Benefits of Biodiversity

- Section 3

Does Biodiversity Matter?

- Scientists have offered a number of concrete, tangible reasons for preserving biodiversity directly or indirectly that supports the long term sustainability of human society.
- In addition, beyond tangible benefits to humans, many people feel that there are ethical and aesthetic dimensions to biodiversity preservation.

Valuable Ecosystem

- Healthy forests can provide clean air and prevent against flood and drought.
- Native crops can provide against disease and drought.
- Abundant wildlife can attract tourists and boost economies in developing countries.

Biodiversity provides:

- Food, fuel and fiber.
- Shelter and building materials.
- Purifies air and water.
- Detoxifies and decomposes wastes.
- Stabilizes and moderates Earth's climate.
- Moderates floods, droughts, wind, and temperature extremes.
- Generates and renews soil fertility and cycles nutrients.
- Pollinates plants, including many crops.
- Controls pests and disease.
- Maintain genetic resources as key inputs to crop varieties, livestock breeds, and medicines.
- Provides cultural and aesthetic benefits.
- Provides us the means to adapt to change.

Conservation Biology

- It is a scientific discipline devoted to understanding the factors, forces, and processes that influence the loss, protection, and restoration of biological diversity within and among ecosystems.
- This concept arose in response to increasing extinction rates.
- Conservation biologists attempt to integrate an understanding of evolution and extinction with ecology and the dynamic nature of environmental systems. They use field data, lab data, theory and experiments to study the impact of humans on other organisms.

Endangered Species Act

- Was passed in 1973
- Forbids government and private citizens from taking actions that would destroy endangered species or their habitats.
- Forbids trade in products made from endangered species.
- The aim is to prevent extinctions, stabilize declining populations, and, when possible, to enable populations to recover to the point where they no longer need protection.

Bringing back Endangered Species

- Captive Breeding – can be raised and then released into the wild.
- DNA Cloning
- International Treaties – protecting by not allowing transport.
- Community Based Conservation – engage local people to protect wildlife in their own backyard.

Conclusion

- The loss of biodiversity matters, scientists agree, because biodiversity pragmatic benefits are such that human society could not function without them. As a result, many conservation biologists and others are rising to the challenge of conducting science aimed at saving endangered species, preserving their habitats, restoring populations, and keeping natural ecosystems intact. The innovative strategies of these scientist hold promise to slow the erosion of biodiversity that threatens life on Earth.