

THE PLIGHT OF THE POLAR BEAR



Did you know?

The Polar Bear (*Ursus maritimus*) is the only bear species that is known to be a marine mammal.

They are the apex predator in the Arctic and feed primarily on ringed seals. Polar bears rely on the formed platform of sea ice to reach these seals.

Polar Bears are unique because they are adapted to survive the harsh climate of the Arctic, where temperatures can plunge to -50° F.

Polar bears have two layers of fur and a thick fat layer to insulate them, as well as compact ears and a small tail to prevent heat loss. Polar bear feet are furred and covered with small bumps called papillae to keep them from slipping on the ice. Their sense of smell is powerful for detecting seals.

And their powerful claws can haul out a 150-200 lb. seal from the water for dinner- now that is some power!



Photo: Anthony Nielsen

Why is the Polar Bear in trouble?

Polar Bears rely on the sea ice in order to hunt their primary food source, seals. Seals provide the polar bear with all the calories that they need to survive in the arctic.

With a warming climate, the sea ice is not forming as early nor is it lasting as long. Less ice throughout the year is causing the Polar Bears to have a shorter hunting season.

While polar bears primarily feed on seals, they are always alert to other food sources, such as plants, bird eggs, geese, and even small mammals. Though this might fill the belly of a bear temporarily, these land based food items are not abundant enough to sustain them, and would negatively impact the grizzly bear, arctic fox, birds of prey and other species that rely on these food sources to survive.

Why should you care?

Besides the fact that they are charismatic and cute, polar bears are important for many reasons. Polar bears are what are known as an umbrella species; many organisms are connected to polar bears via a food web.

For example, the Arctic Fox depends on the polar bear for food - they eat the left over seal carcass after the polar bear is done. Without this top predator the entire Arctic food web (seals, fish, etc...) will be in disarray and killer whales will take their place.

Another reason to care about the polar bears is the overall notion of biodiversity, which refers to the number and variety of different species. For example, there are millions of different species of beetles. While it may not seem important to have so many types, each is a specialist in terms of food, habitat, behavior, etc. Each plays a role in their ecosystems.

Polar Bears are also a specialist and the sea ice is necessary for their survival. Without sea ice, we won't have polar bears. There is so much focus on polar bears because they get the attention of the public. They serve as an "ambassador" species for what's happening in the Arctic right now. They serve as a gauge to measure effects of climate change. Climate change is not only affecting the survival of the polar bear, but will eventually affect the survival of humans as well.



WHAT WE CAN DO TO TO MAKE A DIFFERENCE

What is causing climate change?

Greenhouse gases (GHGs) in the atmosphere act like a blanket that keeps the earth warm. This protective blanket helps make our planet habitable. But over the past 200 years, humans have greatly increased the level of GHGs in the atmosphere by burning fossil fuels like natural gas, oil, and coal. This is like throwing on a second blanket, causing temperatures to rise. Other factors such as deforestation have added to the problem. Trees soak up carbon dioxide, one of the greenhouse gases, from the air. Fewer trees, especially in the tropics, means less CO₂ is removed from the atmosphere.

Trees naturally remove carbon dioxide from the atmosphere. Large forests create what are called carbon sinks- an area which absorbs more carbon than it releases. Tropical rainforests are among the largest and most productive carbon sinks in the world!

Zoo keepers are making a difference

Zoo keepers across the globe have been working to save polar bears not only in a zoo setting but also from their own back yards. Since 2009, zoo keepers started a grassroots effort, **Trees for You and Me** (TFYM), which is a campaign for keepers to work in their own communities to get more trees planted and help reduce the amount of carbon dioxide in the atmosphere. Chapters of the American Association of Zoo Keepers have held fundraisers to support urban tree planting, plantings in tropical rainforests, and local reforestation efforts. Since this program began, zookeepers, with the help of their local communities, have raised \$81,436 and planted 100,000-150,000 trees. The TFYM fundraising initiative will go towards a TFYM grant focused on carbon reduction through reforestation efforts



Photo: Anthony Nielsen

And you can make a difference too!

Every little bit helps! Individual actions can make a difference. You can make individual actions multiply when you inspire others to join your activity, particularly when you create change on a community level. You also make change with your dollar and can influence the marketplace through your buying habits.

Lastly, donate to the TFYM grant and aid in carbon reduction by simply going to www.aazk.org and clicking on the TFYM donation button!

Some easy things that you can do to help protect and restore vital habitats are:

- * REDUCE, REUSE, RECYCLE
- * TURN OFF LIGHTS AND ELECTRONICS
- * UNPLUG ELECTRONIC DEVICES OR TURN OFF POWER STRIP WHEN NOT IN USE
- * SET UP A NO IDLE ZONE AT SCHOOL
- * USE REUSABLE BAGS
- * WALK OR BICYCLE
- * PUBLIC TRANSPORTATION
- * PLANT TREES
- * GROW YOUR OWN VEGETABLES
- * ENERGY EFFICIENCY AND RENEWABLES
- * GREENING YOUR GROCERY LIST THROUGH LOCAL, SUSTAINABLE FOOD ITEMS
- * SUPPORT FOOD CO-OPS AND FARMERS' MARKETS
- * EAT LESS MEAT AND MORE ALTERNATIVE PROTEIN SOURCES, LIKE SUSTAINABLY PRODUCED BEANS, LENTILS, NUTS, AND EGGS.
- * DRINK WATER FROM A REUSABLE CONTAINER
- * BE A CONSERVATIONIST
- * COMPLETE AN ENERGY AUDIT OF YOUR HOME
- * BE A SMART CONSUMER
- * REPLACE OLD APPLIANCES WITH ENERGY STAR™
- * COMBINE ERRANDS OR CARPOOL TO DRIVE LESS
- * WEATHER-PROOF YOUR HOME
- * USE A PROGRAMMABLE THERMOSTAT TO SAVE ENERGY
- * SET YOUR THERMOSTAT UP/DOWN 2° DEPENDING ON THE SEASON
- * LIMIT THE TIME YOUR VEHICLE IDLES
- * VOTE FOR CANDIDATES WHO SUPPORT ACTION ON CLIMATE CHANGE

IN DOING ANY OR ALL OF THE ABOVE YOU ARE REDUCING THE IMPACT OF CLIMATE CHANGE FOR ANIMALS AND PEOPLE AROUND THE WORLD! THANK YOU!



Trees for You and Me

www.aazk.org

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