

Topic 8 - Pains and Gains

The Role of Zoos in Preserving Biodiversity

Zoos were not originally started to preserve diversity. They were exotic collections for private collectors. They didn't become public until the early 1800's – in London. Today there are thousands around the world and we have one of the finest - right here in Alberta. The Calgary Zoo is known as one of the finest zoos in the world. Located on St. George's Island in the Bow River, it opened in 1929. It now is home to over 1100 species, including endangered species such as the Whooping Crane and the Siberian Tiger. Besides being home to a diverse group of animals and plants, the Zoo is an educational institution that runs school programs for K-12 students. It is also part of a worldwide network that is attempting to protect and preserve endangered species. Animal exchange programs help to increase the genetic diversity essential to species survival. Support for research is also a large part of their program. Zoos are visible evidence of our attempt to preserve and maintain biological diversity.

Preserving the Biodiversity of Plants

Preserving global biological diversity is a challenge that is receiving much attention.

Ex-situ conservation refers to conservation of components of biodiversity outside of a natural habitat. Examples include:

- The collection and storage of genetic resources, such as seeds (**IPGRI**) London, England's **Royal Botanic Gardens** is one of the world's largest seed banks. The goal is to collect 10% of the world's seed-bearing plants.
- Zoos (captive breeding programs) **Calgary Zoo**
- Sperm and Egg Banks
- Human Genome Project

A Global Effort

The preservation of biological diversity depends on local efforts and global efforts. The 1995 **Canadian Biodiversity Strategy** was created to preserve biodiversity in Canada. It will be done through the cooperation of many levels of government, along with many groups, agencies and individuals, who are dedicated to preserving our bio-diverse future.

- **Protected Areas** (National Parks, Provincial Parks, game preserves, natural areas)
- **Restoration Programs for Ecosystems and Species** (Governments and **Nature Conservancy of Canada** programs to purchase land for species habitat renewal, individual landowners giving habitat back - in the form of a naturally protected area, **Ducks Unlimited CARE** program, **Swift Fox** - restoration of a species - extirpated from Canada and now recovering)
- **Resource Use Policies** (Laws - **National Accord for the Protection of Species at Risk - Species at Risk Act - Wildlife Act, 1998**)
- **Controlling the Introduction and Spread of Exotic Species** (Information and teaching about the invasiveness of an exotic species is communicated to the public on a regular basis. Penalties and fines, as well as loss of desirable areas for recreational purposes, has improved the perception of the negative effect an exotic species can have on a local ecosystem.)
- **Global Treaties:** 1975 **Convention on International Trade of Endangered Species (CITES)** is aimed at preventing endangered plants and animals from being imported or exported. It is illegal to buy or sell animals or animal parts identified for protection by CITES.
- 1992 **Convention on Biodiversity** was signed by 180 countries to set up and maintain protected areas for threatened and endangered species.
- **Canadian Wildlife Federation** and **Canadian Nature Foundation** educate the public about biodiversity issues and lobby the government to conserve our Canadian biodiversity.