

## Vocabulary

**conquistador** – A leader of the Spanish conquest of Mexico and Peru in the 16<sup>th</sup> century.

**El Niño** -- a disruption of the ocean-atmosphere system in the tropical Pacific that has important consequences for global weather, including increased rainfall across the southern tier of the United States and in Peru and drought in the western Pacific.

**guano** – A substance composed mostly of bird droppings that is extensively used as fertilizer. The mining of guano was an important factor in the destruction of the habitat of the Humboldt penguin.

**habitat** – The environment in which a particular animal or plant normally lives.

**Incas** – An indigenous people of Peru who maintained an extensive empire before being conquered by Spain.

**porpoising** – An efficient swimming technique used by penguins that makes them very skillful in catching fish.

**salmonella** – A bacteria that, in humans and other animals, causes a variety of illnesses, including typhoid fever and food poisoning. Many Humboldt penguins died of salmonella contracted from the dumped sewage of passing ships.

## Important People

**Sir David Attenborough** – British naturalist who is a widely read author and one of the world's leading television documentary makers on wildlife.

**James Cook** – English explorer and navigator who, in the 18<sup>th</sup> century, surveyed the oceans around Canada, the South Seas, Hawaii, New Zealand, Australia, and South America. He reported that Humboldt penguins were so docile his men could kill them with sticks.

**Marc Gaede** – Paleontologist who has theorized that the slaughter of penguins is part of an attack on humanity itself.

**Marnie Gaede** – A member of the board of directors of the Sea Shepherd Conservation Society, a non-profit non-governmental organization that investigates and documents violations of international laws, regulations, and treaties protecting marine wildlife species.

**Pablo Llerena** – Peruvian worker with the Punta San Juan Conservation Group who used to kill Humboldt penguins but now works to save them.

**Robert Falcon Scott** – British naval officer who led an ill-fated expedition to Antarctica, where he died in 1912. Scott observed Humboldt penguins and called them "ludicrous."

**Sabrina Taylor** – Scientist who studies the penguins at Punta San Juan, with special emphasis on their sex differences.

**Lyll Watson** – Documentary maker, author, zoo administrator, and naturalist who has written over 20 books on nature.

## SAVING THE ENDANGERED SPECIES

### THE HUMBOLDT PENGUIN

On the coast of Peru lies a small outpost where scientists struggle to save what was once one of the most plentiful animals on earth. This, the northernmost species of penguin, may prove to be a barometer for future devastation threatening our fragile ocean environments.

#### A Bird in Danger

It is estimated that as recently as 1960 there were some five million Humboldt penguins on the west coast of South America. Today there are about 6,000. Although people assert that they love these birds, such a statistic forces one to wonder how seriously to take that claim. The assault on these fascinating birds has come from many directions—from hunters, from miners who have stripped the birds' habitat, from predators introduced by outsiders, and from changes in weather patterns that have diminished their food supply. That these birds are surviving at all is partly due to the dedicated efforts of conservationists who warn that the disappearance of the Humboldt penguins could be a warning sign that the human environment, too, is also facing a dangerous threat.

#### Important Places

**Humboldt Current** – An ocean current that runs from Antarctica up the west coast of South America in the third quarter of the year, cooling the waters. Also known as the Peru Current.

**Punta San Juan** – A small area on the Peruvian coast that is a natural refuge for Humboldt penguins and sea lions. Home to the Punta San Juan Conservation Group.



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## Things To Think About

Some people believe that species that are endangered in the wild can yet be preserved in zoos. Based on the documentary, how realistic a hope do you think that is?

Because of the Humboldt penguin's appearance, especially its awkward movements on land, some people have believed them to be "buffoons." What mistakes might people make by judging the characteristics of animals solely on their appearance?

In the documentary, it is pointed out that conserving endangered species is not necessarily altruistic – that it is done not just out of kindness for the animals themselves but also out of an awareness that the sea and the forest are a medical treasure trove. What can you find out about medical products that come from endangered habitats and why is it important to preserve these areas for purely human reasons?

One of the reasons for the decline of the Humboldt penguin was the introduction of outside predators such as foxes, dogs, cats, and rats. What other harmful effects can result when species are introduced into new environments that are distant from their point of origin?

## Internet Resources

<http://www.rumbosperu.com/articles/14-60-ecopuntasj.htm> – A site (with pictures) on Punta San Juan, "the last refuge."

[http://www.zoo.org/educate/fact\\_sheets/penguin/penguin.htm](http://www.zoo.org/educate/fact_sheets/penguin/penguin.htm) – From the Woodland Park Zoo in Seattle, WA, a "Fact Sheet" on the Humboldt penguin with a bibliography.

<http://www.zoo.org/conserv/ssp/penguin.htm> – A conservation report on the Humboldt penguins at Punta San Juan.

<http://www.imarpe.gob.pe/aves/homepage.html> – Home page of an informative Web site on Peruvian seabirds.

<http://users.capu.net/~kwelch/pp/species/humboldt.html> – Instructive Web site on the Humboldt penguin with a series of good photographs.

## Other Resources

### For students:

Jango-Cohen, Judith. *Penguins (Animals, Animals)*. Benchmark Books, 2001.

Reid, Keith. *Penguin: Habitats, Life Cycles, Food Chains, Threats*.

Raintree/Steck Vaughn, 2002.

Robinson, Clare. *Penguin (Life Story)*. Troll, 1993.

Stonehouse, Bernard. *A Visual Introduction to Penguins (The Animal Watch Series)*. Checkmark Books, 2000.

Winner, Cherie. *Penguins (Our Wild World)*. NorthWord Press, 2002.

### For adults:

Lynch, Wayne. *Penguins of the World*. Firefly Books, 1997.

Marion, Remy. *Penguins: A Worldwide Guide*. Sterling Publications, 1999.

Peterson, Roger Tory. *Penguins*. Houghton Mifflin, 1998.

Schafer, Kevin. *Penguin Planet: Their World, Our World*. Creative Publishing International, 2000.



## SAVING THE ENDANGERED SPECIES -THE HUMBOLT PENGUIN-