THREATS TO ARCTIC BIODIVERSITY

The Arctic is home to 21,000 of some of the most unique, highly adapted species on the planet. In the face of modern climate change, many now exist on a precipice.[9]

In addition to the roles these organisms occupy in the wider polar ecology, many are also a source of food, custom and context for the continuity of cultural identity for many Indigenous communities in the region.[2][3]

THREATS

- RISING TEMPERATURES LEADING TO ACCELERATED THAWING OF PERMAFROST AND SEA ICE LOSS
- EXPOSURE TO INDUSTRIAL POLLUTION AND OTHER ENVIRONMENTAL CONTAMINANTS
- HUMAN ENCROACHMENT, INFRASTRUCTURE DEVELOPMENT AND POACHING/OVER-HUNTING

Narwhal

Monodon monoceros[16]

Narwhals are known as the "unicorns of the sea" and were once hunted across their range. Today, many northern Indigenous communities rely on narwhal hunting for subsistence and customs, but like many marine predators, they are at risk of accumulating environmental toxins in their tissues.[1] They spend their entire lives in the vicinity of the Arctic Ocean, and are thus highly threatened due to changes in sea ice cover and increased ship traffic.[8]

Polar Bumblebee

Bombus polaris[5]

Yes, there are bumblebees in the Arctic! *B. polaris* is one of the most important pollinators of plants in the far North. These bees are specially adapted to cold air temperatures and melting permafrost is changing vegetation regimes and altering their food resources and habitat.[12] They are highly sensitive to air pollution, which is also an accelerating phenomenon in the Arctic and sub-Arctic.[10]

REFERENCES

Ivory Gull

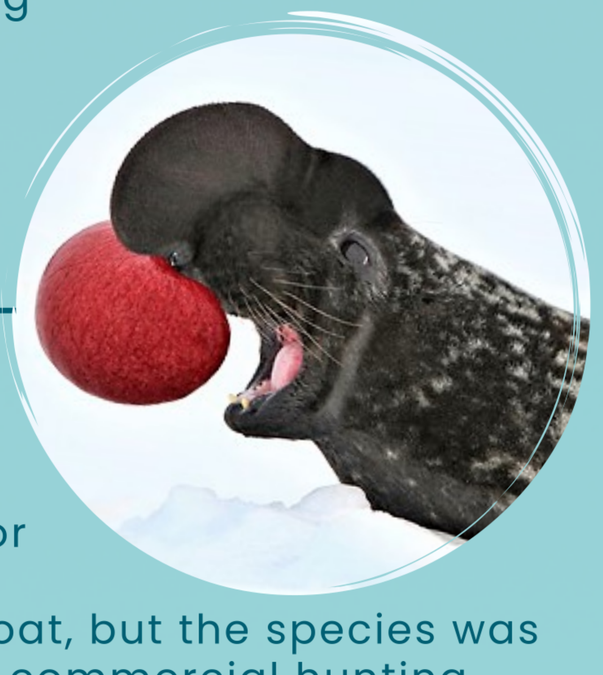
Pagophila eburnea[7]

Ivory gulls, once numerous in the high Arctic, have seen their numbers fall by up to 80% in the last two decades. As a sea ice-dependent breeder, this loss of critical habitat comes in addition to pressure from illegal hunting, population fragmentation, contaminated or compromised food sources and pollution such as oil spills, discarded fishing gear and other plastics.[4]

Arctic Grayling

Thymallus arcticus[14]

While Arctic grayling numbers are not considered endangered, some populations have been disrupted by anthropogenic habitat fragmentation. Melting permafrost and increased active layer runoff cools waterways, which can affect the reproductive cycle of the grayling, as well as expose them to an increased microbe load.[11] They are an important game fish and dietary staple for many Indigenous communities, so monitoring must be vigilant.[13]



Hooded Seal

Cystophora cristata[15]

Hooded seals are known for their blood-red, inflatable nostril sacs and spotted coat, but the species was once nearly decimated by commercial hunting practices. They are threatened by the accelerating loss of the sea ice they utilize as habitat, and as a large carnivore, are susceptible to the biomagnification of heavy metals and other industrial pollutants in their fatty tissues.[1][6]