An aerial photograph of a vast sand dune system, likely a coastal or riverine dune field. The dunes are characterized by their smooth, undulating surfaces and distinct horizontal ripples, indicating wind or water erosion. A dark, winding river or stream flows through the dunes, creating a stark contrast with the light-colored sand. In the background, a dense forest of trees is visible, with some buildings and structures scattered among them. The lighting is dramatic, with strong shadows and highlights that emphasize the texture and contours of the dunes.

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DID YOU KNOW?



The roots of the “walking tree” (*Socratea Exorrhiza*) allow it to move in search of optimal sunlight.

As the soil erodes, it develops new roots that find more stable and fertile soils, facilitating its movement of up to 2-3 cm per day or 20 m per year!

To learn more visit <https://www.discoverwildlife.com/plant-facts/trees/walking-tree>

SPECIES SPOTLIGHT

SMALL WHITE LADY'S SLIPPER (*Cypripedium candidum*)

Flowers: late May and June, white with purple streaks and resemble slippers

Leaves: three or four simple clasping leaves alternate along each stem

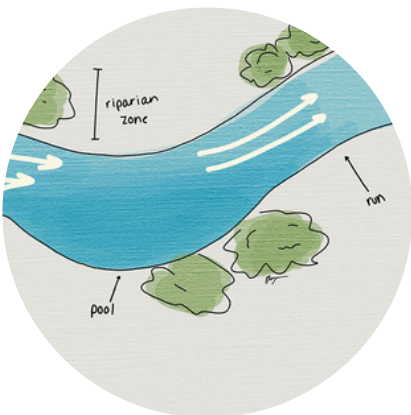
Habitat: moist prairies, savannahs, and wetlands/fens

Interesting Fact: this plant takes about 3 years to produce its first leaf and 12 or more years to produce its first flower

To learn more visit: <https://www.natureconservancy.ca/en/what-we-do/resource-centre/featured-species/plants/small-white-ladys-slipper.html>



TERMINOLOGY TIME



A **run (in a river)** is an area of stream with moderate current, continuous surface, and depths greater than riffles.

Runs come after pools and before riffles, where water is deep (like pools), and has fast flowing water (like riffles), and a uniform flow.

To learn more visit <https://www.healthyheadwaterslab.ca/hhl-news/riffle-pool-run>

CREATURE FEATURES

Western Coachwhip

Found in the dry, open areas of Southern United States and Northern Mexico, Western Coachwhips play an important role in their ecosystems. Due to their speed, they maintain a variety of species populations such as insects, amphibians, lizards, birds, rodents, and other snakes.

Fallow Deer

Native to Asia but found commonly across the UK, the Fallow Deer plays an important ecological role. As herbivores, 60% of their diet is grass, the rest comprising of herbs, various nuts such as chestnuts, fruits, bramble, and conifer. They are also prey for predators such as wolves, cougars, and bears.

Golden Lion Tamarin

Found in lowland rain forests of south-eastern Brazil's Atlantic coast, the Golden Lion Tamarin plays an important ecological role. As omnivores they maintain the populations of many insect, spider, and snail species, as well as acting as effective seed dispersers for many fruit and flower species.



Western Coachwhip



Fallow Deer



Golden Lion Tamarin

CHEONGGYECHEON RIVER RESTORATION

South Korea



Background

Since the 1970s, the Cheonggyecheon River in downtown Seoul, South Korea was covered by a busy, multi-lane roadway and elevated highway. An engineering survey conducted in 2000 revealed structural weaknesses in these roads and indicated a need for a costly renovation project. In lieu of investing in this, the Seoul City Government opted to demolish the roads and restore flow to the river in order to improve the environmental and aesthetic state of the downtown.

Actions Undertaken

- Demolition took place in 2003.
- Embankments were built that can withstand the worst expected flood to occur every 200 years.
- Several covering structures were installed in order to prevent water contamination.

Results

- Improved air quality.
- 30 species of birds and 13 species of fish were present in the stream, an increase of 6 and 5 species from the year before.
- The heat island effect has been curbed with temperatures ~ 3.6°C lower than places 400 meters away.
- Increase in tourism and local investment.

To learn more about this project visit <https://www.landscapeperformance.org/case-study-briefs/cheonggyecheon-stream-restoration-project>



SPECIES OF NEWFOUNDLAND

By Elizabeth Williamson

Newfoundland and Labrador's geography and location makes for a unique set of plant and animal species. Newfoundland and Labrador constitute parts of three geographic regions of Canada: the St. Lawrence Lowlands, the Canadian Shield, and the Appalachian Lowlands. Impacts from glaciation, a climate that varies greatly across the region, and proximity to the Atlantic Ocean make Newfoundland and Labrador a habitat for a range of local and migratory wildlife.

Newfoundland and Labrador are often recognized for their colonies of millions of bird species, such as Puffins and Murres, or their Moose and Caribou populations. However, 76 species of wildlife are listed as "at risk" under Newfoundland and Labrador's Endangered Species Act. Mammals at risk include the American Marten, the Polar Bear, the Wolverine and Woodland Caribou. Some birds at risk are the Chimney Swift, the Newfoundland Gray-cheeked Thrush, the Piping Plover, and the Peregrine Falcon. At risk fish in this region are the American Eel and the Banded Killifish. Finally, some plant species at risk include the Fernald's Braya, the Low Northern Rockcress, the Mountain Fern and the Northern Twayblade.

Many of these species are unique to the East Coast of Canada or to small regions within Newfoundland and Labrador. Their reasons for being at risk vary including highly specific habitat requirements, very low reproduction rates, and habitat fragmentation and destruction. There are numerous environmental policies and initiatives in Newfoundland and Labrador that protect and support a range of plant and animal species. For example, some guiding documents for wildlife conservation and management include the Species at Risk Policy, Endangered Species Act, and National Accord for the Protection of Species at Risk.

The Government of Newfoundland and Labrador has established a range of ecological preserves and conservation areas that protect essential habitat and grounds for wildlife. Recovery teams, totaling 100 volunteers from a range of backgrounds, also help support and manage the protection of wildlife in the area.

The specific wildlife categories used by the Government of Newfoundland and Labrador also help in prioritizing which species may need urgent support or long-term efforts to improve their population size or health. The most urgent designation is "endangered", which means that species are close to becoming extinct or no longer existing in Newfoundland and Labrador. The next category is "threatened", and it is used to identify species that may soon become "endangered" if there are not urgent conservation and restoration efforts made. The final category is "vulnerable", which is used for wildlife that is sensitive to human or natural interactions within the ecosystem.

In addition to voting for leaders that support positive environmental changes, readers can:

- **Be informed.** Understanding local ecology and environmental initiatives is helpful for making positive environmental changes.
- **Leave no trace.** When hiking, camping or travelling, ensure that you avoid impacting the natural ecosystem. For example, stay on trails and do not remove flora or fauna.
- **Consider your own property.** Growing native plants can help support local ecosystems by providing essential habitats and food sources.
- **Get involved.** Consider community involvement and donate or support environmental organizations in any way you are able.

UPCOMING EVENTS

FROM MILKWEED TO MONARCHS

July 9th, 2024 7:00-8:00pm EST

Join us to learn about the special relationship between monarchs and milkweed, the fascinating transformation from egg to butterfly, and how you can get involved in citizen science programs like MilkweedWatch!

To learn more visit https://events.trca.ca/event/from-milkweed-to-monarchs-6?instance_id=20240709190000

CONSERVATION YOUTH CORPS | IN-STREAM WORK

July 10th, 2024 9:30am-2:30pm EST

Join Ontario Streams to install in-stream habitat enhancement structures to reduce excess sedimentation caused by land development and to create habitat for aquatic wildlife.

To learn more visit

https://events.trca.ca/event/conservation-youth-corps-in-stream-work?instance_id=20240710093000



CRAWLING CRAYFISH

July 13th, 2024 10:00am-12:00pm EST

Search for crayfish, aquatic bugs and more! Get up close with these and other fascinating creatures who make their home in the Humber River. We'll use nets and magnifying glasses to examine these creatures before releasing them back into the creek.

To learn more visit

https://events.trca.ca/event/crawling-crayfish-4?instance_id=20240713100000

PASSPORT TO NATURE: INTERESTING INSECTS

July 20th, 2024 1:00-3:00pm EST

Insects are important friends to our environment, and they are everywhere! Learn how to truly appreciate these incredible creatures on a hike at MeadowWoods in West Elgin.

To learn more visit

<https://www.londonenvironment.net/passport-to-nature-interesting-insects>



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