

# Ontario's Great Wall:

# What's So Special About



Written and photographed by  
Gary Hutton except where noted

The Niagara Escarpment is the most significant natural landform in Ontario. Yet few know much about it and how valuable this crown jewel is to a rapidly expanding southern Ontario. Everyone knows about Niagara Falls and thousands of motorists zipping along Highway 401 in Milton see the Escarpment Country signs or catch a glimpse of the dramatic cliffs at the Kelso/Glen Eden Conservation Area. Yet many people have little understanding of the Escarpment's huge linear footprint, the intriguing story of its formation and world-class designation, and why it's so important to the six million people living within 90 minutes of the great wall.

▲ Ontario's Niagara Escarpment stretches 750 km with elevations that reach 510 metres. Shown here is the Georgian Bay shore of the Bruce Peninsula.

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# the Niagara Escarpment?

**T**he Escarpment is a massive ridge of natural rock that begins at Queenston on the Niagara River and winds its way north and west through southern Ontario to Georgian Bay and then up the Bruce Peninsula to the islands off Tobermory and on through Manitoulin Island. It also extends west into the United States where it forms the Door Peninsula in Wisconsin and down into Illinois where it ends. In Ontario, the rock wall can be 510 metres high at its greatest elevations and 750 km long in its serpentine trek north. The spectacular limestone cuesta is a rich mosaic of cliffs, waterfalls, forests, farms, rolling hills and parks amidst a band of thriving villages, towns and cities.

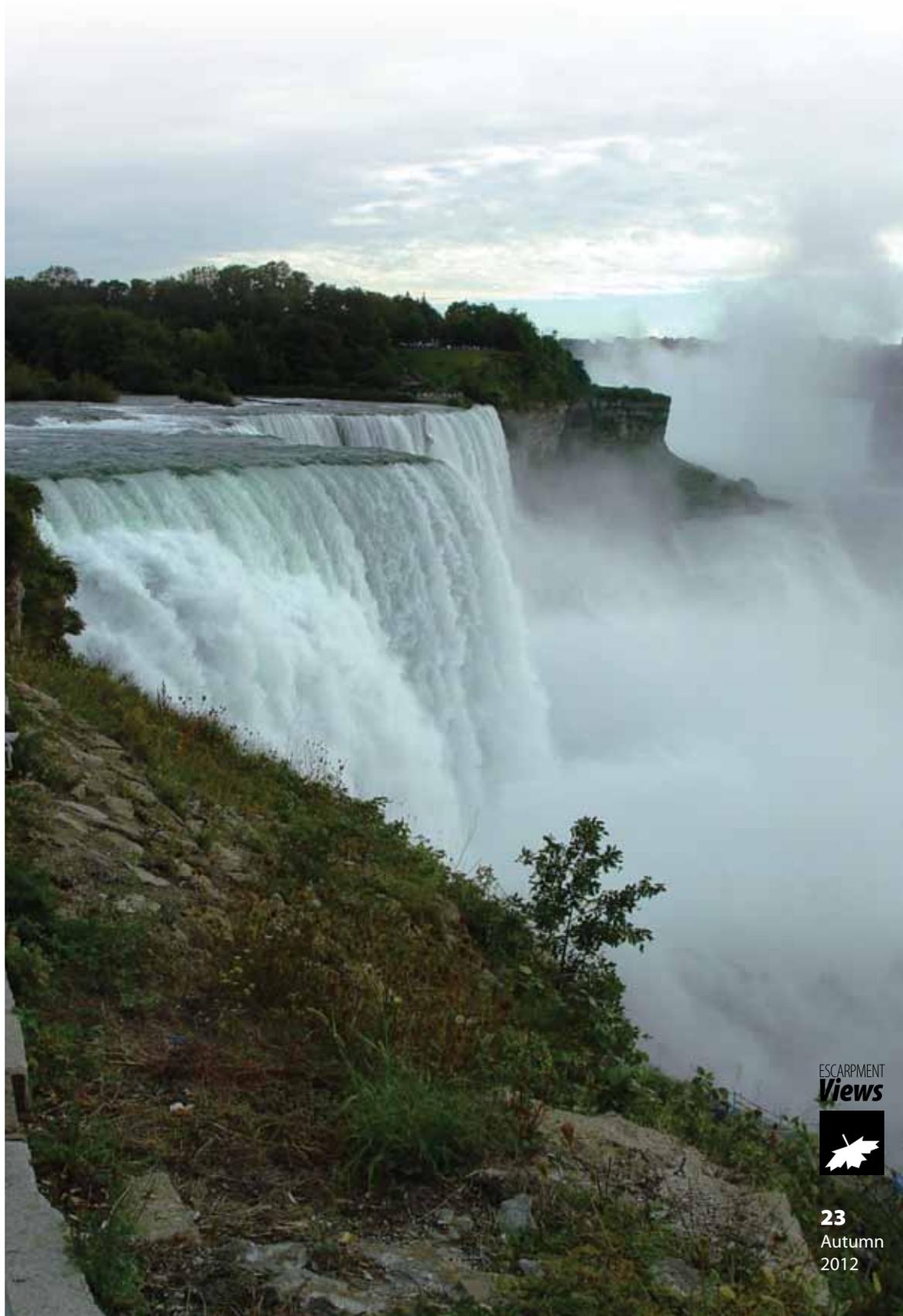
Robert Bateman, international artist and former Escarpment resident said “The Escarpment has wildness without remoteness. It can be rugged and secluded yet accessible and to a large extent has a subtle blend of human heritage and nature. Some of the most charming and eloquent places in the world have a gentle and compatible interface with nature.”

Ontario's great wall has some of the most scenic natural settings in the province. From the deep Niagara gorge with its thundering waterfalls to the wave-cut sea stacks on Flowerpot Island, the Escarpment landscapes provide a myriad of macro and micro images of nature laid out like a glistening string of pearls.

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**Two mighty waterfalls pour over the Niagara Escarpment at the border in Niagara Falls: the American Falls, left, and Horseshoe Falls. ▶**

PHOTO BY MIKE DAVIS.



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▲ The Niagara Escarpment at Milton is clearly seen from Hwy 401, the busiest highway in Canada. PHOTO BY BRANIMIR ZLAMALIK.



▲ Flowerpot Island off Tobermory, with its distinctive rock formations, is but one of 100 sites of geologic significance in the Niagara Escarpment.

### Building Blocks of the Great Wall

To understand how Ontario's great wall was formed, one has to delve into the complexities of science and geology. The Escarpment is actually the outer rim of a giant saucer that was once occupied by a warm shallow sea about 450 million years ago. Viewed from outer space, the saucer would have looked like a huge horseshoe centred in the State of Michigan and engulfing part of southern Ontario and all of Lake Huron and Michigan.

Rivers flowing into this ancient sea, known as the Michigan Basin, carried sand, silt and clay resulting in thick layers of sediment. Skeletons of lime-rich sea creatures were also deposited. After millions of years, this layered medley of limestone grit compressed into massive bands of rock. With further lapses in other geological time zones and several periods of glaciation, accompanied by erosion by rivers and changing lake levels, the Escarpment was sculpted into the landform of today. Its formation is ongoing as layered soft rock erodes underneath harder cap rock. Our great wall includes more than 100 sites of geologic significance with features like waterfalls, potholes, underground rivers and caves, karst lakes and deep fissures.

### Escarpment Ecosystem

The Escarpment's ecosystem contains habitat for 300 species of birds, 53 mammals, 36 reptiles and amphibians, and 90 kinds of fish. Located in two major forest zones, the Carolinian and the Great Lakes-St. Lawrence, the great wall has more than 1,500 species of vascular plants, 50 ferns and 37 species of wild orchids. The great wall is also home to Ontario's oldest growth forest: small knurled Eastern White Cedars that cling to cliff edges and can be over 1,000 years old.

I was on a hike with Doug Larson from the University of Guelph shortly

Continued on page 28 

**Ancient cedar growing out of crevice of the Niagara Escarpment at Rattlesnake Point. ►**

PHOTO BY MIKE DAVIS.







▲ The Bruce Trail, which celebrates its 50th anniversary this year, is a public footpath that follows the Niagara Escarpment from Queenston in the south to Tobermory on the Bruce Peninsula. Stone cairns mark each end. PHOTOS BY MIKE DAVIS.



after he discovered the Escarpment's ancient forest in 1988 at the Kelso Conservation Area in Milton. He enthusiastically reflected on his findings. "After years of studying cliff ecosystems, my students and I realized we had discovered the oldest and least disturbed forest in eastern North America. Nothing will ever match the euphoria we felt that day when the truth about this cedar forest was beginning to be revealed to us."

The Escarpment's amazing ecosystem is perhaps its most important feature. This ribbon of wild land within Canada's industrial heartland is a natural corridor which supports a healthy ecosystem that should enable the movement of wildlife, maintains biodiversity of species, protects stream and river headwaters, and provides regional connections to other natural areas. It also creates a rich natural research area where we can continue to learn more about ecosystem health and its close relationship to human health.

#### Canada's Longest Footpath

Atop Ontario's great wall is Canada's longest footpath, The Bruce Trail. Conceived in 1960 by Hamilton naturalist Ray Lowes and school teacher friend Robert Bateman, not yet a famous artist, the trail marks a milestone this year with the 50th anniversary of the first hike.

In 1997, I interviewed Ray Lowes who reflected on that first ground-breaking hike. "In 1962, I was privileged to participate in a trail-blazing hike with six friends who were enthusiastic about a proposed Bruce Trail that would cross Ontario from Queenston to Tobermory. The old Toronto Telegram provided transportation and daily front-page coverage of our progress. We started the hike near Mount Nemo in Burlington. The 185-km hike from Halton to Georgian Bay was an astounding contribution to what would become a world class hiking trail."

Continued on page 40 ▶

**Ball's Falls near Jordan is one of 70 major waterfalls that cascade over the Niagara Escarpment. ▶**

PHOTO BY MIKE DAVIS.

#### Niagara Escarpment:

### Special by the Numbers

- ▶ 6 million people live within 90 minutes of it
- ▶ 510 m high at the highest points
- ▶ 750 km long
- ▶ millions of years old
- ▶ more than 100 sites of geologic significance
- ▶ 300 species of birds
- ▶ 53 mammals
- ▶ 36 reptiles & amphibians
- ▶ 90 kinds of fish
- ▶ 2 major forest zones
- ▶ 1,500 species of vascular plants
- ▶ 50 ferns
- ▶ 37 species of wild orchids
- ▶ Eastern White Cedars can be more than 1,000 years old
- ▶ most accurately dated prehistoric native village in Canada
- ▶ exact number of waterfalls: unknown but count increases yearly!



▲ The Escarpment's unique alvar habitat, or limestone pavement, hosts many rare plants and animals, such as these Lakeside Daisies at Dyer's Bay.







Today The Bruce Trail has become a monument to public agencies that have acquired significant lands for conservation, to private land owners who allow access and to countless volunteers who maintain it. Ontario's great wall with The Bruce Trail and hundreds of parks provides countless recreational and tourism opportunities to residents and visitors alike.

#### **World Recognition and Canada's First Environmental Protection Plan**

On April 4, 1990, the Escarpment was declared a World Biosphere Reserve by the United Nations Educational, Scientific and Cultural Organization (UNESCO). As a Conservation Halton staff member at the time, I attended the proclamation event on that cold bright spring morning. There was a buzz in the air as the Premier's helicopter touched down near the Gambrel Barn at the former site of the Ontario Agricultural Museum in Milton.

After accepting the UNESCO proclamation Premier David Peterson

said, "The Niagara Escarpment is one of Ontario's very special treasures that dramatically enhances the quality of life for people living in this great province. We are determined that the natural and human aspects associated with this unique and valuable geological feature will be preserved for our children and grandchildren in perpetuity."

Ontario's great wall received this prestigious designation for its significant natural ecosystem along with its plan for protection. The plan's development was a long and arduous process that began with the passage of the Niagara Escarpment Planning and Development Act in 1973 which called for the establishment of the Niagara Escarpment Commission and the development of the Niagara Escarpment Plan. In 1985 Ontario created Canada's first large-scale environmental protection plan that included development controls and a system of parks. Other World Biosphere Reserves include the Florida everglades, Galapagos Islands and Serengeti plains in Africa.





▲ Crawford Lake Conservation Area, Milton, includes a reconstruction of a Native village of longhouses, based on archaeological finds that date the site to prehistoric times.

### **A Repository of the History of Ontario**

The Escarpment is a repository of hundreds of historical and archaeological sites which mirror the history of Ontario. One site at the Crawford Lake Conservation Area in Milton has the most accurately dated prehistoric Native village in Canada, that was discovered from the sediments of a nearby karst lake. In 1991 this unique Escarpment park even caught the eye of royalty.

During a visit to Canada by Prince Charles and Diana, Princess of Wales, their children, Princes William and Harry, aged 8 and 10 at the time, visited the park for a tour of the village and a walk around the lake. I helped organize the little-known event that was arranged by the RCMP. We were sworn to secrecy to avoid onlookers and the media. The two young princes enjoyed the tour and were most fascinated by the cats that lived in the reconstructed native longhouses to keep the mice in check.

### **Keeping the Great Wall Great**

This overview of the Escarpment has highlighted a few of the great things about Ontario's great wall. Great recreational opportunities for millions of people. Great natural ecosystem to maintain biodiversity. Great cultural resources to preserve our history. Great protection plan for future generations. And great natural capital to grow our economy and enhance human health.

But even with all these great things, the Escarpment needs the constant vigilance of a concerned public to protect it. Take a moment this fall and view one of the Escarpment's 70 major waterfalls wrapped in a blaze of vivid colours, to witness first hand, why we need to keep the great wall great. **EV**

*Gary Hutton, author of Halton Hikes and the former director of communications for Conservation Halton, is a frequent contributor to Escarpment Views. His last article was "Green Feathers: Rock-loving Ferns of the Niagara Escarpment," Spring 2011.*