear biology and polar bear safety practices;
5. working with a local artist, students, and residents to create polar bear safety posters, brochures, and signs; and most-recently,
6. collaborating with a broad range of stakeholders to help establish professional, conservation-minded standards for recreational polar bear viewing etiquette.

These outreach efforts have resulted in a broad, strong, partnership network sharing the goal of addressing polar bear conservation- and management-related issues.

In a place as distant as Kaktovik, where the Fish and Wildlife Service does not maintain a year-round office in the village, active local involvement is a critical component to minimizing bear-human conflicts. One sign that the commitment to empowering local leadership is paying off emerged when the village earned a

Fish and Wildlife Service-funded Tribal Wildlife Grant to develop a community bear-human safety plan, in response to a growing concern for public safety. The proposed plan was funded for three years (2007-2010) and consists of three primary components:

1. establishing authorized village patrols to deter (non-lethally haze) bears from the village;
2. minimizing attractants in and around the village; and
3. developing educational materials.

To accomplish these grant goals, a local "Polar Bear Committee," consisting of a broad cross-section of community residents, is working to develop specific measures to minimize bear-human conflicts. As the grant winds to a close, the Committee will continue their work with village residents, Miller, and Reed to address emerging management issues, such as the need to ensure that

increased tourism demands upon this small community do not result in the disturbance of polar bears.

These partnerships, and the resulting achievements of their efforts, provide a good model for other small, coastal Alaskan communities experiencing similar issues with polar bears.

In the mean time, the Fish and Wildlife Service is using the results of ongoing monitoring in its environmental planning, for such issues as oil and gas related activities and Arctic Refuge public use management. Miller has also turned over some of the biological monitoring to Kaktovik residents so that they can participate in co-management efforts concerning polar bears. Most importantly, Miller and Reed have established the basis for long-term cooperative working relationships with Kaktovik residents. These relationships will contribute to future polar bear conservation efforts, as these iconic animals of the Arctic continue to increase their activities on land.



Polar bear mother and cubs feeding on whale remains at Barter Island - USFWS



A Traditional Value: Respect Polar Bears

Elders tell us to respect all animals so they will continue to be available in the future.

Polar bears need coastal areas to travel, rest, and hunt. They are not that different than us.

Harassing polar bears reflects poorly on our culture and on the co-management efforts by the Alaska Nanuuq Commission on behalf of subsistence hunters.

Do . . .

Allow polar bears to do whatever they were doing before you showed up. Avoid attracting bears by keeping a clean camp.



Don't . . .

Do not chase or disturb bears. If a bear is focused on you, you are too close.

Your observations are valuable!



Please report polar bear sightings to:
Alaska Nanuuq Commission, 1-855-877-5044
or
your nearest U.S. Fish & Wildlife Office



Polar bear at Kaktovik - USFWS





Arctic

National Wildlife Refuge

Timeline: The development of community-based polar bear management in Kaktovik

- Pre-history to the Present**
- Traditional hunting by Inupiat residents.
- 1990s**
- More polar bears observed coming into the community.
- 2000s**
- In 2002, a team of U. S. Fish and Wildlife Service (USFWS) polar bear biologist set out to learn more about the polar bears congregating in the Barter Island area. Three factors are found to be attracting bears near the community: a bone pile of portions of unused whale carcasses left after Inupiat subsistence whale hunting; the presence of seals in the area; and the absence of nearby Arctic Ocean sea ice.
 - Around 2004, USFWS Marine Mammals Management and Arctic Refuge staff begin their collaboration to conduct outreach with residents of Kaktovik about human polar bear conflicts. Staff offer services/technical advice for addressing problems in the community related to wildlife, polar bear issues and other environmental issues.
 - By 2005, monitoring of polar bears is in place including documentation of polar bear interactions with other bears and with humans, which allows for a better understanding of what is needed to develop effective human-polar bear safety guidelines.
 - In 2004 and 2005 Arctic Refuge offers funds for the community to create information kiosks.
 - In 2006, Community Open Houses begin to be conducted annually, during which residents share their bear observations and biologists explain the results of their monitoring activities.
 - In response to community concerns for youth safety, Arctic Refuge staff and Kaktovik leaders organize a polar bear coloring contest to convey key safety messages to Kaktovik children.
 - A local artist is contracted by Arctic Refuge to create original artwork. Posters about polar bear safety are made using her line drawings. The end product demonstrates a growing collaboration.
 - Local efforts are made to improve safety. An *ad hoc* Kaktovik Polar Bear Committee constructs barriers to the whale bone pile which warned people not go any closer than the barrier.
 - Discussions start about listing polar bears as threatened under the Endangered Species Act.
 - In 2007 USFWS conducts outreach about the potential listing of polar bears under the Endangered Species Act.
 - Arctic Refuge clarifies their jurisdiction of waters where polar bear viewing is taking place. The Refuge has a responsibility to manage commercial activities so that Refuge resources aren't harmed, and works with the community to begin to establish an authorized viewing program.

Continued on the back.

- USFWS awards a Tribal Wildlife Grant to the Native Village of Kaktovik to develop a community bear-human safety plan. The grant funds three years of work to meet the following goals:
 - Establish authorized village patrols to deter bears from the village.
 - Minimize attractants in and around the village.
 - Develop educational materials.
- In 2008 polar bears are announced as threatened under the Endangered Species Act. There is an increase of awareness of the plight of the polar bear, and more visitors begin coming to northern Alaska to view bears.
- In 2009, Arctic Refuge staff coordinates funding for a polar bear viewing guide workshop. Local residents are provided training in laws protecting polar bears, Coast Guard licensing, safety best practices, small business development, and the permit authorization process.
- 2010s**
 - In 2010, Arctic Refuge recognizes there are enough commercial polar bear viewing businesses, that an official guide permit authorization program is launched. The Refuge issues its first guide authorization for polar bear viewing.
 - In 2010 to 2012, Arctic Refuge staff works with local guides to be safe, legal and professional.
 - In 2011, Kaktovik Youth Ambassador program starts.
 - At least four operators have full coast guard credentials and are authorized by Arctic Refuge to operate.
 - 2011-2013 The Refuge's guide authorization program continues to evolve. A core group of local guides work with tour operators from around the world.
 - In 2013, Refuge staff responds to Kaktovik community's request for enforcement of guide permit requirements to standardize the emerging tourism industry in the community.
 - In 2014, all operating guides meet legal requirements.
 - In 2015, Arctic Refuge is awarded a grant by National Fish and Wildlife Foundation to meet the following goals shared with the Kaktovik community:
 - Expand capacity for community-based polar bear management.
 - Increase the role of local Alaska Native youth in polar bear conservation, and fund the Kaktovik youth ambassador program.
 - Expand communication of safety and conservation messages with local leaders to manage the emerging polar bear viewing tourism industry.





Polar Bear

Threatened Under Endangered Species Act

Polar bears are long-lived carnivores with relatively low rates of reproduction and natural mortality. They are the largest member of the bear family, with the exception of Alaska's Kodiak brown bears, which can equal polar bears in size. Male polar bears can be up to 11 feet long and typically weigh 600 to 1,200 pounds, but may weigh as much as 1,500 pounds. Females can be up to 8 feet long and typically weigh between 400 and 600 pounds. Polar bears have a longer, narrower head and smaller ears than other bears. Their white coat helps them blend in with the snow-covered environment, which is a useful hunting adaptation.

Status

On May 15, 2008 (Federal Register, vol. 73, p. 28212), the U.S. Fish and Wildlife Service (Service) listed polar bears as threatened under the Endangered Species Act (ESA) because of observed and forecasted evidence that circumpolar warming is melting sea ice, the polar bears' primary habitat. Critical habitat was designated on December 7, 2010 (Federal Register, vol. 75, p. 76086).

Habitat and Habits

Polar bears' primary habitat is sea ice, which they depend on as a platform for hunting ice seals (their primary prey), seasonal and long-distance movements, travel to terrestrial maternal denning areas, resting, and mating. Polar bears are not evenly distributed throughout the Arctic, nor do they comprise a single nomadic population, but rather occur in 19 relatively discrete subpopulations throughout the ice-covered marine waters of the northern hemisphere. The U.S. contains portions of two subpopulations: the Chukchi Sea (CS) and the Southern Beaufort Sea (SBS) subpopulation, shared with Russia and Canada, respectively. Although a precise population estimate does



not currently exist for polar bears in Alaska, the SBS population is estimated to be approximately 1,526 bears; the size of the CS population is unknown. Globally, the total polar bear population is estimated to be 20,000 to 25,000.

Threats

The main threat to polar bears is the loss of their sea ice habitat due to circumpolar warming. Recorded declines in sea ice have been correlated with declines in polar bear body condition, survival rates, and population size in portions of their range. The extent and duration of sea ice is projected to continue to decline into the foreseeable future. Polar bear populations also are susceptible to other human-caused disturbances, such as offshore development, habitat alteration and human-caused mortality.

Management and Protection

In the U.S., polar bears are a federally protected species under the Marine Mammal Protection Act of 1972

(MMPA) and the ESA. The MMPA prohibits hunting of polar bears by non-Natives, although Alaska Natives are allowed to harvest some polar bears for subsistence and handicraft purposes. The Service is the Federal agency responsible for managing polar bears in the U.S.

An international conservation agreement for polar bears signed in 1976 by the U.S., Russia, Norway, Canada, and Denmark (Greenland) calls for cooperative management of polar bears. Another treaty, the Agreement between the Government of the United States of America and the Government of the Russian Federation on the Conservation and Management of the Alaska-Chukotka Polar Bear Population (U.S.-Russia Agreement), covers the shared CS population of bears. Notably, the treaty calls for the active involvement of Native people and their organizations in polar bear management programs. It also enhances long-term cooperative efforts such as conservation of



Susi Miller / USFWS

ecosystems and important habitats, sustainable harvest allocations, collection of biological information, and increased consultation and cooperation with State, local, and private interests.

A number of protective measures have been taken to reduce human activities along the coast in polar bear denning areas, as the animals are most sensitive to outside disturbances while denning. For example, oil and gas activities have been modified to avoid these areas. The Service also provides expertise to industries on how to minimize conflicts with bears while conducting their operations.

The Service's overall conservation goal is to adaptively manage Alaska's polar bears in the face of projected climate change impacts so they remain a healthy, resilient component of the CS and SBS ecosystems. In 2010, we initiated a collaborative planning process with our conservation partners to develop a Conservation and Management Plan (Plan) for polar bears, as mandated by the ESA and MMPA. The Plan will include prioritized research and monitoring actions to address key uncertainties and build upon existing baseline data. For example, although we predict that polar bear populations will suffer at a global level from loss of sea ice, the specific response of polar bears at the subpopulation level is less clear.

We are also crafting collaborative management actions to effectively address identified threats, including a strong outreach component to build on our existing partnerships with international and domestic government agencies, Alaska Native organizations, industry, and non-government organizations. We continue to implement conservation actions to support our biological objective. Those actions include engaging with international partners in Russia and Canada to manage shared populations; working with the Alaska Native community to implement sustainable harvest management strategies; and coordinating with industry to minimize take associated with oil and gas operations in Alaska. For example, the Service has recently:

- Worked with State and local entities, oil and gas companies, non-profit organizations, and others to reduce human-bear conflicts by providing polar bear safety and deterrence training, developing community-based guidelines for bear viewing/tourism, and creating standardized curriculums for both polar bear deterrence and den detection survey methods.
- Helped negotiate a first-ever harvest quota in the CS of 58 polar bears per year to be shared between Natives in Alaska and Russia under the U.S.-Russia Agreement.
- Worked with the Alaska Nanuq Commission to develop a draft shared harvest management plan that balances Alaska Native subsistence needs with polar bear conservation in the CS region.
- Worked with the North Slope Borough and Canadian Inupiat/Inuvialuit commissioners to recommend a reduction in the SBS harvest quota from 80 to 70 bears in recognition that the SBS population may be declining due to reductions in the quantity and quality of sea ice habitat.

We recognize that addressing the primary threat of climate change offers the most hope for ensuring polar bears remain a healthy part of the Arctic ecosystem. Through continued cooperative management with our partners, we hope that these great marine mammals, and the unique Arctic environment on which they depend, can be protected for generations to come.

**For more information contact:
U.S. Fish and Wildlife Service
1011 E Tudor Road
Anchorage, Alaska 99503
(907) 786-3800
(800) 563-3148**

<http://www.fws.gov/alaska/fisheries/mmm/polarbear/pbmain.htm>

November 2014



U.S. Fish & Wildlife Service

Ongoing Polar Bear Research in Alaska



DAN COX, NATURAL EXPOSURES

Capturing and handling polar bears increases our understanding of population health.

The U.S. Fish and Wildlife Service (FWS) is responsible for monitoring polar bear populations in the United States and works cooperatively with the U.S. Geological Survey's (USGS) polar bear research program as well as other research entities to better understand Alaska's polar bears. Of 19 polar bear populations throughout the world, two live in Alaska waters. The Chukchi Sea population ranges primarily between western Alaska and Siberia, while the Southern Beaufort Sea population extends from western Alaska east into the Canadian Arctic.

LONG-TERM RESEARCH ON POLAR BEARS IN THE SOUTHERN BEAUFORT SEA

The Southern Beaufort Sea (SB) polar bear population is one of the best-studied populations in the world. Much of what we know about polar bears has come from a long-term capture-recapture study conducted in the SB by the USGS. Captures of polar bears in this population began as early as the 1960s, with relatively consistent data collection

starting in the early 1980s. In 2001, a 5 year intensive capture-recapture study began with the objective of estimating the size and vital rates of this population.

From the intensive capture-recapture study, USGS estimated that there are 1500 polar bears in the SB population. This is less than the estimate of 1800 polar bears that was derived in the 1980s and 1990s. Because of uncertainty in both estimates, we can't be sure that the size of the SB population has declined in the past 20 years. However, recent studies have shown that SB polar bears are being strongly affected by declines in the sea ice. In years with long open-water seasons, polar bear survival and breeding rates are low, which causes deaths to outpace births, and leads to reductions in population size. One explanation is that, in years with long open-water seasons, polar bears spend less time hunting seals on sea ice over the biologically productive waters of the continental shelf. This limits the amount of fat they can store, leading to nutritional stress and possibly starvation. Indeed, some sex and age classes of bears appear to grow more slowly and be thinner in years with long open-water seasons.

MORE TO LEARN ABOUT POLAR BEARS IN THE SOUTHERN BEAUFORT SEA

Although research and traditional knowledge have taught us a lot about polar bears in the SB, this population is facing new challenges and there's a lot we do not know. For example, what are the mechanisms by which climate change is affecting polar bears? While nutritional limitations appear to be affecting some segments of the population such as young, growing males, others, such as adult females, appear to have remained in good condition. Are drowning events, contaminants, or disease further impacting this population? Will changes in the sea ice cause polar bears to leave their old ranges and move into new areas? Will offshore oil development impact the ability of polar bears to cope with climate change? These types of questions, in addition to long-term monitoring of the health, condition, and

vital rates of bears in this population, are being addressed through ongoing capture efforts.

For more information and connections to publications generated from long-term studies in the Southern Beaufort Sea, go to: http://alaska.usgs.gov/science/biology/polar_bears/

A NEW STUDY IN THE SOUTHERN BEAUFORT SEA IN 2008

To better understand the response of polar bears to climatic warming, a new research study funded, in part, by the National Science Foundation, is being conducted by the University of Wyoming, the USGS, and FWS. The goal is to compare the activity, movements, body condition, and physiology of polar bears that spend the fall open water season on land, versus polar bears that follow the sea ice as it retreats north into the polar basin. In 2008, polar bears were captured in the Prudhoe Bay area at the beginning and end of the open-water season to determine how their condition and physiology changed during this time, including whether or not they gained weight, accumulated body fat, or fasted. Similarly, in 2009, polar bears were captured on land but also out on the Beaufort Sea pack ice at the beginning and end of the open-water season. This will help us understand how polar bears will cope with the longer open-water seasons that are predicted to occur in coming years, and should help managers anticipate challenges associated with bears spending more time on land.

FALL AERIAL SURVEYS IN THE SOUTHERN BEAUFORT SEA

Since 2000, the FWS has conducted aerial surveys along the SB coastline and barrier islands between Barrow and the Canadian border. The purpose of the surveys is to document the distribution and number of bears on shore during the fall open water period. Analysis of data collected in 2000-2005 determined that on average, less than 4% of the SB population came on shore during the fall, and of those that did come to shore, 65% did so at Barter Island where they have access to subsistence-

harvested bowhead whale carcasses. The number of bears observed on shore and the amount of time they spent there was higher during years when the ice retreated furthest from shore. The FWS continued aerial surveys in 2007-2009 with extra surveys flown in August of 2008 and 2009 to accommodate sightings by oil and gas industry workers, which indicate that bears may be coming to shore earlier than in previous years. Future aerial surveys, in combination with the new fall capture program outlined above, will allow us to monitor polar bear responses to future changes in fall sea ice conditions.

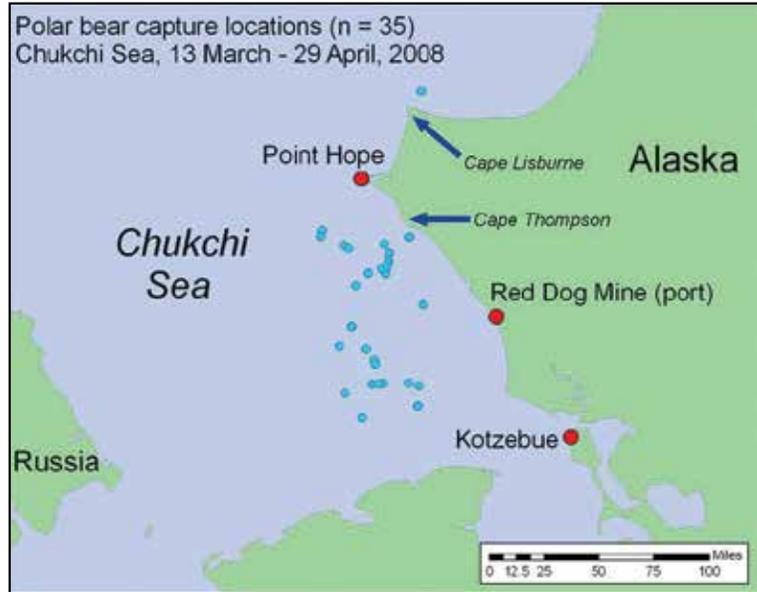
NEW RESEARCH ON POLAR BEARS IN THE CHUKCHI SEA

In 2000, the U.S. and Russia signed a bilateral treaty to cooperatively manage polar bears in the Chukchi Sea. This treaty establishes a Joint Commission of federal and Native representatives from the U.S. and Russia who will make decisions involving polar bears in the Chukchi Sea. To ensure that the Joint Commission will have the best available science on which to base management decisions, FWS and USGS initiated a study in 2008 to begin gathering biological and demographic information on polar bears in the Chukchi Sea.

Currently, very little is known about the status and health of polar bears in the Chukchi Sea, including reproductive rates, survival, or population size. The first step of this study is to identify



George Durner, USGS Research Zoologist, examines a 1,240-pound adult male captured 65 miles off the Chukchi Sea coast in April 2008.



Location of polar bears (blue dots) captured in March and April 2008.

the best methodology for estimating population, status and trends of polar bears in the region, and to gain an initial understanding of the health and sex/age structure of the population. The long-term goals are to estimate population status and trend using the methods identified, and to understand how polar bears are distributed in the region and how they use sea ice habitat. This information will be evaluated in the context of rapidly changing sea ice conditions and other changes that may be occurring in the ecosystem.

In March-May of 2008 and 2009, polar bears were captured out on the sea ice between Point Hope and Kotzebue in the Alaskan Chukchi Sea. A total of 74 polar bears were captured and standard information such as body weight and body length/skull size were recorded. In addition, samples of blood, hair, and fat biopsies were obtained from captured bears. Twenty-one adult females were fitted with satellite radiocollars that provide their locations every 3 days for up to 2 years. These collars are fitted

with new software that tracks the daily amount of time bears spend in the water. This information will be important in assessing any impacts that changing sea ice conditions may have on polar bear behavior and their risk of drowning. Data collected during this initial capture effort will be added to data collected during subsequent capture efforts planned for 2010-2012 to establish current baseline information for the population. In addition, efforts are being made to expand capture efforts in Russia to gain a more comprehensive assessment of the status of polar bears in the Chukchi Sea.

U.S. Fish & Wildlife Service
1 800/344 WILD
<http://www.fws.gov>

December 2009

For more information please contact:
Karyn_Rode@fws.gov
Eric_Regehr@fws.gov

U.S. Fish & Wildlife Service
Marine Mammals Management Office
1011 East Tudor Road
Anchorage, AK 99503

Visit the Marine Mammals home page:
<http://alaska.fws.gov/polarbear>



U.S. Fish & Wildlife Service

What to Do if You Find a Dead Polar Bear

The U.S. Fish and Wildlife Service (FWS) is the federal agency responsible for monitoring polar bear populations in the United States. As part of this effort, FWS biologists are working to obtain information on the condition and health of these animals. Recovering the carcass of a polar bear that has died recently of natural causes provides an important opportunity to aid in monitoring the health of polar bear populations. For example, a small tooth extracted from a polar bear skull allows scientists to estimate the animal's age, while marrow from a leg bone can be used to assess body condition and health.

We need your help. If you find a polar bear carcass or partial remains, please contact the FWS Marine Mammals Management Office in Anchorage at 1-800-362-5148. You will be asked to provide the following information about the animal, and, if possible, take photographs and collect the skull and femur (biggest front leg bone):

- Location where the carcass was found (GPS location, if possible)
- Estimated length, girth (circumference), and weight
- Sex and age class (cub of the year, yearling, sub-adult or adult)

- Body condition (see diagram on back)
- Presence of ear tags, collar, or other identifying features
- Possible cause of death (for example: open wounds, scars, broken bones)
- Estimated time of death (less than or more than 24 hours - see below)

It is especially valuable to biologists to quickly obtain samples from animals that are frozen or have died within 24 hours. If you find a polar bear that is frozen or has died within 24 hours, please call the FWS Marine Mammals Management office immediately. The FWS will arrange for samples to be shipped to Anchorage. The carcass is less than 24 hours old if:

- Carcass is intact and not scavenged
- Eyes are present and not wrinkled or shrunken
- No foul odor or dark brown/black fluid leaks from carcass
- Fur does not pull free in clumps when grasped
- No maggots or fly eggs are on or under the body

Thank you for your assistance. Your help in collecting this information is very much appreciated.



Scientists investigate a polar bear mother killed at her den site by an adult male polar bear.

CRAIG PERHAM, USFWS

U.S. Fish & Wildlife Service
1 800/344 WILD
<http://www.fws.gov>

December 2009

For more information please contact:
Craig Perham or Susanne Miller
1 800/362 5148
Craig_Perham@fws.gov
Susanne_Miller@fws.gov

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1011 East Tudor Road
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Visit the Marine Mammals home page:
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Polar Bear Score Card: A Standardized Fatness Index

Illustrations by Doug Lindstrand

1



SKINNY

Skinny emaciated appearance, vertebrae, ribs, and hip bones externally visible without palpation, no fat palpable between skin and muscle over the dorsal body, hips, or lower rump.

2



THIN

Thin, vertebrae and hip bones (but not ribs) partially visible, easily palpable under the skin, little/no fat between skin and muscle over the back, small amounts of fat detectable on lower rump.

3



AVERAGE

Average healthy appearance, vertebrae / hip bones not visible, upper 1/3 to 1/2 of the spinal column can be felt under the skin, detectable layer of fat between skin and muscle over rear half of body, thickening slightly but detectably over lower rump.

4



FAT

Fat, vertebrae / hip bones not visible, palpation reveals fat deposited over upper vertebrae, hip bones difficult to feel through fat, fat thick over rump, a hand rubbed above the rump will initiate ripples in the skin over the fat layer.

5



VERY FAT

Obese, vertebrae / hip bones undetectable by palpation, thick layer of fat is apparent between skin and muscle 2/3 of the way up the back & over rump, a hand rubbed on lower back above rump sets off waves of rolling fat, possibly jiggling.

Condition: This is a subjective determination of bear's body condition based on assessment of body fat.



Polar Bear Harvest Management in Alaska

Alaskan Natives may harvest polar bears for subsistence purposes as outlined under the Marine Mammal Protection Act (MMPA). The U.S. Fish and Wildlife Service (FWS) monitors harvest through local taggers in 15 communities hired through the Marking, Tagging, and Reporting program (MTRP). Taggers gather important information from hunters about polar bears harvested around their community, including the date, location of harvest, and the sex/age and condition of the bear. While taggers assist in obtaining information from hunters, it is the hunter's responsibility to get the skull and hide of harvested bears tagged within 30 days of harvest.

Taggers are supplied with kits that include tools for taking measurements, and a small pre-molar tooth to age the bear, and certificates that include a variety of important information about the harvested bears. Unfortunately, reporting rates are low with the required harvest information being provided for less than 50% of the polar bears harvested in Alaska. The FWS is currently working to improve compliance of harvest reporting and the completeness of information received for harvested bears.

ASSESSMENT OF HARVEST DATA

The FWS serves as a conduit for harvest information. We analyze and summarize data provided by taggers and hunters on harvested polar bears and provide this information to co-management partners to assist them in making management decisions. In addition, we work with the U.S. Geological Survey to obtain information on the population dynamics of Southern Beaufort and Chukchi/Bering Seas polar bears through research programs. Data collected from harvest and research are used to:

- ensure that polar bears are available for harvest in the future;
- provide information to co-management partners (i.e. Alaska Nanuq Commission, Inupiat-Inuvialuit Game Commission, U.S.-Russia Joint Commission) that allows



Polar bear hide on a drying rack in Alaska.

KARYN RODE, USFWS

them to evaluate harvest relative to their management agreements and objectives;

- provide information that allows evaluation of the status, trends, and health of polar bear populations.

HARVEST MANAGEMENT OF THE CHUKCHI/BERING SEAS POLAR BEAR POPULATION

On December 9, 2006, Congress signed into law the implementing legislation for the *Agreement between the United States of America and the Russian Federation on the Conservation and Management of the Alaska-Chukotka Polar Bear Population*, originally signed by the U.S. and Russia in 2000. The primary purpose of the *Bilateral Agreement* is to ensure long-term conservation of this population using the best biological information available. Now that implementing legislation is in place, a Joint Commission, consisting of a government and native representative from each country, has been established. The Joint Commission will be responsible for the design, coordination, and evaluation of management and research activities. One benefit of the

Bilateral Agreement allows both the U.S. and Russia to formally address polar bear harvest issues, including the establishment of hunting quotas with involvement from Native users. High harvest levels, in combination with increasing environmental change in the region, make enactment of the *Bilateral Agreement* a high priority for polar bear conservation.

To address information needs of the Joint Commission, an ad hoc meeting of technical specialists from the U.S. and Russia occurred in Anchorage in 2007 to discuss future management, research, and conservation needs for the Chukchi/Bering Seas polar bear population. We determined that the primary challenge to establishing a sustainable harvest level as called for by the *Bilateral Agreement* is the lack of population information (status and trends). The Joint Commission met in Moscow, Russia in September, 2009, and established a scientific working group to advise their activities, as called for under the *Bilateral Agreement*.

HARVEST MANAGEMENT OF THE SOUTHERN BEAUFORT SEA POLAR BEAR POPULATION

Since 1988, polar bears in the Southern Beaufort Sea have been managed under the Inupiat-Inuvialuit Agreement (between Alaskan North Slope residents and the Inuvialuit Game Council in Canada). This voluntary agreement establishes a harvest quota and calls for management based on sustainable yield. Additionally, the I-I Agreement prohibits hunting using aircraft or large motorized vehicles, and calls for the protection of females with cubs and denning bears.

Recent studies suggest that the Southern Beaufort Sea population may have recently declined and will continue to decline due to reduced sea ice availability. In light of this information, along with a new population estimate of 1500 bears, the current harvest level of 80 bears (40 for Alaska and 40 for Canada) set under the Inupiat-Inuvialuit Agreement appears to be unsustainable. The FWS has recommended a voluntary reduction in harvest for this population. Any potential changes to harvest levels are currently being considered by members of the Inupiat-Inuvialuit Agreement.

HARVEST PATTERNS IN ALASKA

Harvest levels in Alaska have remained stable over the past 20 years in the Southern Beaufort Sea but have declined in the Chukchi/Bering Seas (Figure 1). However, while the Alaskan Chukchi Sea harvest has declined, a considerable, un-quantified illegal harvest of bears from the Chukchi/Bering Seas population is believed to be occurring in Russia. As a result, there is currently concern that harvest levels for both of Alaska's polar bear populations may be unsustainable. Six communities (Barrow, Point Hope, Savoonga, Gambell, Diomed, and Wainwright) harvest 80% of all polar bears harvested in Alaska. Polar bears are harvested in every month except June. Hunters in western Alaska, from Point Lay to St. Lawrence Island, typically harvest bears after December since bears moving southward with advancing pack ice are not available in this area until later in the season. Since 1980, significantly more

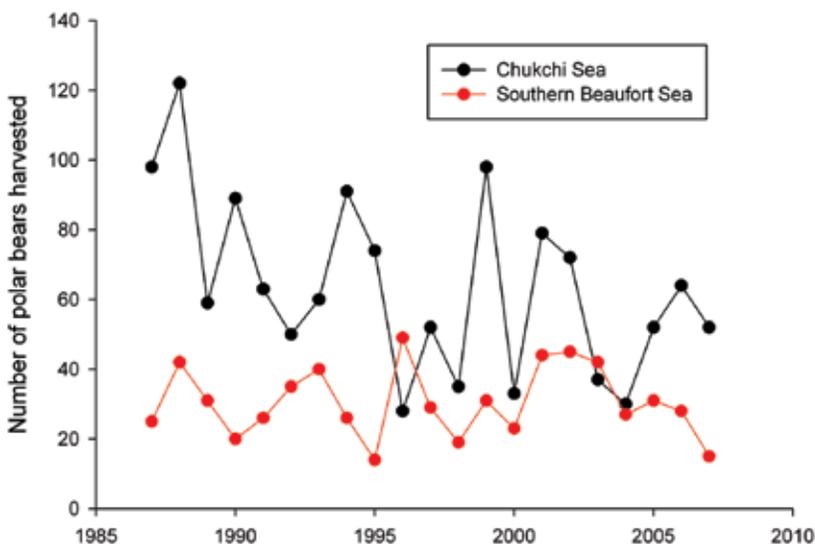


FIGURE 1: Alaska polar bear harvest, 1985-2007.

bears have been harvested in the fall (October - December) in the Southern Beaufort Sea than in the Chukchi/Bering Seas.

ENSURING SUSTAINABLE HARVEST THROUGH CO-MANAGEMENT AGREEMENTS

The FWS continues to work through our existing co-management agreements with Alaska Natives to address future actions that affect polar bears and polar bear hunting. This includes working with the Alaska Nanuq Commission (state-wide), the North Slope Borough and Inuvialuit Game Council (Beaufort Sea region) and the Joint Commission formed with Russia under the *Bilateral Agreement* (Chukchi/Bering Seas region).

If populations decrease as a result of changing ice conditions, it may mean that fewer bears will be available for hunting, and that bears may be in poorer condition. To ensure that bear populations are managed to allow for long-term harvest, it is more important than ever to have adequate reporting of harvest, collection of harvest data, and collection of biological samples (e.g.: pre-molar tooth) from harvested bears.



Measuring polar bear skulls helps monitor the health of the population.

U.S. Fish & Wildlife Service
1 800/344 WILD
<http://www.fws.gov>

December 2009

For more information please contact:
Thomas_Evans@fws.gov

U.S. Fish & Wildlife Service
Marine Mammals Management Office
1011 East Tudor Road
Anchorage, AK 99503

Visit the Marine Mammals home page:
<http://alaska.fws.gov/polarbear>



U.S. Fish & Wildlife Service

Killing a Polar Bear in Defense of Human Life

What's Legal?

For more information, to report a polar bear kill, or to contribute samples, please contact one of the following:

- your local Tagger (contact Brad Benter at 907-786-3980 or Forest Hannan at 907-786-3551 to find a Tagger in your community)
- USFWS Marine Mammals Management Office in Anchorage: 907-786-3800 (or 800-362-5148)
- USFWS Office of Law Enforcement: 907-786-3311 (Anchorage) or 907-456-2335 (Fairbanks) or 907-443-2479 (Nome)
- North Slope Borough Department of Wildlife Management: 907-852-0350 (Barrow), or your community's Borough Coordinator
- Alaska Nanuq Commission: 907-443-5044 (Nome), or your local Commission representative

Bears are curious and will investigate almost anything to see if it is food. Managing attractants around your home and work site will reduce the potential for defense-of-life kills.

Legal Requirements

- Defense of life kills are only allowed in self-defense or to save the life of a person in immediate danger. All defense-of-life kills of polar bears, regardless of where they occur in Alaska, must be reported to the US Fish and Wildlife Service within 48 hours.
- The shooter may be required to transfer the entire carcass (including hide and skull) to a law enforcement officer or designated local representative. The shooter is responsible for the carcass once the bear is killed. Don't abandon the carcass.
- The shooter may not keep any parts of the animal, unless authorized by the US Fish and Wildlife Service.

Here's the Situation

Polar bears throughout Alaska are struggling because of sea ice loss. The *Marine Mammal Protection Act* and other laws protect polar bears. These laws allow:

- 1) killing polar bears only for defense of human life; or
- 2) subsistence hunting only by coastal-dwelling Alaska Natives.

Local leaders agree polar bears need to be conserved for future generations. Co-management agreements between Alaska Natives and federal agencies are in place to limit the number of polar bears that are killed.

What you can do to Reduce Defense-of-life Kills

- Handle meat and store trash so bears can't get it.
- Be alert outside to avoid close encounters with bears.
- Know bear behaviors and life-patterns so you can assess whether a bear is a threat to human life.
- Don't attract, approach, harass, or provoke polar bears.



The U.S. Fish & Wildlife Service works with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people



U.S. Fish & Wildlife Service

Hunting Polar Bears of the Southern Beaufort Sea Population

What's Legal?

For more information, to report a polar bear kill, or to contribute samples, please contact one of the following:

- your local Tagger (contact Brad Benter at 907-786-3980 or Forest Hannan at 907-786-3551 to find a Tagger in your community)
- USFWS Marine Mammals Management Office in Anchorage: 907-786-3800 (or 800-362-5148)
- USFWS Office of Law Enforcement: 907-786-3311 (Anchorage) or 907-456-2335 (Fairbanks) or 907-443-2479 (Nome)
- North Slope Borough Department of Wildlife Management: 907-852-0350 (Barrow), or your community's Borough Coordinator
- Alaska Nanuq Commission: 907-443-5044 (Nome), or your local Commission representative



All subsistence-harvested polar bear MUST BE TAGGED within 30 days.

Legal Requirements

- Hunting is only allowed by coastal-dwelling residents that are one quarter or more Alaska Native.
- The harvest cannot be wasteful: At least the hide and skull must be salvaged.
- The hunter must have both the hide and skull tagged within 30 days.
- Raw (not handcrafted), inedible parts such as hides or claws can be given or sold only by Alaska Natives to Alaska Natives.
- If inedible parts are significantly altered into a handicraft, they may be sold to anyone.
- Edible portions (for example: meat) may be given or sold in an Alaska Native village by the hunter to anyone for consumption.

Here's the Situation

Polar bears throughout Alaska are struggling because of sea ice loss. The *Marine Mammal Protection Act* and other laws protect polar bears. These laws allow:

- 1) subsistence hunting only by coastal-dwelling Alaska Natives; or
- 2) killing polar bears only for defense of human life.

These laws prohibit sport hunting and most forms of harassment.

Local leaders agree polar bears need help. The Inupiat of the North Slope Borough, and the Inuvialuit of Canada, developed a voluntary local user (co-management) agreement in 1988 known as the *Inupiat-Inuvialuit Polar Bear Agreement*. The *Agreement* sets an annual harvest limit to help ensure polar bears remain for future generations. Currently the total harvest limit is 35 bears, of which no more than one third can be female. The harvest limit applies to the Beaufort Sea population of polar bears and the residents of Kaktovik, Nuiqsut, Barrow, Atqasuk, and Wainwright who hunt predominantly from this population of bears. This *Agreement* affects their hunting practices.

Polar bears of the Bering/Chukchi seas population are managed under an international polar bear treaty with Russia, known as the *US-Russia Bilateral Agreement*. Residents of villages south of and including Point Lay hunt from this population of bears.

What you can do

Hunters can uphold local polar bear co-management agreements by:

- knowing the harvest limit in your region.
- reporting your harvest immediately.
- safeguarding polar bear reproduction by not killing denning bears or females with cubs.
- contributing body part samples for polar bear health studies.

The U.S. Fish & Wildlife Service works with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people

Part V: Contacts for Additional Information on Laws, Regulations and Resources

City of Kaktovik
City Administrator
P O. Box 27
2051 Barter Avenue #27
Kaktovik, AK 99747
907-640-6313

Kaktovik Inupiat Corporation
President
P O. Box 73
4089 Hula Hula Avenue
Kaktovik, AK 99747
907-640-6120

Native Village of Kaktovik
Tribal Administrator
P O. Box 130
834 8th Street
Kaktovik, AK 99747
907-640-2042

U.S. Fish and Wildlife Service
Arctic National Wildlife Refuge
Visitor Services Coordinator
101 12th Avenue, Room 236
Fairbanks, AK 99701
800-362-4546

U.S. Fish and Wildlife Service
Division of Management Authority
4401 W. Fairfax Drive, Room 212
Arlington, Virginia 22203
800-358-2104

U.S. Fish and Wildlife Service
Marine Mammals Management
Polar Bear Biologist
1011 E. Tudor Road MS 341
Anchorage, AK 99503
800-362-5148

Appendix:

Translations of some information sheets into German and Japanese. (2013)



Richtlinien zur Beobachtung von Eisbären in Kaktovik

**Eisbären zu beobachten und zu fotografieren ist erlaubt.
Eisbären zu stören ist nicht erlaubt.**

Eisbären zu stören ist sowohl gefährlich als auch unklug.

- Informieren Sie sich über „Bärensicherheit“, bevor Sie in das Bärengebiet kommen (unter: <http://arctic.fws.gov/visitors.htm>).
- Beobachten Sie die Bären nur während des Tages. Halten Sie sich in einer Gruppe auf und bleiben Sie entweder in einem Boot oder Fahrzeug.
- Respektieren Sie den persönlichen Freiraum der Bären; vermeiden Sie es, den Tieren zu nahe zu kommen.
- Nähern Sie sich den Tieren langsam mit möglichst wenig Geräusch, Licht oder Bewegung.
- Bleiben Sie stehen, wenn ein Bär Sie bemerkt. Lassen Sie ihn mit der Beschäftigung fortfahren, die er vor Ihrer Ankunft ausübte, bevor Sie weitergehen.
- Treiben Sie Bären nicht zusammen; verfolgen oder jagen Sie sie nicht.
- Versuchen Sie nicht, Bären zu füttern oder sie anderweitig anzulocken.
- Vermeiden Sie es, zwischen eine Bärenmutter und ihre Jungen zu geraten.
- Gewähren Sie schwimmenden Bären „die Vorfahrt“.
- Erlauben Sie Bären keinen Kontakt mit Ihnen selbst oder mit Ihrem Boot oder Fahrzeug.

Respektieren Sie die Bären. Ihr verantwortungsvolles Verhalten wird dazu beitragen, dass auch in Zukunft Eisbären und Wale beobachtet werden können. Danke für ihre Mithilfe!



Photo von Susanne Miller, USFWS



Richtlinien für die Besucher der Gemeinde Kaktovik

- Bitte seien Sie achtsam beim Besuch unserer Dorfgemeinde. Wir heissen sicherheitsbewusste und respektvolle Besucher zum Beobachten der Eisbären und der Walfang Aktivitäten willkommen.
- Beachten Sie die errichteten Barrieren, um sichere Bär-Beobachtung zu gewährleisten.
- Um die traditionelle Art der Nahrungsbeschaffung zu gewährleisten, gestattet das Gesetz den Gemeindemitgliedern, Grönlandwale zu jagen. Bitte respektieren Sie diese traditionellen Aktivitäten, indem Sie während des Schlachtens nicht im Wege stehen.
- Fotografieren Sie nur aus der Entfernung.
- Wir empfehlen Ihnen, mit einem professionellen Führer zur Bären-Beobachtung zu gehen. Dadurch wird sicheres Verhalten gemäss des Bärenschutzgesetzes gewährleistet.
- Der Kauf von Dingen, die aus Körperteilen der Meeressäugerhandgefertigt wurden, ist erlaubt. Das Meeressäuger-Schutzgesetz gestattet nur den einheimischen Alaskanern den Verkauf von solchen Dingen. Nicht-Einheimischen ist es untersagt, andere als diese handgefertigten Produkte zu besitzen, zu transportieren oder zu verkaufen. Bitte vergewissern Sie sich, dass die Einfuhr von Meeressäuger-Produkten in Ihrem Heimatland legal ist.

Respektieren Sie unsere Dorfgemeinde. Ihr verantwortungsvolles Verhalten wird dazu beitragen, dass Beobachten von Eisbären und Walen auch in Zukunft durchgeführt werden kann. Vielen Dank für Ihre Mithilfe!



Photo von Susan Gordon
Kaktovik Eisbär Committee Zeichnung von Flora Rexford

Wissenwertes über Eisbären

Eisbären haben einen wichtigen Platz in der kulturellen Tradition der einheimischen Bevölkerung Alaskas. Sie schätzen die bemerkenswerte Kraft, das Jagdgeschick und die List der Bären.

Einwohner und Besucher haben eine einmalige Gelegenheit, Eisbären in Kaktovik zu beobachten. Diese Bären sind ein Teil der Southern Beaufort Sea Gruppe, geschätzte Anzahl: 1,500 Tiere. Diese Gruppe bewohnt ein Areal, das sich mehr als 800 Meilen entlang der Nordküste Alaskas und Kanadas erstreckt. Das Eis ist die bevorzugte Heimat der Eisbären, aber da es im Sommer und Herbst abnimmt, kommen die Bären an die Küste, um sich auszuruhen und zu fressen; sie warten auf die Rückkehr des Eises. Später im Jahr graben sich auch manche eine Geburtshöhle, um darin Junge zu bekommen.

Auf Barter Island treffen Eisbären manchmal auf Braunbären. Eisbären sind viel grösser als Braunbären; ein erwachsener männlicher Eisbär misst gewöhnlich ca. 2½ - 3 Meter von der Nase bis zum Schwanz, und er kann ein Gewicht von bis zu ca. 600 kg erreichen. Erwachsene weibliche Tiere sind meistens nur halb so gross wie die männlichen. Trotz ihrer Grösse werden Eisbären oft von Braunbären verschreckt, wenn sie an dem Walknochen-Haufen fressen.

Eisbären haben sich besonders ihrer arktischen Umgebung angepasst. Sie sind weiss zur Tarnung, haben ein wasserabweisendes Fell und dichtes Unterhaar, schwarze Haut, um Wärme zu absorbieren, kleine „Saugnäpfe“ an ihren Fusssohlen zum Laufen auf glattem Eis; ihre Zähne sind für's Fleisch-Fressen und nicht für eine Fleisch-Pflanzen Diät spezialisiert; und bei einem reichlichen Nahrungsangebot können sie grosse Fettreserven in ihrem Körper anlegen, um im Notfall wieder darauf zurückgreifen zu können. Die Hauptnahrung der Eisbären sind Ringelrobben. Sie jagen jedoch auch Bartrobben, Walrosse und Belugawale, und sie

fressen am Strand angespülte Kadaver, die sie entlang der Küste finden.

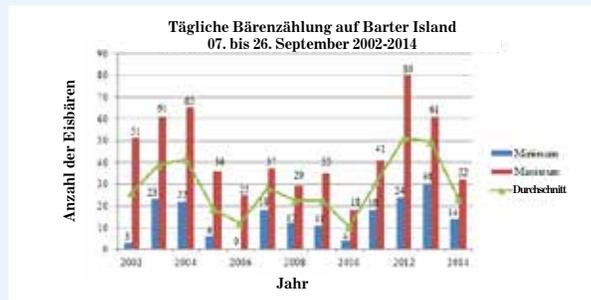
Normalerweise sind die Eisbären Einzelgänger, ausser wenn sie sich zur eisfreien Zeit am Ufer versammeln, oder zur Paarungszeit und wenn sie Junge aufziehen. Trächtige Bärinnen verbringen die Zeit von Ende Oktober/Anfang November bis zum späten März oder April in ihren Winterhöhlen. Andere Eisbären benutzen normalerweise keine Höhle, sondern sind das ganze Jahr über aktiv. Die Höhlen der Eisbären liegen oftmals an Land, wo viel Schnee angehäuft ist, so z.B. an den Steilküsten oder den Flussufern nahe Kaktovik. Auch in Schnee- und Eisverwehungen auf dem Meereis werden manchmal Höhlen gegraben.

Trächtige Bären gebären 1 bis 3 winzige, hilflose und fast nackte Junge in der Mitte des Winters. Mutter und Junge sind in einer Schneehöhle geschützt, in der es bei gleichbleibender Temperatur relativ warm ist. Dort säugt die Mutter ihre Jungen bis März oder Anfang April. Sobald die Familie die Höhle verlässt, begibt sie sich auf das Meereis, wo die Jungen die Jagd erlernen. Junge bleiben ca. 2 ½ Jahre bei ihrer Mutter.

Die Zeit in der Geburtshöhle ist sehr wichtig für die Entwicklung der Eisbär-Jungen. Wird eine Winterhöhle gestört, kann die Folge das Verlassen der Höhle und den Tod der Jungen bedeuten. Von Bär-Beobachtungen in der Nähe der Winterhöhlen ist abzuzuraten.

Die Klimaerwärmung führt zum Schmelzen des arktischen Meereises. Dadurch entstehen breite eisfreie Wasserflächen, die die Bären durchschwimmen müssen, wenn sie zwischen Meereis und dem Land unterwegs sind. Es ist üblich, dass die Bären sich an Land einige Tage ausruhen, nachdem sie solche Langstrecken geschwommen sind. Halten Sie Abstand zu solchen Bären, damit sich die Tiere ungestört ausruhen können.

Anzahl der Eisbären auf Barter Island



- Eisbär-Zählungen von 2002 bis 2014 brachten unterschiedliche Ergebnisse. Es zeichnet sich in dieser Zeit keine klare Tendenz ab.
- Eisbären beiderlei Geschlechts und jeden Alters kommen nach Barter Island. Diese Gegend ist möglicherweise besonders günstig für nicht ausreichend ernährte Bären.
- Für gewöhnlich erscheinen die Eisbären im August auf Barter Island und bleiben dort bis zum Oktober, wenn das Meer wieder zufriert. Zählungsdateien wurden im Jahr 2002 erstellt, um die Anzahl der Bären zu schätzen, die sich von den Resten der Wale ernähren, die mit traditioneller Technik zur Nahrungsbeschaffung erlegt wurden.
- Weitere Beobachtungen/Zählungen sind notwendig und werden durchgeführt.

Warum kommen Eisbären nach Barter Island

- Im Herbst versammelt sich die grösste Anzahl von Eisbären, die es an den Küsten von Alaska und West-Kanada gibt, um Barter Island.
- Die Anzahl der Bären am Ufer scheint mit der Entfernung des Meereises zum Land zusammenzuhängen. Der Rückgang des Meereises könnte zur Folge haben, dass die Eisbären sich vermehrt an Land aufhalten.
- Ein Grund dafür, dass Barter Island eine solche Anziehungskraft auf die Bären ausübt sind die Walgerippe, die von der traditionellen Nahrungsbeschaffung übrig bleiben.
- Ein weiterer Grund ist vermutlich die grosse Anzahl von Ringelrobben, die hier grösser ist als in anderen Küstengebieten. Sie sind die bevorzugte Nahrung der Eisbären. Im Herbst gefriert das Eis hier am ehesten und bietet ihnen eine gute Plattform, von der aus sie die Robben jagen können.

2013



写真撮影：スーザン・ミラー アメリカ合衆国野生動物庁

カクトビクでの北極グマ(白クマ)観察注意点

北極グマ(白クマ)の観察、及び写真撮影は法律で認められています。しかし、クマを刺激したり、おどかしたりすることは違法であり、たいへん危険な行為です。

- 北極グマの生息地を訪れる前に、安全のための注意を説明しているウェブサイト (<http://arctic.fws.gov/visitors.htm>) をご覧下さい。
- クマの観察は昼間の明るい時間帯だけにしましょう。単独でなくグループで、車内かボート内から観察してください。
- クマの行動を妨げることのないよう、十分な距離を置き、けっして近づきすぎないようにしましょう。
- 音、光、動きを最低限におさえて、ゆっくりとクマに近づいてください。
- クマが、接近行為に気がついた場合は、ただちに動きを止めましょう。そしてクマが元の行動に戻るまで静かに待ちましょう。
- クマを呼んだり、クマについて回ったり、追いかけてはいけません。
- クマにえさをやろうとするなど、クマを故意に自分に向かせるような行為はしないでください。
- 母グマと子グマの間には絶対に入ってはいけません。
- ボートから観察中に、泳いでいるクマの進路を妨げないようにしてください。
- クマを車やボート、人体に接触させないようにしてください。

北極グマ(白クマ)を尊重し適切な行動を取っていただくことにより、今後も北極グマ観察の機会を継続することができます。ご協力ありがとうございます。



写真撮影：スーザン・ゴードン
カクトビク北極グマ委員会
挿絵：フローラ・レックスフォード

カクトビク地域へお越しの皆様へのお願い

- この地域へお越しの際は地域住民への配慮を忘れず北極グマ(白クマ)の観察や捕鯨の見学をされますようお願いいたします。
- 写真撮影は離れた場所からお願いします。安全の確保のための囲いや目印がある場合はそれらに従って観察してください。
- この地域の伝統的な食物収集活動を続けるために、アメリカ合衆国法はカクトビク地域住民のホッキョククジラ捕鯨を許可しています。この伝統を尊重し、クジラの解体作業中は作業の妨げにならないように気を付けて観察してください。
- 北極グマの観察は研修や実習を受けたガイドを伴ってください。それによって、法律にしたがった安全な観察をすることができます。
- 海洋生物を素材とした工芸品の購入は許されていますが海洋生物保護法により、海洋生物の工芸品を販売することができるのはアラスカ先住民だけです。先住民でない者が先住民から購入した工芸品以外の海洋生物製品を保持、運搬、販売することは違法です。また、ここで先住民から正規に購入した工芸品であっても、それらを他国に持ち帰ることが合法であるかどうかは、入国先によって異なりますので事前にご確認ください。

この地域を尊重し適切な行動を取っていただくことにより、今後も北極グマの観察や捕鯨の見学の機会を継続することができます。ご協力ありがとうございます。

北極グマはアラスカ先住民の伝統文化にとっても重要な位置を占めています。北極グマの強靭さ、獲物に忍び寄り狩りの能力はアラスカ先住民が認め賞賛してきました。

カクトビックでは、住民や訪問者が北極グマを観察する珍しい体験ができます。ここで見られるクマは、ビューフォート海南部に生息するおよそ1500頭のクマの一部です。これらのクマはアラスカとカナダ北部の800マイル(約1287キロ)にわたる海岸地区を利用して生活しています。北極グマは水上を好みますが、氷が減る夏と秋には海岸で休息し、食べ物を探し、海に再び氷が張るのを待ちます。時にはここで巣穴を作り出産するクマもいます。

バーターアイランドでは、陸にいる北極グマがヒグマに遭遇することがあります。北極グマはヒグマよりもかなり大きく、大人のオスは鼻先から尾まで8フィートから9フィート(2.4から2.7メートル)ほどあり、体重は1320ポンド(約600キロ)さらに大きいものでは1760ポンド(約800キロ)にもなります。大人のメスは、オスの半分ほどの大きさが普通です。その大きさにもかかわらず、バーターアイランドにある捕鯨後のクジラの残骸が積み上げられている餌場では、よく北極グマがヒグマに場所を譲る光景が見られます。

北極グマは北極の環境に適応して暮らしてきました。北極グマの白さはカモフラージュになります。外側には防水効果のある粗い毛、内側には保温のための密集した毛、そして熱を吸収する黒い皮膚があります。足の裏には小さな吸盤のようなものがあり、滑りやすい氷の上の滑り止めになっています。歯は肉食草食両用ではなく、肉食のみに最適な構造をしています。食べ物が豊富な時には大量の脂肪を体に蓄えて、食べ物が不足しても、蓄えた脂

肪を使うことができます。北極グマは主にワモンアザラシを食べますが、他にもアゴヒゲアザラシ、セイウチ、シロイルカなども食べ、海岸にうちあげられた生き物の死骸を探してまわったりもします。

海に氷が張らない時期に海岸線近くに多く集まる時や繁殖期、子育て中を除き、北極グマはたいてい単独で生活します。妊娠中の母グマは10月末か11月ごろから3月末か4月ごろまで、冬の巣穴で過ごします。他のクマは巣穴に住むことはほとんどなく1年中活動します。母グマの巣穴はカクトビック周辺の川岸や海岸の崖に沿った、雪が多く積もった陸地によくあります。また、圧力で盛り上がった氷海上に掘られたものもあります。

妊娠した母グマは真冬になると、かよわい、ほとんど毛の生えていない、とても小さな子グマを巣穴の中で1~3匹生みます。雪に守られた巣穴は一定の暖かさを保ってくれ、母グマは3月から4月まで巣穴の中で子グマを母乳で育てて過ごします。巣穴から出た後は母グマと子グマは氷海上に移り子グマは狩りの仕方を習い始めます。子グマはおよそ2年半ほどを母グマと生活します。

巣穴に住む時期は子グマの成長にたいへん重要です。冬に巣穴をおびやかすことは母子を巣穴から追い出し、子グマの死につながります。ですから、冬に北極グマの巣穴に近づくことは避けるべきです。

近年の気候の温暖化によって海氷がとけてきたために北極グマは氷と陸の間を長時間泳いで渡らなければならなくなりました。長時間泳いだ後で、クマが何日も動かずに陸上で休むことはめずらしくありません。そのようなクマを見かけた場合、近づかないで静かに休ませておくようにしてください。



- 2002年から2014年の間のクマの数はまちまちで一定の傾向はみられません。
- オス、メスともに幅広い年齢層のクマが、バーターアイランドを訪れます。ここは栄養不足のクマにとっては特に重要な地域と言えます。
- 北極グマはたいていバーターアイランドに8月頃現れ10月に海が凍るまでとどまります。バーターアイランドでは文化と伝統に根ざした先住民生存捕鯨が行われています。そのクジラの残骸に集まるクマの数を推計するため、2002年にクマの数を調べる日が設定されました。
- クマの数を継続して調査することは重要であり、現在も続けられています。

- アラスカの北海岸からカナダの西部にかけて、北極グマが秋が一番多く集まるのは、バーターアイランド周辺です。
- 海岸部で見られるクマの数と、陸から海水までの距離は密接に関係しているようです。今後、海水が減り、陸との距離がさらに伸びれば、陸地を使う北極グマはさらに増えると思われます。
- 北極グマがバーターアイランドに集まる大きな理由の一つは、捕鯨の後のクジラの死骸があることのようにです。
- もう一つの理由は、おそらく、クマの主な食べ物であるワモンアザラシがバーターアイランド付近には他のどの海岸地域よりも多く生息しているからでもあるでしょう。秋になるとここでは真っ先に海が凍り、ワモンアザラシを捕るために都合のよい狩り場ができるのです。



Arctic

National Wildlife Refuge

So beobachtet man Eisbären am besten

Buchen Sie ein autorisiertes Unternehmen, wenn Sie Eisbären vom Wasser aus beobachten wollen.

Wenn Sie Eisbären vom Wasser aus beobachten oder dazu einen Wassertaxi Service benutzen wollen, buchen Sie bei einem autorisierten Unternehmen mit registrierten Booten und Angestellten. Diese Leute haben an Führungsworkshops und Sicherheitstraining teilgenommen, sie kennen sich mit den Umweltschutzgesetzen und den wissenschaftlichen Studien aus—und können daher professionelle und hochwertige Eisbärführungen anbieten. Diese Führer sind verpflichtet, ihre Boote und Gerätschaften auf professionellem Stand zu halten.

Sie finden die Liste der vom Arctic Refuge genehmigten Unternehmen unter <http://arctic.fws.gov/pbguide.htm>.

Autorisierte Bootsunternehmen haben eine Kopie ihrer Lizenz an Bord ihres Bootes. Darauf befindet sich auch die Liste mit den Namen der offiziell zugelassenen Bootsunternehmer, die von der Coast Guard autorisiert sind. Auf Anfrage zeigen Ihnen die Bootsunternehmer diese Lizenz. Sie haben hart dafür gearbeitet.

Was tut das Arctic Refuge?

Das Refuge ist verpflichtet, die kommerziellen Aktivitäten auf dem Wasser und in den Refuge Gebieten an Land um Kaktovik herum zu beaufsichtigen, um das Habitat wilder Tiere zu schützen und die Möglichkeiten zur traditionellen Nahrungsbeschaffung für die lokale Bevölkerung zu wahren.

Arctic Refuge und seine Partner stellen sowohl technische Hilfe als auch Trainingsmöglichkeiten für Geschäfte und Bootsunternehmer zur Verfügung. Für weitere Informationen kontaktieren Sie bitte Jennifer Reed bei Arctic Refuge: Tel. (907) 455-1835, oder unter jennifer_reed@fws.gov.

Obwohl Eisbären manchmal zahm erscheinen, so sind es doch wilde Tiere und ihr Verhalten kann sich schnell ändern. Eisbären in der Natur zu beobachten kann daher ein gefährliches Unternehmen sein.

Das Gesetz schreibt vor, dass Eisbären nur dann beobachtet werden dürfen, wenn die Tiere nicht gestört werden. Sie haben die Möglichkeit dazu, weil vor Ihnen Menschen verantwortungsvolle und sichere Beobachtungen durchgeführt haben. Eisbären zu beobachten kann auch in Zukunft nur möglich sein, wenn Sie und andere Beobachter sich darum bemühen, dass Bären und Menschen ungefährdet sind.

Jeder Bär reagiert verschieden auf eine Begegnung mit Menschen. Das hängt vom Bären selbst, von den Umständen und anderen Faktoren ab. So kann z.B. ein Bär Beobachter in 100 Fuss (ca 35 m) Entfernung tolerieren, während ein anderer fortgeht, wenn man sich ihm in einer Entfernung von 500 Fuss (ca 180 m) nähert. Bären reagieren auch eher auf ein Fahrzeug oder Boot, dass sich ihnen geräuschvoll und schnell nähert, als auf eines mit weniger Licht und Lärm.

Was Sie tun können . . .

Befolgen Sie diese Richtlinien, um Eisbären so wenig wie möglich zu stören:

Bevor Sie zur Bären-Beobachtung aufbrechen:

- Studieren Sie die „Bärenführer-Broschüre“ gemeinsam mit Ihrem Führer
- Machen Sie sich mit dem Sicherheitsplan Ihres Führers vertraut, für den Fall, dass einmal eine Notlage eintritt (z.B. eine Fahrzeugpanne)
- Lernen Sie richtiges Verhalten, falls ein Bär sich Ihnen entweder neugierig, nervös, drohend oder aggressiv nähert
- Machen Sie sich mit Alarmsignalen der Bären vertraut (wie in der „Polar Bär Viewing Information“ Broschüre beschrieben) und vermeiden Sie jegliches Verhalten, das die Bären beunruhigen kann

Während der Bär-Beobachtung:

- Nähern Sie sich dem Beobachtungsort langsam, mit so wenig Licht und Geräusch wie möglich, und verlassen Sie den Ort wieder auf demselben Weg, den Sie gekommen sind
- Bleiben Sie stets in Hörweite Ihres Führers
- Vermeiden Sie lautes Reden und plötzliche Bewegungen während der Beobachtung
- Besondere Vorsicht ist geboten bei schlechtem Licht (Hier empfiehlt es sich, einen aufmerksamen Beobachtungsposten zu haben, der in alle Richtungen nach Bären Ausschau hält)
- Bleiben Sie in Ihrem Fahrzeug oder Boot, es sei denn, Ihr Führer informiert Sie anderweitig

Zu Ihrer Sicherheit:

- Treiben Sie Bären niemals zusammen, verfolgen, jagen oder vertreiben Sie sie nie
- Locken Sie niemals Bären mit Nahrung, Gerüchen oder Geräuschen an
- Lassen Sie nicht zu, dass ein Bär mit einem Fahrzeug oder Boot körperlich in Berührung kommt
- Trennen Sie niemals eine Bärenmutter von ihren Jungen
- Behindern Sie niemals schwimmende Bären
- Befolgen Sie alle Richtlinien und Gebote, die örtlichen Barrieren oder „Verkehrszeichen“ hinsichtlich der Eisbär-Beobachtungen



Polar Bears (USFWS)

Arctic National Wildlife Refuge
 907/456 0250 800/362 4546
 arctic_refuge@fws.gov <http://arctic.fws.gov/>
[facebook.com/arcticnationalwildliferefuge](https://www.facebook.com/arcticnationalwildliferefuge)

Oftmals gestellte Fragen

Wie nah ist „zu nah“ am Eisbären?

- Es gibt keine offiziell festgelegte Distanz beim Eisbär-Beobachten. Es wird jedoch von den Führern als auch von den Beobachtern erwartet, dass die Bären nicht gestört werden. Wie ein jeder Bär auf Kontakt mit Menschen reagiert, hängt von seiner individuellen Toleranz und dem Verhalten des Beobachters ab.
- Wenn ein Bär auf Ihre Anwesenheit reagiert, müssen Sie sofort stehenbleiben. Zeigt er sich weiterhin gestört und beunruhigt, müssen Sie umdrehen und sich zurückziehen.
- Um Eisbären legal und sicher zu beobachten, muss man ein gründliches Wissen über das Verhalten der Tiere haben. Deshalb sollten Sie die Dienste eines Führers nutzen, der einem professionellen Standard für hochqualitatives Eisbär-Beobachten verpflichtet ist.

Wer entscheidet, wie wir Bären beobachten: der Führer oder der Beobachter?

- Ihr Führer ist verantwortlich für alles, das sowohl Ihrer Sicherheit als auch der der Bären dient. Respektieren Sie, was der Führer entscheidet. Als Beobachter tragen jedoch auch Sie die Verantwortung für respektvolles und legales Verhalten gegenüber den Bären, egal ob Sie mit einem Führer oder selbstständig unterwegs sind.

Warum sind manche Aktivitäten, die die Bären stören, erlaubt, das Beobachten der Bären jedoch so sorgfältig überwacht?

- Der „Endangered Species Act“ und der „Marine Mammal Protection Act“ gestatten folgende Arten von Störung („Take“ genannt) wie z.B. die traditionelle Nahrungsbeschaffung, wissenschaftliche Forschung, und die Sicherheit für Menschen. In all diesen Fällen ist der Jäger, der Forscher, der Manager verpflichtet, den Bären so wenig wie möglich zu stören und einen Bericht zu erstatten. Für Freizeit-Bären-Beobachter gibt es keine Ausnahmen, und d.h. Bären können auch weiterhin nur beobachtet werden, wenn sie nicht gestört werden.

Warum dürfen Eisbären gejagt werden, obwohl sie vom Aussterben bedroht sind?

- Der „Endangered Species Act“ hat die Eisbären auf die Liste der „bedrohten Tierarten“ gesetzt wegen des Rückgangs des Meereises und nicht wegen des Jagens.
- Der „Endangered Species Act“ und der „Marine Mammal Protection Act“ gewährt den einheimischen Küstenbewohnern des Recht, Eisbären zu jagen und erkennt hiermit die Tradition und seine kulturelle Bedeutung an. Der „Marine Mammal Protection Act“ ernennt ausserdem etliche co-managemant Partner aus der einheimischen Bevölkerung Alaskas zum Artenschutz der Eisbären. Ihre Beteiligung trägt dazu bei, eine verantwortungsvolle Jagd zu garantieren.
- Es besteht ein freiwilliges Abkommen mit den einheimischen North Slope Inupiat and den Kanadischen Inuvialuit, um eine verantwortungsvolle Jagd zu gewährleisten.

Benötigen Berufsfotografen eine Sondergenehmigung?

- In den meisten Fällen – ja. Genaue Informationen hierzu finden Sie in der Broschüre „Richtlinien zum Beobachten von Eisbären“ Die Bedingungen können verschieden ausfallen, je nachdem wie und wo diese Fotoarbeiten durchgeführt werden sollen.

Was muss ich tun, wenn ich einen Eisbären im Ort sehe?

- Bringen Sie sich in Sicherheit und wählen Sie dann 911, um den genauen Standort des Bären mitzuteilen.

Die Küste des Arctic Refuge ist einzigartig wegen seiner Möglichkeiten zum Beobachten von Eisbären, und wegen der Rolle, die die einheimische Bevölkerung bei dem Artenschutz der Bären spielt.

Sie verdanken die Möglichkeit zum Beobachten von Eisbären Menschen, die vor Ihnen hier waren und einen Sicherheitsstandard setzten. Bitte tragen auch Sie hierzu bei, wenn Sie die Eisbären beobachten.

2013

AMERICA'S NATIONAL WILDLIFE REFUGE SYSTEM...

Conserving the Nature of America





北極圏 国立野生生物保護区

北極グマ(白クマ)観察の注意点

ボートからクマを観察する場合は公認業者をお雇いください。

ボートからクマを観察したり水上タクシーを使われる場合は公認業者をお雇いください。公認業者には、登録されたボート操業者や職員がいます。これら職員は北極グマ観察を安全に案内するための特別な研修を受け、野生動物保護のための法律や研究に関する知識も備えています。公認業者はボートや必要器具を常に高い標準に維持し、操業するように義務づけられています。

北極圏国立野生生物保護区認定の業者のリストは <http://arctic.fws.gov/pbguide.htm> をご覧ください。

公認のボート操業者はボート内に北極圏国立野生生物保護区内で操業するための許可証の控えを保管しています。許可証を取得し維持するために、これらの公認業者は色々な努力をしてきました。許可証にはアメリカ海上保安庁発行の免許を持つボート操縦者の名前も記されています。乗客が問い合わせた時には、公認の操業者はその認可証を乗客に見せることになっています。

北極圏国立野生生物保護区管理者と北極グマ観察活動との関わり

北極圏国立野生生物保護区管理者は、野生動物の生息地と地域先住民の伝統的生存狩猟活動を守るために、カクトビック周辺の保護区の陸地と水上で行われる商業活動を監督する義務があります。

北極圏国立野生生物保護区管理者及びその共同者はボート操業者やその他の業者に技術援助や研修の機会を提供しています。詳しくはジェニファー・リード (Jennifer Reed at Arctic Refuge: (907) 455-1835, or jennifer_reed@fws.gov) までお問い合わせください。

北極グマ(白クマ)は一見おとなしそうに見えても野生動物であり、行動を突然変えることがあります。ですから、野生の北極グマ観察は常に危険を伴います。

クマの観察はクマを刺激したり脅かしたりすることを避けるという前提に基づき、法律で認められています。現在みなさんに観察の機会が続けて与えられているのは、これまでの観察者が安全確保にふさわしい責任ある行動をとってきたからです。皆さん自身や他の観察者がクマや人の安全を最優先した行動をとってこそ、貴重な野生の北極グマ観察の機会を今後も続けていくことができるのです。

それぞれのクマが人に対してどのように反応するかは、クマの性格、観察時の色々な状況などにより大きく違ってきます。たとえば、人が30メートルまで近づいてもあまり気にとめないクマもいれば、150メートル以上近づくと逃げてしまうクマもいます。また、同じクマでも、大きな音を出して早いスピードで近づいて来る車やボートには敏感に反応する反面、音や光を最小限におさえてゆっくりと近づけばそれほど気にとめない傾向があります。

下記に北極グマ(白クマ)観察の際の注意点を挙げています。

これらの注意点を守っていただくことで、北極グマに与える影響を最小限にとどめることができます。

観察の前に:

- ガイドと一緒に、Polar Bear Viewing Information (北極グマ観察について説明した小冊子)をお読みください。
- 非常時(たとえば、観察中に車が故障した場合など)にどうすればよいか、ガイドの定める安全確保のための計画をよく確認しておいてください。
- クマがそわそわしたり、あなたに興味を示したり、攻撃的、威圧的に近づいて来た場合などに、どのように対応すべきかを事前に知っておいてください。
- 野生動物は身に危険を感じると色々な兆候を見せます。(Polar Bear Viewing Information に記してあります。) そういった兆候を知っておき、クマを刺激するような行動を避けるようにしましょう。

観察する時に:

- 観察場所には光や音を最小限におさえながら、行きも帰りも同じ経路を使って、ゆっくりと近づいてください。
- あなたの声が常にガイドに聞こえる範囲にとどまって観察しましょう。
- 観察中は大声で話したり急に動いたりするのを避けましょう。
- 薄暗い時間にクマを観察する場合は特に注意が必要です。例えば、薄暗い中で、一方向ばかりに気を取られていると、違う方向から近づいて来るクマに気がつかない恐れがあるので、全ての方向を常に見張る役の人を一人決めるなどの工夫をするのも一つの方法です。
- ガイドから特に指示がない限り、車やボートの中にとどまりましょう。

厳守すること:

- クマを追いかけたり、一カ所に追い込んだり、別の場所に追いやったり、クマにつきまったりしないでください。
- 食べ物、におい、音などで、クマの興味を引こうとしないでください。
- クマを車やボートに接触させないでください。
- 絶対に母グマと子グマを離れさせてはいけません。
- 泳いでいるクマの邪魔をしないでください。
- 地域にあるクマ観察に関するすべての標識、囲い、決まり事などに必ず従ってください。



北極グマ (USFWS)

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よくある質問

北極グマ(白クマ)にどのくらい近づいてもいいですか。

- 法律ではクマ観察の距離は特に定められていません。そのかわりにガイドと観察者はクマを刺激したり脅かしたりすることなく観察するように求められています。クマの行動は個々のクマの許容性や観察者の行動によって大きく左右されます。
- あなたの行動がクマの行動に影響を与えた場合は直ちに接近するのをやめてください。接近をやめてもクマがまだ落ち着かない態度を見せた場合はクマから遠ざからなければなりません。
- クマを法律にしたがって安全に観察するためには、クマの行動や生態を深く理解する必要があります。ですから、専門的な知識や経験があり、信頼できるガイドを雇うことはとても大切です。

どのようにクマを観察するかを決めるのは誰の判断であるべきですか。ガイドですか、それとも観察者ですか。

- 観察者とクマの安全を確保するために適切な行動を選ぶのはガイドの責任です。ガイドの判断を尊重し、それに従ってください。しかし、法に従ってクマを尊重することは、ガイドの有無に関わらず、観察者自身の責任でもあります。

北極グマにとって必ずしも好ましくない影響を及ぼすいくつかの活動は許されているのに、なぜ北極グマの観察はとも注意深く管理されているのですか。

- The Endangered Species Act (絶滅のおそれのある野生動植物の種の保存に関する法律) 及び Marine Mammal Protection Act (海洋哺乳類保護法) は特別な例として、先住民の伝統的生存狩猟活動、科学的調査、人命保護などが目的であれば、北極グマに影響を与える活動であってもそれらを許可しています。これらの活動に従事する狩猟者、科学者、管理者たちはクマへの影響をできる限り抑え、その活動を報告するよう義務づけられています。
- 娯楽のための北極グマ観察は上記の法律で例外を認められた活動ではありません。ですから、観察活動がクマに好ましくない影響を与えない方法で行われるという前提がなければ続けて行くことはできません。そのため、観察活動を注意深く管理しなければならないのです。

営利目的で北極グマの写真を撮るには特別な許可が必要ですか。

- ほとんどの場合、営利を目的とした写真撮影をするためには特別な許可が必要です。詳しくは Polar Bear Viewing Information (北極グマ観察について説明した小冊子) をご参照ください。撮影の行われる場所や状況によって条件が異なる場合があります。

もし北極グマを町の中で見かけたら、どうしなければいけませんか。

- 安全な場所に移動した後、直ちに911に電話し、クマを見た場所を報告して下さい。

北極圏国立野生生物保護区の海岸地域は北極グマ観察の機会とクマの保護のために市民が果たす役割の重要性という点において、とても特別な地域です。

これまでの観察者が北極グマを尊重し適切な行動を取ってきたからこそ、現在も北極グマの観察の機会が与えられているのです。今後もこのような観察の機会を続けることができるよう、観察のための注意点を守って安全なクマの観察をされますように、ご協力をお願いします。

2013

アメリカ合衆国国立野生保護区制度
アメリカの自然を守るために



