

As much as 76 per cent of our original wetlands are gone and 85 per cent of our rivers and streams have dried up at least partially. Fortunately we realized this before it was all gone. In the 1940s, people of vision and integrity realized that if action was not taken soon, all of our remaining natural resources would be gone. Conservation and environmental movements began to take the stage and the preservation of our remaining wilderness began.

The Valley is not simply a forest to be protected. It is much more significant than that. As part of the Niagara Escarpment, it is an area which has taken 450 million years to evolve. The Escarpment is protected by the Niagara Escarpment Commission (NEC), Ontario's Greenbelt, national and provincial parks, seven conservation authorities, the Bruce Trail Conservancy and many more environmental organizations across the province. UNESCO has declared the Escarpment as a world biosphere, putting it in the company of such incredible natural areas as the Serengeti, the Everglades, the Amazon Rain Forest, Yellowstone NP, and the Galapagos islands. This 700-kilometre-long biosphere contains more endangered species than any other part of Canada.



The Dundas Valley, however, is even more significant than that. It is one of 10 nodal parks along the Escarpment, is home to 585 species of plants and animals, of which 55 are rare or endangered. Even more impressive is its status as an environmentally sensitive area. In 1976 the Hamilton Conservation Authority studied 31,000 acres of environmentally sensitive areas (ESA's) in Hamilton so that these areas could be protected for the future. Of the nine criteria set out, the Dundas Valley was the only area which met all nine criteria. Close followers were the Beverly Swamp (meeting eight criteria), and the Copetown Bog and Cootes Paradise (each meeting seven criteria). This identifies the Dundas Valley as the single most significant natural area in Hamilton, and one of Canada's natural treasures.

The geographical area of the Valley is more than 6,000 acres (2,700 ha), including Spencer Gorge and the Escarpment rim in Ancaster, Dundas and Flamborough. Today the Hamilton Conservation Authority protects 3,000 of those acres, thanks largely to the efforts of concerned citizens. Visionaries, such as the Honourable Justice Thomas A. Beckett, conceived a plan in 1952 to protect the Valley. The HCA adopted its official plan to protect this area in 1967, preventing a provincial highway from devastating the Valley. The Students' Park Fund of the 1970s raised awareness and support in the community, and local residents have been the Valley's advocate for decades, personally protecting privately owned land in the Valley.



The Dundas Valley is as rare and unique as any protected area in the world, but it is not in the middle of the wilderness. It is in the heart of Canada's 10th largest city, is eight times larger than New York's Central Park, and our efforts to preserve this gift of nature and all its inhabitants must be vigilant and relentless. Otherwise it will diminish into memory, leaving none of its magical beauty, its streams, waterfalls, hills, ravines, and wildlife for future generations.

# Giant's Rib DISCOVERY Centre

## The Giant's Rib

It is said that North America is the Giant and the Niagara Escarpment is its rib. Native Canadians and early settlers referred to the Escarpment as the Giant's Rib. It is also known in different areas as The Rock, The Ledge, The Mountain and the Great Arc.



[www.giantsrib.ca](http://www.giantsrib.ca)



# The Niagara Escarpment World Biosphere Reserve

Stretching 725 kilometres (450 miles) from Queenston on the Niagara River to Tobermory at the tip of the Bruce Peninsula, Ontario's Niagara Escarpment is a natural wonder and one of Canada's foremost scenic landforms.

It began as sediment 450 million years ago on the bottom of a shallow sea known as the Michigan Basin. Over the next 50 million years, pressure from the weight of the sea formed the layers of sedimentary rock we now know as the Niagara Escarpment. In fact, if you look at the alternating layers of shale, sandstone, limestone and dolostone from the base of the escarpment to its peak, you are looking at 50 million years of the Earth's history. The Escarpment contains more than 100 sites of geological significance including some of the best exposures of rocks and fossils of the Silurian and Ordovician Periods (405 to 500 million years old) to be found anywhere in the world.



Since then the Niagara Escarpment has seen three ice ages, the last of which ended approximately 14,000 years ago. Erosion from ancient waters and glacial recession in this last ice age carved the Escarpment into what we see today. Melting glaciers flowed over the escarpment face in rivers much greater than the Niagara is today, carving out valleys and even splitting off entire sections such as the Milton Outlier (Rattlesnake Point/Kelso). The Escarpment will look much different at the end of the next ice age!

Today the Escarpment soars 510 metres (1675 ft.) at its highest point within Ontario, and is a varied tapestry of forests, farms, recreation areas, scenic panoramas, cliffs, streams, wetlands, rolling hills, waterfalls, mineral resources, wildlife habitats, historic sites, villages, towns and cities. The Escarpment is also home to Canada's longest footpath, the Bruce Trail, established in 1967.



Also known as the Giant's Rib, the Escarpment is an incredibly rich habitat for wildlife. In fact, in 1990 it was designated as a World Biosphere Reserve by UNESCO (the United Nations Educational, Scientific, and Cultural Organization). Ontario's Niagara Escarpment is one of only 16 biosphere reserves in Canada, and is part of a network of 531 reserves in 105 countries, putting it in the company of such incredible natural areas as the Serengeti, the Everglades, the Amazon Rain Forest, Yellowstone National Park and the Galapagos Islands.

This 700-kilometre-long biosphere contains more endangered species than any other part of Canada. The Escarpment contains more than 300 bird species, 1500 species of vascular plants, 50 species of ferns, 53 mammals, 36 reptiles and amphibians, 90 fish and 100 varieties of special interest flora including 37 types of wild orchids. Rare species include the endangered North Dusky Salamander, the threatened Eastern Massasauga Rattlesnake, the vulnerable Southern Flying-squirrel and the rare Eastern Pipistrelle Bat. 72% of all Ontario bird species can be found here. Of the breeding species, 25 are considered nationally or provincially endangered, threatened or vulnerable, including Bald Eagle, Red-shouldered Hawk, Black Tern, Louisiana Waterthrush and Hooded Warbler.



The cliff face itself is its own ecosystem. All along the face of the Escarpment you can see slow growing Eastern White Cedars of which the oldest are more than 1200 years old. Here in the Hamilton area, some of the cedars have been identified as more than 500 years old. This cliff ecosystem constitutes the oldest "old growth forest" in eastern North America.

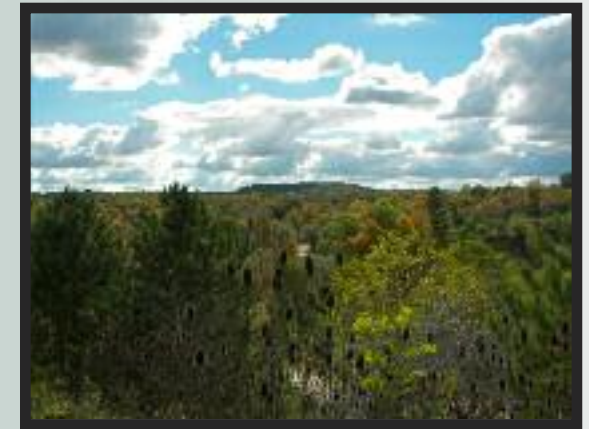
The Escarpment is protected by the Niagara Escarpment Commission (NEC), Ontario's Greenbelt, national and provincial parks, conservation authorities, the Bruce Trail Conservancy and many more environmental and community organizations across the province.

Information sourced from NEC website, University of Guelph study on Ancient Cedars.

## The Dundas Valley

When considering the Dundas Valley, it is imperative that we understand just how rare and unique it truly is.

The Dundas Valley is part of a once vast and untouched deciduous forest stretching from Southern Ontario to the Carolinas, known as the Carolinian Forest. This Carolinian Forest can be found nowhere else in Canada, accounts for only one per cent of Canada's geographical area, but is home to 25 per cent of Canada's population, and home to one-third of Canada's endangered species.



This was not always so. When LaSalle first entered Hamilton Harbour in 1669 looking for a route west, the Valley was a pristine wilderness. In the following years, the Valley became home to the region's first settlers: Ancaster in 1790 and Dundas in 1798. The area is rich in human history. Explorers found their route west. The power of water flowing over the escarpment was the foundation of early industrial development, and, with the construction of the first mill in 1800, the area became the chief business community for importing and exporting at the Head of the Lake with 20 manufacturing facilities in operation by 1845. We are fortunate today to have preserved many of these historical

sites within the Dundas Valley so that we may remember our roots. The Hermitage, Hermitage Gatehouse, Fieldcote, Woodend, and Griffin House tell us the story of our ancestors and forbearers, whether they were the wealthy elite from overseas, or families of slaves escaped to freedom. Remnants of the Darnley (Stutt's) and Clark's Mills are preserved in the upper reaches of the Valley, allowing us a peek into our past. Today's Valley residents are proud of their heritage, and know that any preservation of the Valley means the preservation of its history as well.

While we might remember our ancestors proudly, settlement and industrialization took its toll on the untamed wilderness and the vastness of the Carolinian Forest. 80 per cent of our original forest cover below the Canadian Shield has disappeared as a result of tree cutting for lumber, industry, farmland and human expansion.

