

SEIZE THE DAY

SEIZE THE DAY
SELF-LEARNING THROUGH MENTORSHIP

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ABSTRACT

The focus of this project is on self-learning through mentorship. The purpose of the project is to introduce teachers to the concept of self-learning by means of a catalyst such as a hike. The hike serves as the key that unlocks the door to reveal the multiple intelligences found within each student.

An example of a final report based on the self-learning through mentorship model has been included in the project. This report, *A Field Guide to the Niagara Escarpment*, is based on the transformation theory and methodology. It also supports the expectations for students established in the various Ministry documents.

Students are encouraged to share their final reports. By sharing their ideas with each other and their mentors, students will be encouraged to develop higher thinking skills.

The “outside” classroom is an environment where self-learning can take place. Students must be able to interact with the outside world in order to get a better understanding of the topic they are studying. Classroom walls only serve as physical barriers to this learning.

Self-learning through mentorship can be an effective educational tool for all grades.

I hope that this project will be of use both to those who wish to mount courses in curriculum and teaching and to anyone who is interested in introducing himself or herself to this important area of self-learning through mentorship.

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CHAPTER ONE

INTRODUCTION

I believe it is essential for students to self-learn through an ongoing mentorship. For a long time, curriculum, textbooks and tests have sustained a focus on the mastery of specific information. But, in self-learning through mentorship, the focus is on the process of learning. My main idea is to make the learning fit the student; instead of making the student fit the learning. The student should have as much control as possible over his/her own learning. This assumption is based on a romantic view of the child that has been articulated by Rousseau, Tolstoy, and Neill. The role of the mentor is to try and relate the subject matter or curriculum to student interests and concerns; learning and development will flow naturally if the proper connection can be made between the external curriculum and the inner life of the student.

In self-learning through mentorship, the emphasis is on holistic learning. In fact, holistic learning is at the heart of this position. Students should learn to see relationships between themselves and their social environment, and between themselves and all aspects of the curriculum (Miller, 1990).

Self-learning through mentorship requires new approaches to teaching and new structures in schooling. In the following pages, the reader will find an array of suggestions and a choice of materials. Just as students must learn to achieve success, so do teachers. Teachers must become self-learners through mentorship and find the most successful ways to help students develop.

It all begins with a simple hike. I wish you well on your own personal journey. May you enjoy the experience and complete it successfully. Good Luck and "Seize the Day".

CHAPTER TWO

THEORETICAL CONTEXTS

Who's smart? Everybody!

Two individuals plan to hike the same trail separately. At the end of their hikes, they will share their own experiences with each other. In order to make the assignment as open as possible, they are permitted to take anything they want on their hikes. One of the individuals might want to take pictures along the way, therefore a camera would be of great value. While the other person might want to record certain sounds, thus requiring a tape recorder.

In short, both hikers have only two requirements. The first one being, they must complete the hike. The second, they must make a report to be shared with each other concerning their hike. Here again, the final report can take any form. Before they submit their final report, they will have the opportunity to consult with their hike mentor concerning any questions they have in regard to their individual hike. The mentor's main role is not to manipulate the student's learning but simply answer questions the student poses. Thus, letting the student's self-learning naturally unfold.

Tapping into the Multiple Intelligence Theory

Howard Gardner (1983), a neuropsychologist and professor of education at Harvard University, believes in the Theory of Multiple Intelligences.

He states that current IQ tests, designed to predict who will do well in school, measure only linguistic and logical/mathematical abilities without taking into account our kinesthetic, musical, spatial, interpersonal, and intrapersonal abilities - abilities that will help determine whether we can find a niche in society.

According to Gardner (1983), for each of the eight intelligences there is a characteristic form of perception, learning, and memory. In other words, a person might have a good memory for music, people, or finding their way around. Individuals differ in the extent to which they are at promise or at risk for different intelligences.

Regarding our hiking assignment, the question one might ask is “how might multiple intelligences influence the final report given by each participant?”

The person who possesses musical intelligence will listen and respond with interest to a variety of sounds found on the trail.

The person who possesses bodily-kinesthetic intelligence learns best by direct involvement and participation; they should remember most clearly what they did on the hike, rather than what was said or observed.

The person who possesses logical-mathematical intelligence will perceive objects and their function in the environment.

The person who possesses verbal-linguistic intelligence will have little trouble putting their thoughts down on paper. They will be able to speak simply, eloquently, persuasively, or passionately at appropriate times regarding their hike experience.

The person who possesses interpersonal intelligence will be able to understand and communicate effectively in both verbal and nonverbal ways.

The person who possesses intrapersonal intelligence is curious about the big questions in life: meaning, relevance, and purpose.

The person who possesses naturalist intelligence learns characteristics of the natural world. They will be able to make fine distinctions between similar types of objects being observed such as plants and animals.

By walking the trail, each hiker will be learning something new about the foot path in his/her own way. Each student has multiple chances of understanding and retaining academic information.

Higher Level Learning

The second requirement of the assignment involves sharing and reviewing one's hike with the other participant. This report could take on any form but should reflect the hiker's area of intelligence strength.

In addition, the final report will demonstrate the level of thinking that the hiker has obtained from the experience. By conferencing with the mentor, the student may rethink certain problems or questions.

Benjamin S. Bloom (1981), an educator, worked with a group of fellow educators to categorize the different types of thinking skills that are used when people are trying to learn something new. They arrived at six different levels, with each level

requiring a different kind of thinking. The following terms refer to these levels which Bloom and others categorized. They have come to be known as Bloom's Taxonomy of Higher Level Thinking Skills. (A taxonomy is a collection).

A) Knowledge Level: At this level, we are simply remembering the facts about a topic we are studying.

Example: List the different sections of the trail from smallest to largest.

B) Comprehensive Level: Here you should be able to show that you understand the main idea about the topic.

Example: Describe one of the sections of the trail in terms of its physical characteristics.

C) Application Level: At this level, Bloom saw people being able to use the information they had learned in the study of the topic.

Example: Explain the difference between a side trail and the main trail.

D) Analysis Level: At this level, you need to take apart the information or knowledge you have gained and look at the smaller elements that work together to make up the larger parts.

Example: Compare and contrast the four sections of the trail in terms of vegetation, hiking difficulty, relief, settlement, and physical features.

E) Synthesis Level: This level is creative. Here you will think about designing new things or using the arts to express your ideas.

Example: Fantasize and describe a guided tour through one section of the trail.

F) Evaluation Level: At this level, you are asked to give a judgement or opinion and be able to support your decision.

Example: Do you think the government is justified in spending money on maintaining vacant property when money could be generated by selling these same pieces of land to private developers? Why or why not?

By sharing their hiking experiences with each other, the students are self-evaluating their own hikes. With the added assistance of the mentor, the students learn to evaluate their own progress toward their own goals.

Let's Talk Curriculum and How It Fits In

In my view, curriculum is an explicit and implicit intentional set of interactions designed to facilitate learning and development and to impose meaning on experience. The explicit intentions usually are expressed in the written curricula and in cours-

es of study. The implicit intentions are found in the “hidden curriculum,” by which we mean the roles and norms that underlie interactions in the school. Learning interactions usually occur between teacher and student, but they also occur between student and student, student and subject matter, and student and environment. These interactions take place at different levels (Schwab, 1969). At the most superficial level, the student merely absorbs factual information from a textbook; at a deeper level, mutual interaction takes place between student and teacher in the course of solving new problems. At the deepest level, the student’s encounter with a poem, for example, or a scientific experiment, or music, stimulates new awareness, perceptions, or cognitive understanding; at this level, dialogue between student and teacher becomes an open mutuality between student and teacher.

The development of curriculum is an ongoing process. Although, in practice, this cycle can start anywhere, I will describe its components in the following order: orientations, development, implementation, and evaluation.

Orientations

At the root of individual perception is a particular world view or model of reality. Such models of reality shape each educator’s personal belief structure about the purposes and methodologies of education. In this paper, I refer to these basic beliefs about what schools should do and how students learn from a transformation metaorientation position (Miller, 1990).

The transformation focuses on personal and social change. It encompasses three specific orientations: teaching students skills that promote personal and social transformation (humanistic and social change orientations); a vision of social change as movement toward harmony with the environment rather than as an effort to exert control over it, and the attribution of a spiritual dimension to the environment, in which the ecological system is viewed with respect and reverence (transpersonal orientation). The paradigm for the transformation position is an ecologically interdependent conception of nature that emphasizes the interrelatedness of phenomena. In the transformation position the curriculum and the student are seen to interpenetrate each other in a holistic manner (Miller, 1990, p.8).

Historically, the transformation position is linked to two different strands of thought. One is the romantic elements, which can be traced to Rousseau’s thinking, and is also found in the work of Froebel, Tolstoy, A. S. Neill, and John Holt. These educa-

tors have argued that the child is essentially good and that education should allow the inner nature of the child to unfold with minimum interference. Neill's school, Summerhill, represents the classic example of putting this theory into practice. The second strand is found in the social change orientation, which argues that educators must take a more critical view of the role of schools in society so that schools do not just mirror dominant economic interests, and that schools must be on the cutting edge of social and political change. Today, the work of educators such as Michael Apple (1977), and Freire's work in Brazil (1972), reflect this orientation.

Philosophically, the transformation position has its roots in transcendentalism, mysticism, and some forms of existentialism. This position embodies what Huxley (1970) called "perennial philosophy" - the idea that all phenomena are part of an interconnected whole. The psychological base of the transformation position is found in humanistic and transpersonal psychology, which emphasize personal fulfillment at the ego (humanistic) levels. Socially, this position is identified with a cultural tendency that advocates decentralized, pluralistic political networks, "small is beautiful" economics, and holistic medicine.

The transformation position consists of the following characteristics (Miller, 1990, p.167).

Metaorientation is rooted in an ecological paradigm that acknowledges the interdependence of phenomena. This paradigm is linked with various forms of mysticism, transcendentalism, and some forms of existentialism (e.g., Heidegger). Transpersonal psychology, with its stress on spirituality and humanistic psychology provides the psychological base. Finally, this orientation is linked with social movements such as the Aquarian Conspiracy and other "New Age" activities (e.g., holistic health).

Self-actualization, self-transcendence, and social involvement are the principal goals of this orientation.

Learning focuses on integration of the physical, cognitive, affective, and spiritual dimensions; the curriculum tends to center around learning experiences that focus on interdisciplinary activities. Connections between disciplines, between one's inner and outer worlds, and between school and community are sought; the curriculum tends to be oriented around projects of a social nature or activities related to self-inquiry.

Teachers in this metaorientation must first work on themselves. They tend to see life as a process of being and becoming. Teachers try to be in touch with their inner life, and, at the same time, to work on their communication skills so that they are in touch with their students. Finally, teachers will make links with the community,

which will, in turn, facilitate student contact with the community.

Evaluation, to some extent, may include conventional modes that focus on skill and subject mastery. However, there is usually a strong emphasis on informal and experimental forms of evaluation, including student self-evaluation, feedback from peers and the teacher, student interaction with teachers in critiquing the curriculum.

Geography Based Curriculum

Geography is the study of place. It examines the earth's physical systems and the people in them. It also investigates how people and environments affect each other. Geography students learn to gather, organize, analyze, and present information obtained from fieldwork, models, simulations, aerial photographs, satellite imaging, maps, and computers. They learn to apply a conceptual framework of location/place, environment, region, interaction, and movement. By integrating various aspects of place, the study of geography provides students with a unique opportunity to learn about the world around them.

Teachers are responsible for developing appropriate instructional strategies. They must bring enthusiasm and a variety of teaching approaches to the classroom. They must also address different student needs, making every reasonable attempt to ensure sound learning for every student.

By using a variety of instructional strategies, teachers can provide as many opportunities as possible for students to develop skills of inquiry and communication, as well as map and globe skills, while they discover and learn fundamental concepts. The activities undertaken should enable students to place these concepts in the social, environmental, and economic contexts in which their relevance and application will be most evident. Opportunities to relate knowledge and skills to these wider contexts - to the goals and concerns of the world in which they live - will motivate students to learn in a meaningful way to learn for life.

In planning geography programs, teachers must ensure that students acquire the fundamental knowledge and skills that will enable them to carry out increasingly complex investigations. Teachers must provide grade - and age - appropriate activities and assignments that encourage mastery of basic concepts and development of inquiry/research skills. To make their programs interesting and relevant, they must relate the knowledge and skills gained to issues and problems in the world outside - for example, to the challenges associated with sustainable development, or the advantages

and disadvantages of various economic associations, or to present-day trends in employment and the workplace. It is essential to emphasize the relationship of geography to the world outside school so that students recognize that these areas of study are not just school subjects but fields of knowledge that affect their lives, their communities, and the world.

In all grades, programs should include visits to local museums, archaeological digs, geographic features (e.g., land formations, rivers), art galleries, and festivals. Students develop a better understanding of various aspects of the study of geography when they can see and experience actual examples of geographic features they are studying. Such experiences also give them a better appreciation of the unique features of the community in which they live.

Fit the Student to the Curriculum

In planning student programs, teachers tend to make the same mistake. They try to fit the curriculum to the student rather than student to the curriculum.

If our hiking assignment was curriculum based, chances are we would have first read about potholes in a geography textbook. If a picture accompanied the description of the pothole most likely the picture would not have been taken locally. However, if a pothole actually existed in your area a field trip might take place. The trip generally would involve the entire class and its main purpose would be to go directly to the site, make observations, and then return to class.

Not only is the curriculum teacher directed but the same curriculum is fitted on each student in the same manner. It is as though students are placed on an assembly line like soup cans. As they progress down the line teachers place identical curriculum labels on them. At the end of the line they are boxed up and stamped for certification.

Compare this to the hiker who comes upon a pothole by chance. He/She may make the following physical observations: cylinder shaped depression in rock, looks like an old washing machine buried in the ground, two to three metres deep, appears very smooth in appearance.

The hiker might tap the sides of the pothole with his/her hiking cane. He/She may listen and respond with interest to the variety of sounds that can be produced. In addition, the hiker might try to test the bottom of the pothole with his/her cane to see whether the bottom will withstand his/her weight. The hiker might then

slowly lower his/her body into the pothole preferring to explore this object through touch and movement.

Seeing the pothole and trying to figure out its function in the environment might leave the hiker scratching his/her head.

The hiker might reach for a pen or pencil in order to make a drawing of it or record notes describing the pothole.

Lastly, the hiker might just give it a quick glimpse and continue on his/her journey.

At the completion of the hike, the student might want to conference with his/her teacher/mentor in order to discuss this strange and mysterious physical feature. By doing so we have matched the student to the curriculum. In addition, by using an opened ended hike, teachers can draw on students' strengths. The model involves the common hike, sharing and reviewing, and the final reports based on each student's own individual understanding of academic information.

Case Study: Exploring the Niagara Escarpment Via the Bruce Trail

The Niagara Escarpment has, for decades, been recognized worldwide as a truly unique and priceless natural treasure. The escarpment is the result of two opposing geological processes, deposition and erosion. The whole process beginning 450 million years ago.

The Niagara Escarpment is home to a wide variety of plants and animals, some of which are rare or found nowhere else in Ontario.

Along the escarpment during the past century, forests were cleared, wetlands drained, pits and quarries dug, battles fought, mills and railways built, and all were influenced by this physical structure.

The Bruce Trail is a pathway that allows us to explore the escarpment's treasures. It is a continuous footpath along the Niagara Escarpment from Niagara to Tobermory. It is approximately 800 km long.

For the purpose of this assignment, I have divided the Niagara Escarpment into four sections. Each section having its own commonality.

Section 1 - The Urban Escarpment

The southern escarpment is an urban escarpment; it is either part of or

within the influence of the urban belt along Lake Ontario. To the north of it is a relatively lightly populated area where vistas are of farm country or bush, and urban intrusion on the countryside is limited. By contrast, in this most southerly region, population density is much greater; cities can often be seen in the distance; and the urban influence is stronger in the countryside.

This is the setting where numerous mills once graced the landscape. These have now, by and large, joined those who built and operated them.

Here also, limestone and sandstone were quarried and Queenston shale made into bricks.

The Urban Escarpment has the most equal balance between exposed and buried escarpment.

Section 2 - The Buried Escarpment

Somewhere between the Pretty River and the Mad River, the power of Georgian Bay is lost and we turn toward the inland valleys and uplands of the Niagara Escarpment.

Glaciers are very effective earth movers. They can move a lot of dirt in a hurry. Among the glacial period's most significant effects was the enormous transfer of material from North to South. The Northland was ravaged by the ice that ripped and carried away its earthen mantle.

Along this portion of the Niagara Escarpment most of the escarpment's face is buried beneath large amounts of glacial debris. Here the ice front stagnated. Although the front was stationary, the ice mass itself continued to move (like a conveyor belt) and to melt, burying with its enormous amounts of material and generating huge amounts of meltwater. Deposits laid down by this process are called moraines.

The rivers flowing off the Escarpment in this area have an easterly direction, and have carried out a series of valleys that give a very irregular shape to the general line of the Escarpment.

Section 3 - The Valleyed Escarpment

The Valleyed Escarpment is a region where four large valleys intrude into and break up the line of the Escarpment. All open into either Georgian or Nattawasaga Bay. The two westerly valleys, Colpoys Bay and Owen Sound, lie underwater. The

easterly valleys are named the Bighead and the Beaver, after the principal rivers that flow through them. All four valleys existed prior to the coming of the glaciers, but the ice deepened and smoothed their contours. Colpoys Bay and Owen Sound were deepened below the current levels of Georgian Bay. When the glaciers melted, lake water filled the bottoms of these drowned valleys. The land between Wiarton and Owen Sound is a transition between the harsh rock of the Bruce Peninsula and the kinder, gentle soils of the south.

Section 4 - The Rocky Escarpment

I consider the Rocky Escarpment to be the area north of Wiarton. The Rocky Escarpment is a region by virtue of its landscape peninsular in nature and dominated by bedrock. The distinctive look and feeling only begins past Wiarton.

The glaciers were not kind to the Rocky Escarpment. They took the soils that covered the land; scratched and grooved the rock, and left little in return. Only indirectly did the glaciers contribute to a mantle of good soil over a small part of the Peninsula, and that in their last dying gurgle. Around Ferndale, a glacial lake deposited a layer of clay that is the base of the only good agricultural soil in the upper Peninsula.

The Rocky Escarpment is a poorly drained piece of land. It abounds in lakes and swamps. Looking below the surface of the shallow waters, bare rock can often be seen. An unique aspect of the Rocky Escarpment not found elsewhere on the Niagara Escarpment is the absence of waterfalls of note on the main escarpment.

The Peninsula has the shape of a classic cuesta, and surface water is directed into Lake Huron following the gentle grade of the plateau. Only a small amount of surface water escapes the rocky grip of the cuesta, and it does so underground.

Becoming the Hiker

Section 1 - The Urban Escarpment - On August 30th, 1998, at approximately 10 a.m., I tapped my walking cane against the Southern Terminus of the Bruce Trail and began my discovery walk. Little did I know what effect that walk was going to have on me. I came to love the sight and smell of the woods and meadows, the waterfalls, crumbly stone walls and old mills. It was as though I was stepping back into time. The noise of cars and people talking in the distance gave way to a new sound of silence that can only be found in the woods. I felt I was entering a fragile, threatened paradise

that could all too easily disappear. As my hike unfolded, I soon discovered that the Escarpment still has places of peace and solitude where the pace is slower and where there is time to stop and notice nature's wonders. And as I walked through the countryside dotted with farms, wandered alongside rivers, past waterfalls and over rugged headlands, it became clear to me the Escarpment is a gift that we have been given by nature. The trail that winds along its edge gives us the means to explore its richness and allows us to be moved and inspired by its sheer beauty.

As they say, "All good things must come to an end" and so did my hike. However, as mentioned earlier in my hiker's assignment, a final report is due and after many months of sharing and reviewing, I submit my final report concerning my hike. Hopefully my project will inspire you to take a walk or hike down a path not yet taken by yourself.

CHAPTER THREE

A FIELD GUIDE TO THE NIAGARA ESCARPMENT

The Niagara Escarpment is a landform of great beauty. It covers hundreds of kilometres from New York state, through the province of Ontario, to eastern Wisconsin.

As a child, growing up in Hamilton, I heard people refer to the Escarpment as “the mountain.” It was this barrier that separated the lower city from the upper city. Being from the lower part of the city, the Beach Strip to be exact, I had little opportunity to explore the Escarpment any further.

It wasn’t until I was in high school that the Escarpment and I interacted. My track coach thought it would be a good idea to run up the Escarpment by way of the Wentworth steps. He suggested I should do the steps five to six times. Needless to say, the Escarpment put me through a lot of pain. However, I did win the city mile championship that year in record time.

In the fall of 1997, I decided to hike the Bruce Trail from Queenston to Tobermory. The experience was so good, I decided to do it again. But this time, I took my camera along so that I could share the many visual images of the Niagara Escarpment from the Niagara Gorge to the Bruce Peninsula.

I have divided the Escarpment into four main sections. My paper will deal with the first section which begins at Queenston and ends at The Forks of the Credit. This region consists of all the rivers that flow into Lake Ontario. It is also the most developed of the four sections.

As the title of my project suggests, one must be willing to “Seize the Day.” So, come along with me as we begin our hike. We will be visiting fifty eight sites along the way, so make sure you bring your best walking shoes with you.

A FIELD GUIDE TO THE NIAGARA ESCARPMENT



THE NIAGARA RIVER AND FALLS

QUEENSTON

The Bruce Trail starts at the southern terminus cairn at the eastern end of Queenston Heights Park. The park is situated on top of a bluff that marks the shore of Lake Iroquois, called the Iroquois Plain, which extends about 11 km, and is the area where glacial ice and meltwater dropped their load of gravel, sand and clay as the glaciers melted. Today, orchards and vineyards thrive on the glacial soils.

In Queenston Heights Park, there is a monument to Major General Sir Isaac Brock, who was killed here during the War of 1812.

The War of 1812 was a by product of the Napoleonic Wars that ravaged Europe at the beginning of the 19th century. For several years, the British Navy had boarded American ships, forcibly enlisted any sailors of British origin and sought to prevent the young republic from trading with France.

The Americans were pushing westward but encountered strong resistance from the Indians. They accused the British of encouraging Indian opposition.

In Congress, more and more representatives were calling for an invasion of Canada, which was then a British Colony. On June 18th, 1812, after years of growing tension, the United States, under President James Madison, declared war on Great Britain.

After Brock's death in battle, Major - General Roger Hale Sheaffe organized a classic counter - attack and was victorious.

Answer:

Not (B). The Niagara River supplies the water that flows from Lake Erie into Lake Ontario.

Believe it or Not?

A) The Niagara River is the product of a river - lake system that developed after the Wisconsin glacier receded from the Niagara Peninsula, and Lake Iroquois formed in the Ontario Basin.

B) The Niagara River is 56 km long and carries water from the upper Great Lakes through Lake Michigan into Lake Ontario.

C) In the Whirlpool basin the water rotates anti-clockwise before spilling out downstream.

D) The rotation is caused by the directed discharge from the Whirlpool rapids over a notch in the Whirlpool sandstone.

E) During periods of low discharge from the rapids, the Whirlpool rotates clockwise.

ALL THE RIVERS RUN INTO THE SEA;
YET THE SEA IS NOT FULL.

- The Holy Bible / Ecclesiastes



SEE - MAP# 1, PG # 19, SITE# 1



WHIRLPOOL IN THE NIAGARA GORGE

ST. DAVIDS BURIED CHANNEL

The Great Lakes above the Escarpment have always found their way to the ocean. In doing so, water has flowed across the Niagara Peninsula and drained into the Lower Great Lakes. Over a period of time, these routes have shifted locations. Several gorges carved into the Escarpment by previous flows are now buried by glacial debris.

St. Davids Buried Gorge used to carry the flow out from the Whirlpool in the Niagara Gorge.

The re-entrant into the Niagara Escarpment south of St. Davids marks the position where the buried gorge emerges from the Whirlpool Basin. The channel was traced, by drilling and geophysical techniques from St. Davids to the north shore of Lake Ontario just west of Niagara - on the - Lake where the Queenston shale was intersected at 71 m, or 3 m below the level of Lake Ontario. It is assumed that the river flowed into some unidentified pre - Iroquois lake that occupied the Ontario Basin, at an elevation only slightly below the level of Lake Ontario.

The sand and gravels exposed in the pits, near St. Davids, are ice contact delta deposits that accumulated when the ice front stood just on top of the Niagara Escarpment. The front is considered to be in line with the front that built the Vinemount Moraine.

Believe it or Not?

A) James Hall pointed out to Charles Lyell during joint field work in 1841 the peculiarity of the Whirlpool and suggested it might connect with the break in the Escarpment at St. Davids.

B) Charles Lyell followed up the clue in 1842 and established the existence of the buried gorge filled with drift.

C) Lyell's stratigraphy of the fill, measured up the western side of the Whirlpool, was not an acceptable record.

D) The buried gorge extended up through the Whirlpool Rapids Gorge, probably as far as the two Railway Bridges.

E) From borehole records for the Cantilever Bridge, Johnston (1928) deduced the existence of a backfilled gorge he assumed to be connected with the St. Davids buried gorge.

THE BEST OF ALL THINGS FOR EARTHLY MEN IS NOT TO BE BORN AND NOT TO SEE THE BEAMS OF THE BRIGHT SUN; BUT IF BORN, THEN AS QUICKLY AS POSSIBLE TO PASS THE GATES OF HADES, AND TO LIE DEEP BURIED.

- Elegies / Theognis

Answer:

Not (C). Lyell's stratigraphy of the fill is still an acceptable record.



SEE - MAP# 1, PG # 19, SITE# 2



BROCK'S MONUMENT

17

LIVE AND LET DIE

Brock's Monument on Queenston Heights is an exceptional example of the adulation of heroes.

Major-General Sir Isaac Brock died on October 13th, 1812 while leading his troops against more than a thousand Americans who had crossed the Niagara River early that morning and sized the heights above Queenston.

Mourned as a great hero, he was credited with gaining the upper hand soon after war broke out by capturing Michilimackinac and then Detroit. The latter victory convinced Upper Canadians their cause was far from lost and boosted morale.

The first Brock's Monument was finished in 1827. Laura Secord was the first keeper. The monument stood a fateful thirteen years until 1840 when it was shattered by an explosion.

Those responsible for the bombing fled to the United States and were never identified or convicted. The incident was a sore point for several years between Canada and United States.

Shortly after, it was replaced by the present day monument. It is 56 m high and is constructed entirely out of cut stone. For a couple of dollars, you can climb the 200 odd circular staircase steps to view the Niagara River through a locked window.

Since its erection, Ontario has added few monuments of that dimension.

Believe it or Not?

A) It was estimated that, in theory, Niagara Falls could power the entire industrial needs of the contemporary world.

B) In earlier years (before controls by ice booms) huge ice jams as high as 23 m formed in the river. One, in 1938, destroyed the Honeymoon Bridge.

C) Table Rock is a name taken from a prominent projecting rock on the Canadian side which fell in 1850.

D) The Maid-of-the-Mist pool is ponded backwater because of the narrow cross section into the Whirlpool Rapids Gorge.

E) The rapids of the upper river are produced by Ontario Hydro redirecting the Niagara River.

EVEN THE DEATH OF FRIENDS WILL INSPIRE US AS MUCH AS THEIR LIVES... THEIR MEMORIES WILL BE ENCRUSTED OVER WITH SUBLIME AND PLEASING THOUGHTS AS MONUMENTS OF OTHER MEN ARE OVERGROWN WITH MOSS; FOR OUR FRIENDS HAVE NO PLACE IN THE GRAVEYARD.

- A Week on the Concord and Merrimack Rivers / Thoreau

Answer:

Not (E). The rapids of the upper river are because of the slope of the glaciated bedrock.



SEE - MAP# 1, PG # 19, SITE# 3



LAURA SECORD'S HOME

LAURA SECORD'S FORGOTTEN COW

It is said that Laura Ingersoll Secord overheard American officers planning the attack on Beaver Dam. The Americans were using her house as a temporary headquarters at the time. While the Americans were dining, Laura Secord got past the American sentries. She took a cow so that the Americans would think she was on her way to the pasture. Her 30 km journey to the British lines is said to have taken hours. There is a monument to Laura Secord on Queenston Heights.

She walked a circuitous, difficult, and perilous route through the woods and swamps and over miry roads to warn a British outpost at DeCew's Falls of an intended attack and thereby enabled Lt. Fitzgibbons on the 24th June 1813 to surprise and attack the enemy at Beechwoods (or Beaverdams).

The Battle of Queenston Heights financially ruined the Secords. Their home and store in Queenston had been looted during the battle and most of their things stolen or destroyed.

After the war ended in 1814, the Secords struggled to pay their bills.

When James Secord died in 1841, Laura was left penniless at the age of sixty-five.

Answer:

Not (B). It was the Mohawks who gave the falls the name Niagara.

Believe it or Not?

A) Natives believed Niagara Falls originally fell from Queenston Heights.

B) It was the Cree who gave the falls the name Niagara, from Onghiara meaning "thunder of the waters".

C) The Attiwandaron believed Hinu, the thunder god, lived in the falls.

D) Hinu is the basis for the legend of the Maid of the Mist.

E) To appease Hinu, the Attiwandaron would send their most beautiful maiden along with fruit and game over the falls in a canoe.

THE GRAND LEAP OF THE WHALE UP THE FALL OF NIAGARA IS ESTEEMED, BY ALL WHO HAVE SEEN IT, AS ONE OF THE FINEST SPECTACLES IN NATURE.

- To the editor of a London newspaper (1765), intended to chaff the English for their ignorance of America / Franklin



CONVERSATION

CONVERSATION IS BUT CARVING!
GIVE NO MORE TO EVERY GUEST,
THAN HE'S ABLE TO DIGEST.
GIVE HIM ALWAYS OF THE PRIME,
AND BUT LITTLE AT A TIME.
CARVE TO ALL BUT JUST ENOUGH,
LET THEM NEITHER STARVE NOR STUFF,
AND THAT YOU MAY HAVE YOUR DUE,
LET YOUR NEIGHBOUR CARVE FOR YOU.

- Conversation / Swift



SEE - MAP# 3, PG # 25, SITE# 5



ALLANBURG BRIDGE #11

THE FIRST WELLAND CANAL (1829 - 1844)

Much of the credit for building the canal must go to an enterprising businessman, William Hamilton Merritt of the ten Provinces of Upper Canada. It was the need for a regular flow of water to his mills, coupled with the United States, that prompted Merritt to undertake initial engineering studies.

In 1824, convinced that the construction of a canal was feasible, he founded the Welland Canal Company which was financed by government and private sources.

The first sod was turned on November 30th, 1824 at Allanburg. Today, a commemorative cairn located at the west end of Bridge #11 marks the location of that historical event. Five years later, the schooner "Ann and Jane" completed the first upbound transit, a two day voyage.

Wherever possible, natural waterways became part of the canal. From Port Dalhousie, on Lake Ontario, the canal followed St. Catharines to Merriton, and up the escarpment to Thorold. In those early years of operation, the canal terminated 8 km south of Thorold, at Port Robinson on the Welland River. Ships then proceeded east on the Welland River to Chippawa, and thence up the Niagara River to Lake Erie.

As traffic increased, it became desirable to extend the canal directly to Lake Erie from Port Robinson in order to avoid the strong currents of the Niagara River. Gravelly Bay, now Port Colborne, was made the southern terminus of the new 18 km cut.

The Welland Canal Company had shown great enterprise but the maintenance of hastily constructed wooden locks was proving expensive and toll revenues were not sufficient.

Appeals were made for additional government assistance and, in 1839, the Government of Upper Canada voted to purchase the privately held company stock.

Believe it or Not?

A) Draught marks indicates the ship's depth in water, measured in feet and metres.

B) Bulbous bow indicates the ship has a large teardrop shape extending forward of the stem.

C) Ship's name is required by law to be displayed only at the bow.

D) Bow thruster indicates that a reversible propeller near the bow that forces water to one side or the other.

E) Bow markings - Each ship has a variety of markings.

THERE IS NOTHING - ABSOLUTELY NOTHING -
HALF SO MUCH WORTH DOING AS SIMPLY
MESSING

ABOUT IN BOATS...OR WITH BOATS...IN OR
OUT OF 'EM, IT DOESN'T MATTER.

- THE WIND IN THE WILLOWS / ELLIS

Answer:

Not (C). Law
requires a ship's
name be displayed at
the bow and stern.



SEE - MAP# 2, PG # 25, SITE# 6



OLD CANAL

THE SECOND WELLAND CANAL (1845 - 1886)

The purchase of the Welland Canal Company was completed shortly after the Union of the Province, in 1841, and soon thereafter, plans were drawn for an improved Welland Canal.

Work then began to increase the canal depth to 2.7 m and to reduce the number of locks to 27. The new locks were masonry structures 45.7 m long and 8.1 m wide. The route of the new canal was much the same as that of the first since the channels and locks of the original canal became the control weirs of the new works. At this time, steamers had begun to replace sailing vessels; they were larger ships and their numbers were increasing rapidly.

In 1870, a Government appointed Commission recommended canal improvements. Its report stated that "wheat, lumber, copper and iron from the Upper Lakes would pass through the Welland Canal in increasing amount were it not for the fact that the larger boats cannot go through." The report further pointed out that three quarters of the tonnage from the lakes could not use the existing locks.

The Commission's recommendations gave rise to the construction of the third Welland Canal.

Believe it or Not?

- A) Seaway engineers designed the locks to take advantage of Government Funding which was only available for five years.
- B) To raise a ship, the upstream lock valves are opened and the water flows in.
- C) To lower a vessel, the downstream valves are opened and the water flows out.
- D) Each lock holds around 91 million litres of water.
- E) Each lock takes approximately ten minutes to empty or fill.

**FORTUNE BRINGS IN SOME BOATS
THAT ARE NOT STEERED.**

_ Cymbeline / Shakespeare

Answer:

Not (A). Seaway engineers designed the locks to take advantage of the law of gravity to fill and empty each lock.



SEE - MAP# 2, PG # 25, SITE# 7



PORT DALHOUSIE

23

THE THIRD WELLAND CANAL (1887 - 1931)

The third Welland Canal was to play an important role in the development of Canada's grain export trade and its steel industry. The design of the new canal was more aggressive than the first two attempts to get up to and over the Escarpment. Engineers made use of existing ravines and stream beds as foundations for their channel, but the line cut directly across the country with no concern for following the easiest contours. The method of scaling the Escarpment itself remained the same however, as the locks were shelved into the "Mountain."

The Third Canal saw the introduction of electrically powered gate opening machinery in 1907. At the same time, electric lighting was installed, replacing the gas lighting in use since 1855. The third Welland Canal followed the same route as the second canal from Lake Erie to a point 5 km above the escarpment, it then left Twelve Mile Creek and followed a more direct line to Port Dalhousie.

A distinctive type of vessel which was called the Great Lakes "canaler" was developed for use in the inland canal system. This bulk carrier was literally a self-propelling barge with machinery at the stern and navigating bridge up forward with a long, almost box shaped cargo hold between. Larger ships were also built to sail from the Lakehead to Port Colborne where their cargo was transferred to several small "canalers." It was hoped that these larger vessels would be able to move into the lower lakes. As a result, plans were made between the years 1907 and 1912 to again enlarge the canal.

Answer:

Not (A). By the 1860s, Barkentines and Schooners carried most of the bulk freight such as lumber and coal.

Believe it or Not?

A) By the 1860s, Barges carried most of the bulk freight such as lumber and coal.

B) Next, came the whaleback steamer, commonly called a "Pig Boat" because of its snout like bow. This unique design was supposed to offer minimal resistance to wind and waves.

C) By 1918, freighters were the largest ships on the lakes and became the standard for all the Great Lakes fleets for the next 35 years.

D) Today, freighter size has reached a maximum of 222.5 m with many of them carrying large self unloading equipment on their decks.

E) Although the seaway locks are huge, there are some specialized ships on the Upper Great Lakes that are just too big to travel through the seaway. These Super Lakers are over 304 m in length.

O CAPTAIN! MY CAPTAIN! OUR
FEARFUL TRIP IS DONE,
THE SHIP HAS WEATHERED EVERY
RACK, THE PRIZE WE SOUGHT IS
WON,
THE PORT IS NEAR, THE BELLS I
HEAR, THE PEOPLE ALL EXULTING.

- O Captain! My Captain! / Whitman



SEE - MAP# 2, PG # 25, SITE# 8



THE FOURTH WELAND CANAL

PORT WELLER REPLACES PORT DALHOUSIE

Studies led to decisions to build locks of greater size and to reduce their number as much as possible. An almost direct north - south route was selected and the Lake Ontario connection was moved to Port Weller, 5 km east of Port Dalhousie. Since no natural harbour existed at Port Weller, an artificial one was created with embankments extending 2.4 km into Lake Ontario.

Construction of the canal started in 1913, was interrupted by World War 1, resumed in 1919 and continued until 1932.

THE WELAND REALIGNMENT

By far the most beneficial improvement to the Welland Canal was the construction of the Realignment, often referred to as the "By - Pass," which opened to navigation in March of 1973. This new channel replaced a 14.6 km section of the Welland Canal that bisected the City of Welland.

The Welland Realignment is a comparatively straight 13.4 km canal running south from Port Robinson to Ramsey's Bend. It provides a navigable route without any overhead obstructions such as bridges, since all land traffic is handled by two tunnels.

Today's Welland Canal covers 100 m height difference between Lake Ontario and Lake Erie by employing seven lift locks and one guard lock over a total distance of 43 km to form the most difficult and spectacular section of the St. Lawrence Seaway system.

No other canal in the world has overcome a slope as steep and abrupt as the Niagara Escarpment to transport ships to more than 176 m above sea level.

MICHAEL ROW THE BOAT
ASHORE, HALLELUJAH!
- Michael Row the Boat Ashore /
Anonymous

Answer:

Not (C). Laker - straight bow, flat deck,
wheelhouse forward.

Believe it or Not?

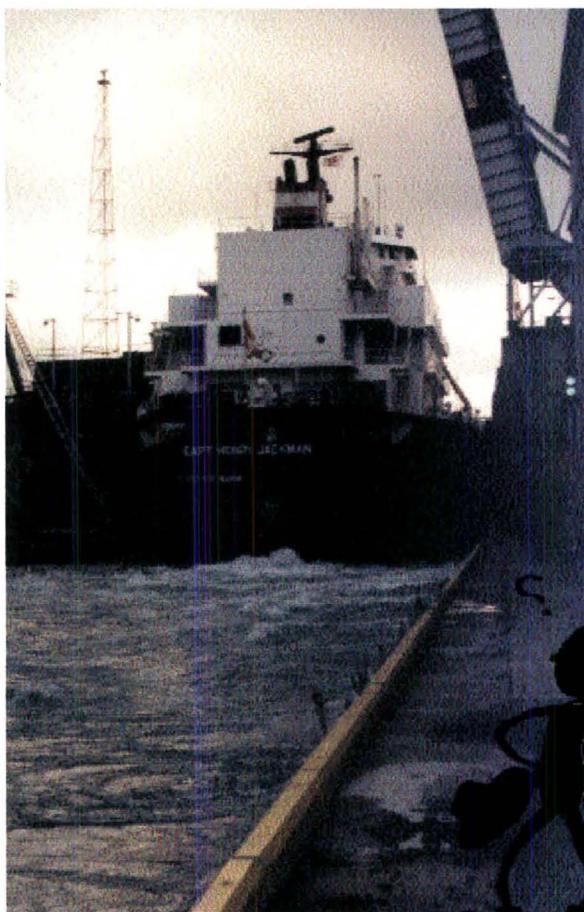
A) Deep Sea Freighter - raked bow, numerous cargo derricks.

B) Self-unloading Laker - straight bow, flat deck, large unloading boom on deck.

C) Laker - Straight bow, flat deck, wheelhouse at stern.

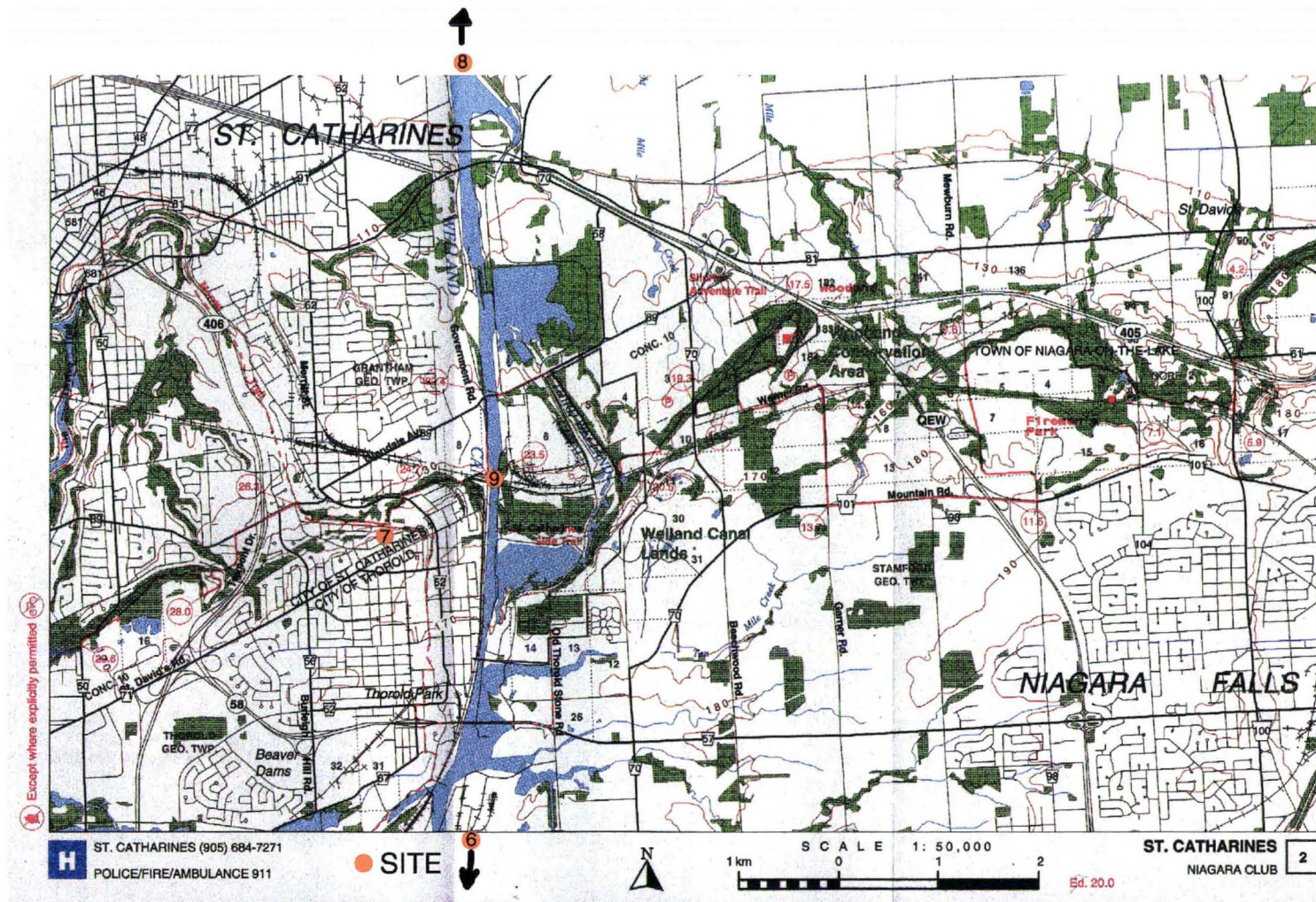
D) Ocean Bulk Freighter - bulbous bow, flat deck, wheelhouse aft.

E) Tanker - raked bow, walkway along rounded deck.



SEE - MAP# 2, PG # 25, SITE# 9





The above map was obtained from "The Bruce Trail Reference 20th Edition 1998" and has been modified for this project.

DECOU'S STONE HOUSE

FINISH LINE FOR LAURA SECORD

This house of Captain John DeCou (the name was variously spelled by his relatives and descendants and later as DeCew) was the Headquarters of the British outpost under Lt. James FitzGibbon to which came Laura Secord through the woods and swamps below the Niagara Escarpment from Queenston on June 24th, 1813 to warn of the American advance. Thus warned, the small British force with its Indian Allies captured the entire force with its commanding officer Lt. Col. Charles G. Boerstler. That action, "The fight in the Beech Woods," was a turning point of the war.

Capt. John DeCou, a militia officer since 1809, had been taken prisoner after the capture of Niagara and Ft. George in May 1813. His wife and children lived here throughout the war. At various times, their home was also a military post and supply point. Capt. DeCou escaped from captivity in 1814 to serve until the end of the war. He was present at Lundy's Lane.

After the war, he restored and developed this property and the area became the Hamlet of DeCew Town, now DeCew Falls. He advocated and he became a director of the first Welland Canal. When the route was changed, leaving his mills without the water power, he became an opponent of the scheme because of the diversion of water from his mills. John DeCou sold this place in 1834.

In 1950, while unoccupied, it was destroyed by a fire believed to have been of incendiary origin. It was preserved in its present state and a tablet was erected in 1952 by the Hydro Electric Power commission of Ontario.

Answer:

Not (D). Originally, flax was grown solely to be turned into linens.

Believe it or Not?

A) DeCou purchased 40 hectares, including the falls, from a native for an ox and a blanket, and an additional 40 hectares for a gold doubloon.

B) DeCou built a sawmill and oil mill.

C) The oil mill was the first of its kind between Lake Erie and Lake Ontario and was an instant success because of the importance of flax in those early days.

D) Originally, flax was grown solely to be turned into alcohol.

E) The mills were at the mercy of the streams, which often dried up during the summer months and were tor-
rential during flood seasons.

HOW MANY ROADS MUST A MAN
WALK DOWN
BEFORE YOU CALL HIM A MAN?

- Blowin' in the Wind / Dylan



SEE - MAP# 3, PG # 28, SITE# 10



THE SHORT HILLS

27

A GLACIAL DELTA

The Short Hills are located on the outskirts of St. Catharines. This area of rolling hills, valleys and woodland provides a striking break in the generally linear Niagara Escarpment. The valley is about 3.2 km wide and 6.28 km long, in places 91 m below the tableland and 68 m above. It was initially carved by a preglacial river. This large notch in the Escarpment now contains massive deposits of glacial drift and subsequent lake materials. Numerous tributaries of the Twelve Mile Creek deeply eroded these deposits to create the present landscape. The flat top of the original delta can be distinguished by an observant eye. The ultimate dissected terrain of the Short Hills is the site of a provincial park that functions as a nature reserve for St. Catharines.

Present in this area are many tree species typical of the Carolinian forest.

Believe it or Not?

- A) The last time that southern Ontario and the Niagara Escarpment were completely buried under ice was about 15,000 years ago.
- B) Features that indicate the former presence of the glaciers and the direction in which they advanced are streamlined landforms, called geomaps.
- C) The glaciers left behind large amounts of rocky materials of all sizes, from clays to boulders.
- D) In the vicinity of the Niagara Escarpment the drift can be up to 50 m thick.
- E) The melting glaciers produced large quantities of meltwater which discharged into large rivers called discharge channels.

THE ICE WAS HERE, THE ICE WAS
THERE,
THE ICE WAS ALL AROUND:
IT CRACKED AND GROWLED, AND
ROARED
AND HOWLED,
LIKE NOISES IN A SWOUND!

- The Ancient Mariner / Coleridge

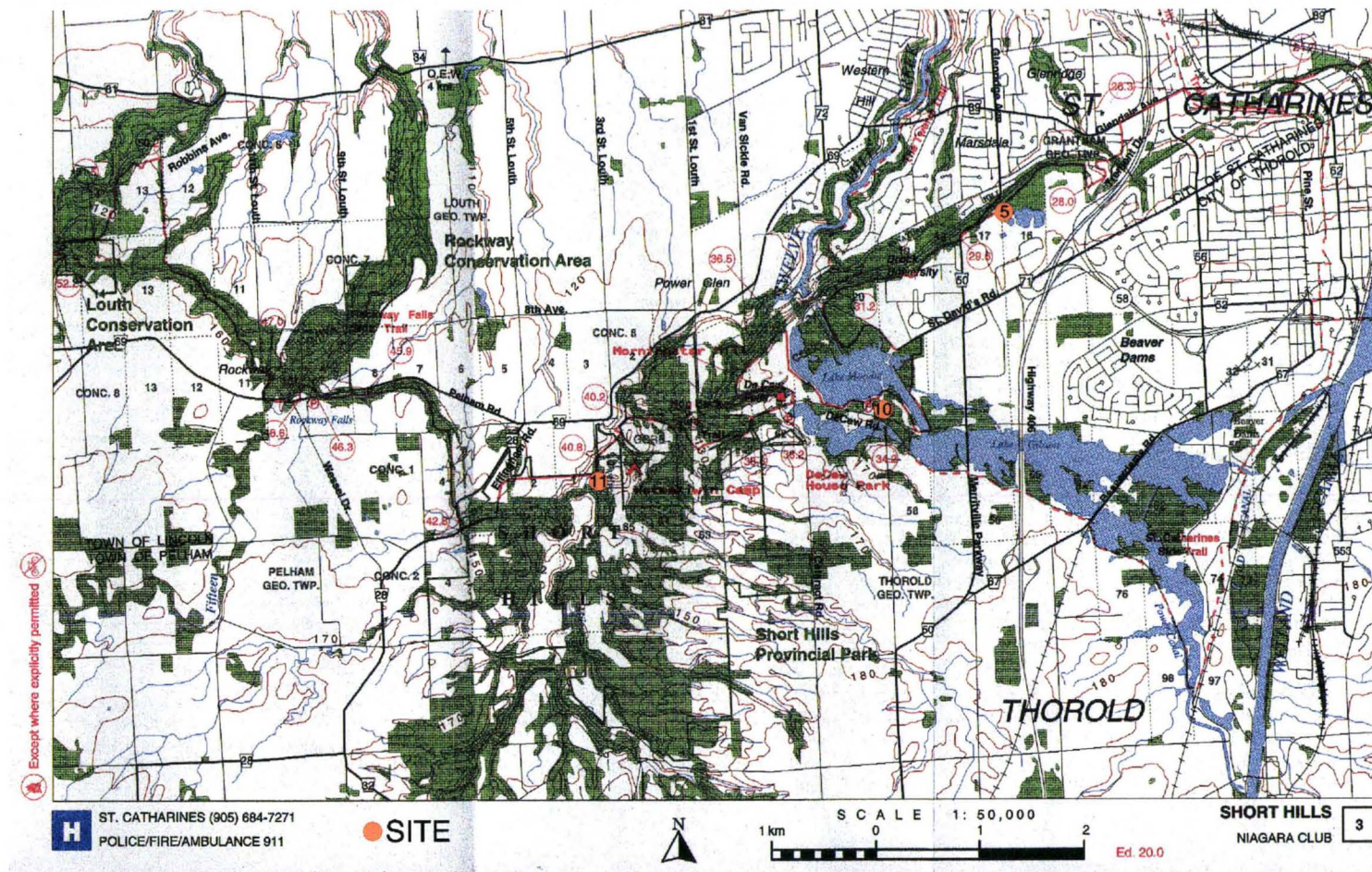
Answer:

Not (B). Features that indicate the former presence of the glaciers and the direction in which they advanced are streamlined landforms, called drumlins.



SEE - MAP# 3, PG # 28, SITE# 11





The above map was obtained from "The Bruce Trail Reference 20th Edition 1998" and has been modified for this project.

BALLS FALLS

BAHL WAS HIS NAME

In 1807, John and George Ball purchased 1,200 acres of land adjacent to Twenty Mile Creek. By 1809 John and George Ball had constructed a four storey gristmill, a sawmill and a woolen mill on the property. The gristmill provided flour for British troops during the War of 1812. By the late 1830s and early 1840s a prosperous commercial operation had been established. Settlers in the Niagara area stopped by to purchase barrels of flour, smoked meat, yards of cloth, and sawn lumber just to name a few supplies.

Balls Falls was bypassed by the Great Western Railway in the early fifties. The railway ended the area's prosperity. In addition, in 1855, the last ship docked at Jordan. Without shipping facilities, the mills fell into decline. The railway and the Welland Canal triggered the rapid growth of villages below the escarpment.

By 1900, the industries at Balls Falls had declined and the grist mill had been partially dismantled. Closed in 1910, the mill was acquired from the Ball family in 1962 by the Niagara Peninsula Conservation Authority.

Today, the site serves as a popular spot for weddings and picnics.

Answer:

Not (D). By 1840, the water level of the creek was falling, so the mill was converted to steam power.

Believe it or Not?

A) Balls Falls is the second sunniest location in Ontario.

B) Bahl, now known as Ball, had enterprises with his brother at the falls.

C) A grist mill built in 1810, was operated by George Ball, a miller.

D) By 1840, the water level was rising, so the mill had to be closed because it kept flooding.

E) Flour was packed in barrels and bags and shipped out though Jordan Harbour or hauled by team to St. Catharines and even shipped overseas to Britain.

THE MILL CANNOT GRIND WITH
WATER THAT'S PAST.

- Jacula Prudentum / Herbert



SEE - MAP# 4, PG # 31, SITE# 12



EARLY SETTLERS

This house style, associated with Scottish and Irish settlers, was the most common type of early log dwelling built in eastern North America. Log houses in Ontario were usually built by settlers as temporary homes until finances and time allowed for the erection of permanent stone, brick, or frame dwellings.

By 1832, the demand for sawn lumber had greatly increased as settlers abandoned their log cabins for better homes. Tree stumps were sometimes hauled to the edge of the fields and turned on their side to make fences. A cabin which might be as much as twenty feet long and eighteen feet wide, usually had only one or two rooms within. There was sometimes a loft overhead where children slept. The inside walls might be smoothed and a floor of thick boards laid. A fireplace was needed for lighting, cooking and heating.

The settlers made most of their furniture themselves. Furniture was built to be useful rather than decorative.

Believe it or Not?

A) The early settlers had to grind their own wheat. This produced very coarse flour which made heavy, dark bread.

B) Potatoes were consumed in large quantities but few families took the time to grow other vegetables.

C) Wild plants were used occasionally as vegetables and to make medicines.

D) Tea was rarely available so substitutes made from such things as hemlock and sassafras were common.

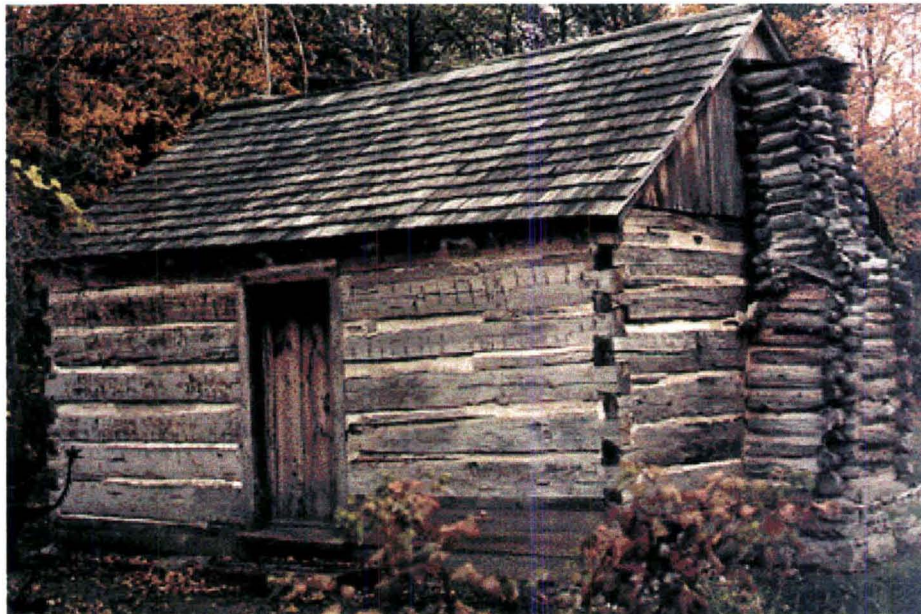
E) Milk and butter were scarce because settlers had to travel a long distance to get to a dairy.

I WILL ARISE AND GO NOW, AND GO TO
INNISFREE,
AND A SMALL CABIN BUILD THERE, OF CLAY
AND WATTLES MADE:
NINE BEAN - ROWS WILL I HAVE THERE, A HIVE
FOR THE HONEYBEE,
AND LIVE ALONE IN THE BEE - LOUD GLADE.

- The Lake Isle of Innisfree / Yeats

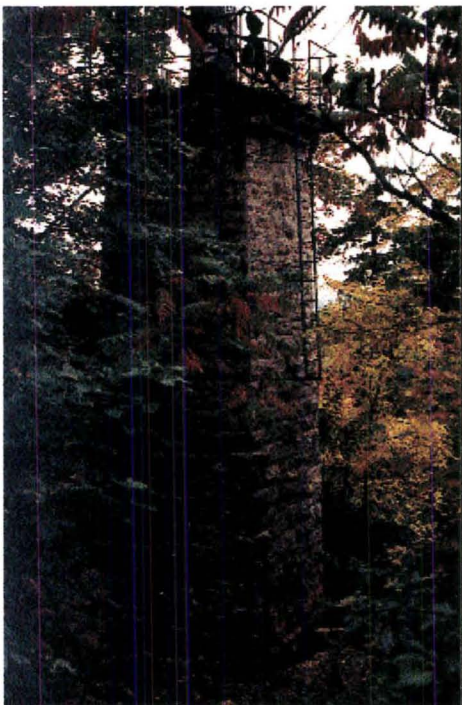
Answer:

Not (E). Milk and
butter were scarce
because few
families had
enough feed to
keep cattle over
the winter.



SEE - MAP# 4, PG # 31, SITE# 13





WHAT'S OLD
COLLAPSES, TIMES
CHANGE,
AND NEW LIFE
BLOSSOMS IN THE RUINS.

- Wilhelm Tell / Schiller



BEAMER CONSERVATION AREA

HAWK MIGRATION

To avoid our harsh Canadian winters, most hawks, falcons, eagles and vultures fly south. Each spring, they return to Canada to nest and raise their young.

Along the Niagara Escarpment, strong updrafts are created by winds deflecting off the cliffs. Migrant hawks take advantage of these redirected winds. They glide on set wings high above the tree tops. Hawks also drift high in the sky by catching a thermal or column of rising hot air created by the spring sunshine warming the ground.

In spring, the cold waters of Lake Ontario and Lake Erie will not produce thermals; therefore, the birds of prey migrating north must go around the Lakes. The configuration of the two lakes creates a funnelling effect, and the result is that a large number of birds of prey fly directly over Beamer Memorial Conservation Area located on the top of the escarpment overlooking the town of Grimsby.

A viewing tower is used to monitor the annual spring migration of hawks, eagles, falcons and vultures. It was installed in January 1998.

Believe it or Not?

Unlike autumn hawk migration, the spring movement tends to be associated with the movement of warm air into the province. The principal hawk species observed are:

- A) Sharp - shinned Hawks (April and early May). The short rounded wings make it possible for the "Sharpie" to pursue its prey through the trees.
- B) Red - tailed Hawks (March and April). When this large broad winged, round tailed hawk banks in its soaring, the rufous of the upperside of the tail can be seen.
- C) Broad - winged Hawks (late April - early May). They have broad wings and wide, rounded tails. They habitually soar aloft in wide circles.
- D) Red - shouldered Hawks (March). This buteo, with its ample tail and broad wings, differs from the Red - tail by its banded tail and reddish underparts.
- E) Turkey Vultures (April - May). With a wingspan of 6 feet - nearly that of an eagle - this scavenger soars over the landscape looking for carrion.

WE'RE NEVER SINGLE - MINDED,
UNPERPLEXED, LIKE MIGRATORY BIRDS.

- The Duino Elegies / Rilke

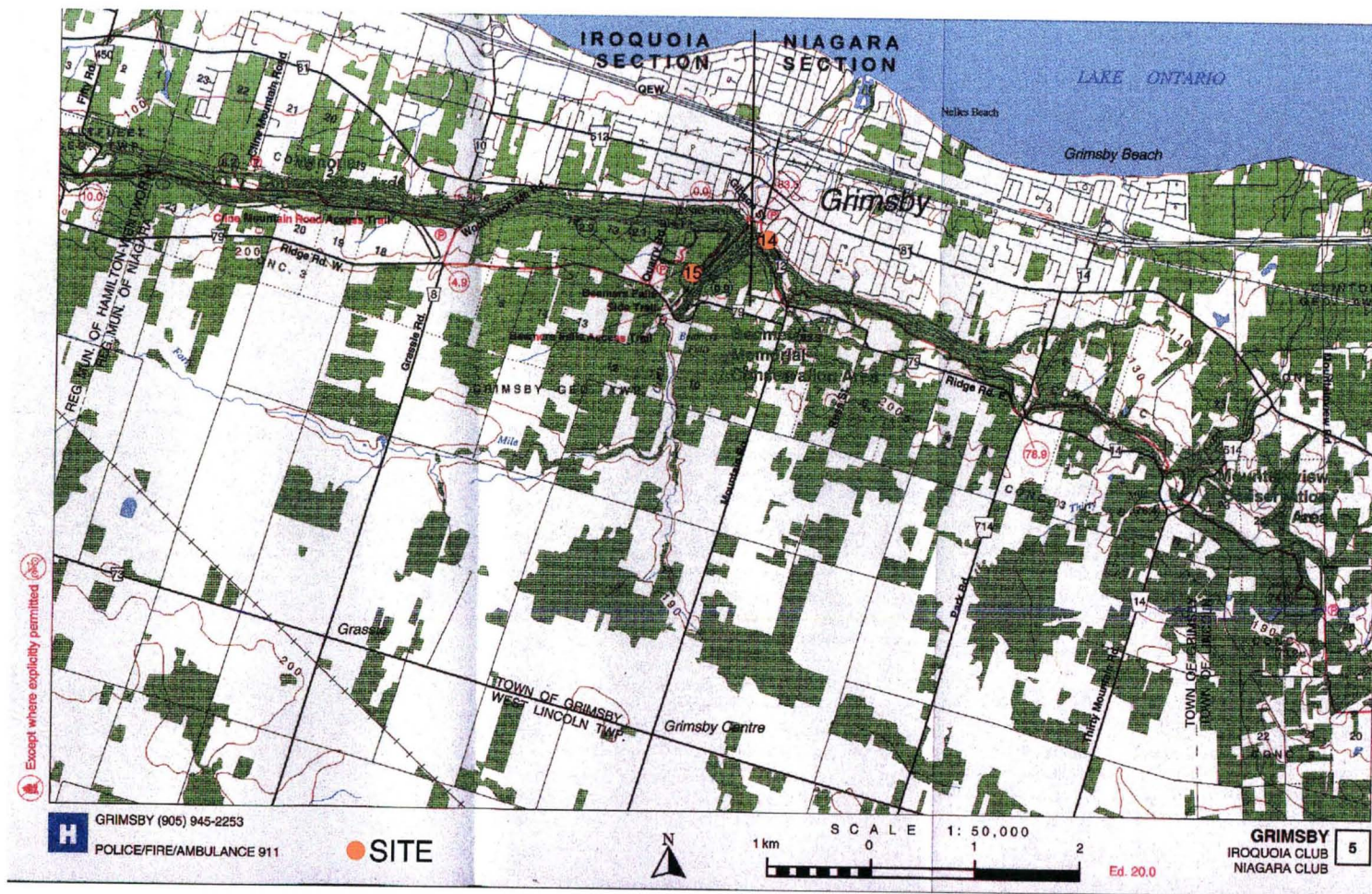
Answer:

Not (E). Turkey
Vultures are not
members of the
hawk species.



SEE - MAP# 5, PG # 34, SITE# 15





The above map was obtained from "The Bruce Trail Reference 20th Edition 1998" and has been modified for this project.

THE DEVIL'S PUNCH BOWL

THE DEVIL MADE ME DO IT!

At this spectacular waterfall, the waters of Stoney Creek drop 25 m into a large plunge pool. Examination of the lower outcrops may only be for the adventurous.

It's a fascinating name for an intriguing spot. The focal point of this 25 - hectare passive conservation area is the dramatic waterfall, the product of a process that began about 450 million years ago.

Known world wide among geologists for its exposed rock strata, Devil's Punch Bowl also provides a spectacular view overlooking Stoney Creek and Hamilton Harbour. It's a perfect spot for photography or a romantic picnic. Devil's Punch Bowl is located on Ridge Road, east of Highway 20.

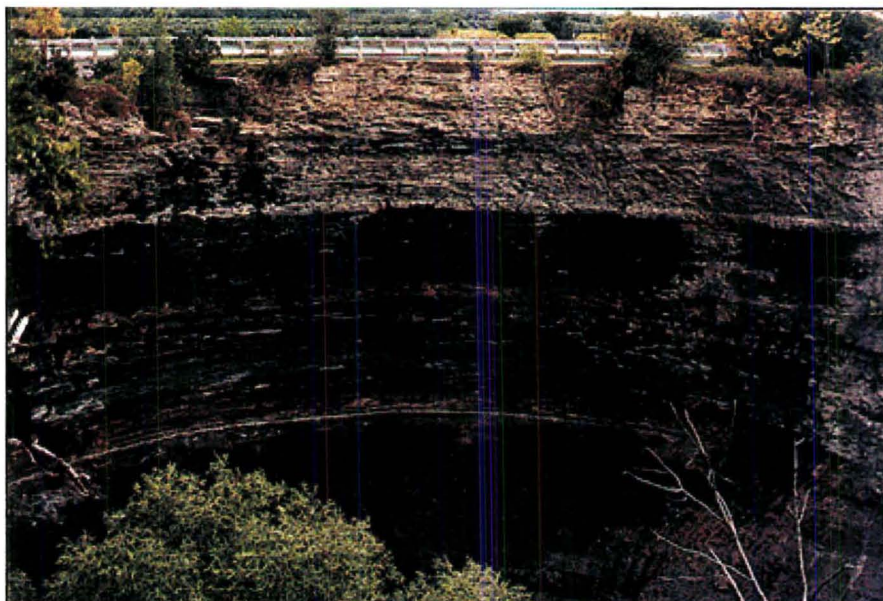
Believe it or Not?

- A) Devil's Punch Bowl is known world wide among geologists for its exposed rock strata.
- B) Devil's Ivy is another name for poison ivy.
- C) Devil's Pulpit is a high wall of dolomite located near the Forks of the Credit.
- D) Devil's Glen is a provincial park noted for its ski chalet.
- E) Devil's Monument is found on the Bruce Peninsula. It is a sea stack.

FIFTEEN MEN ON THE DEAD MAN'S CHEST -
YO- HO - HO, AND A BOTTLE OF RUM!
DRINK AND THE DEVIL HAD DONE FOR THE
REST -
YO - HO - HO, AND A BOTTLE OF RUM!
- Treasure Island / Stevenson

Answer:

Not (B). Devil's Ivy
is not another name
for poison ivy.



SEE - MAP# 6, PG # 38, SITE# 17



THE STONEY CREEK MONUMENT

THE BATTLE OF STONEY CREEK

In 1812, the United States declared war on Britain and then proceeded to invade Canada.

In June 1813, American troops took Fort George and the British troops fled to Burlington Heights (where Dundurn Castle now stands). The British troops were few and ill equipped. About 3,000 Americans reached Stoney Creek on June 5th and settled down for the night. The Gage House was used as headquarters.

The British decided on a night attack, using Billy Green, a young local man as a scout. There were only 700 British troops, but the darkness hid their numbers. After a 40 minute battle in which hundreds of soldiers died, the British withdrew. They had captured the two American generals and some field artillery. The Americans withdrew to "the Forty" which is now Grimsby and never penetrated the peninsula that far again.

The wounded on both sides were taken to the home of James Gage, where his wife Mary and her family tore up sheets and tablecloths to bind the wounds.

The Gage House, riddled with musket shot, weathered the historic Battle of Stoney Creek to become "Battlefield House", a monument to the successful defence of the Niagara Peninsula.

The War of 1812 ended in December, 1814, when both countries signed the Treaty of Ghent and accepted a return to the pre-war land boundaries.

A 30 m stone monument, on the Escarpment flank, commemorates nearly two centuries of peace between Canada and the United States.

Today, the historic Battle of Stoney Creek is commemorated each year by a formal flag raising ceremony.

IF THE TRUMPET GIVE AN
UNCERTAIN SOUND,
WHO SHALL PREPARE HIMSELF
TO THE BATTLE?

- The Holy Bible: 1Corinthians 14:8

Answer:

Not (A).
The Stoney Creek Monument was erected in 1913 to commemorate the 100th anniversary of the Battle of Stoney Creek.

Believe it or Not?

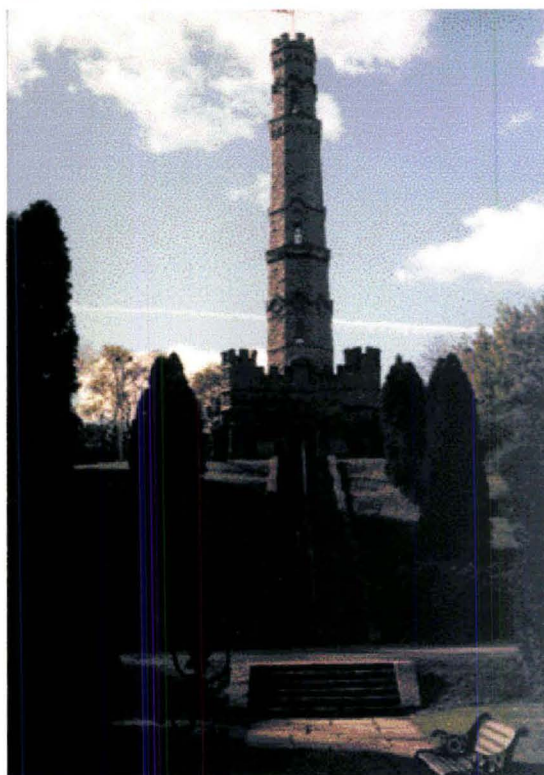
A) The Stoney Creek Monument was destroyed by the Americans during the battle of Stoney Creek and rebuilt after the War of 1812.

B) Scout Billy Green's name appears on one of the eight shields that are around the Stoney Creek Monument.

C) Billy Green explained to Colonel Harvey at Burlington Heights where and how the American army were encamped near Stoney Creek.

D) Colonel Harvey gave Billy Green a corporal's sword and Green was told to take the lead since he knew the way.

E) Most local residents believe that it was their own Billy Green who was responsible for the success of the surprise night attack on the Americans. (Even though there is no official mention of Billy Green in military reports.)



FELKER'S FALLS

WHEELCHAIR ACCESSIBLE

Only a few steps from the city, Felker's Falls provides a quiet escape from its hustle and bustle. The only sounds are the calls of birds echoing through the cool forest, a gentle breeze rustling the leaves, and water from the slender waterfall cascading to the rocks below.

The view is spectacular, with the whole Golden Horseshoe stretched out for many kilometres around.

A very special feature of Felker's Falls is the Peter Street Trail. The two nature trails were especially designed for use for the visually handicapped and those in wheelchairs. Thus, ensuring that no one with a love of nature is denied access. The trail is named in memory of Peter Street, for his efforts on behalf of the disabled.

Felker's Falls Conservation Area is located north of Mud Street off Paramount Drive on Ackland Street, Stoney Creek.

There were few streams within Hamilton's 1999 city limits large enough to provide mill sites. An exception was Big Creek where it dropped over the escarpment (Albion Falls, located just west of Felker's Falls). William Davis built a mill there in 1795. At a later date when a pit was being quarried for a new waterwheel at the Albion Mills, natural gas was discovered. This gas, despite its unpleasant sulphurous odour, was used to light the mill for many years. Natural gas can still be seen bubbling up through the water in the bed of Red Hill Creek.

Answer:
Not (E). The
preservation of the
escarpment is the
responsibility of not only
the Niagara Escarpment
Commission but every
landowner, every visitor,
every
person who cares to
have a
heritage to pass on to
future
generations.

Believe it or Not?

A) The Niagara Peninsula below the Escarpment is heavily built up, and much of this former glacial lake plain has been urbanized.

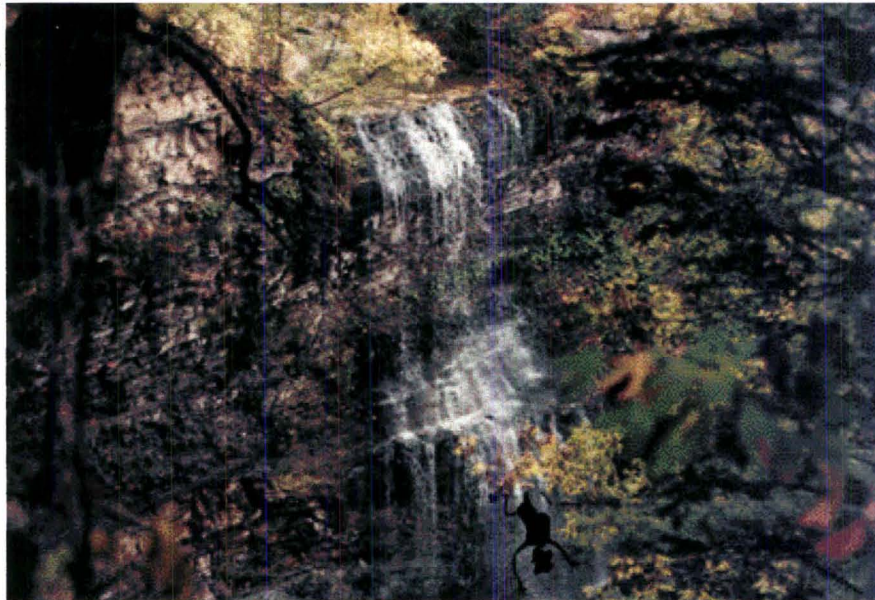
B) The largest urban areas are Hamilton, Grimsby and St. Catharines; a number of smaller communities fill in the countryside between them.

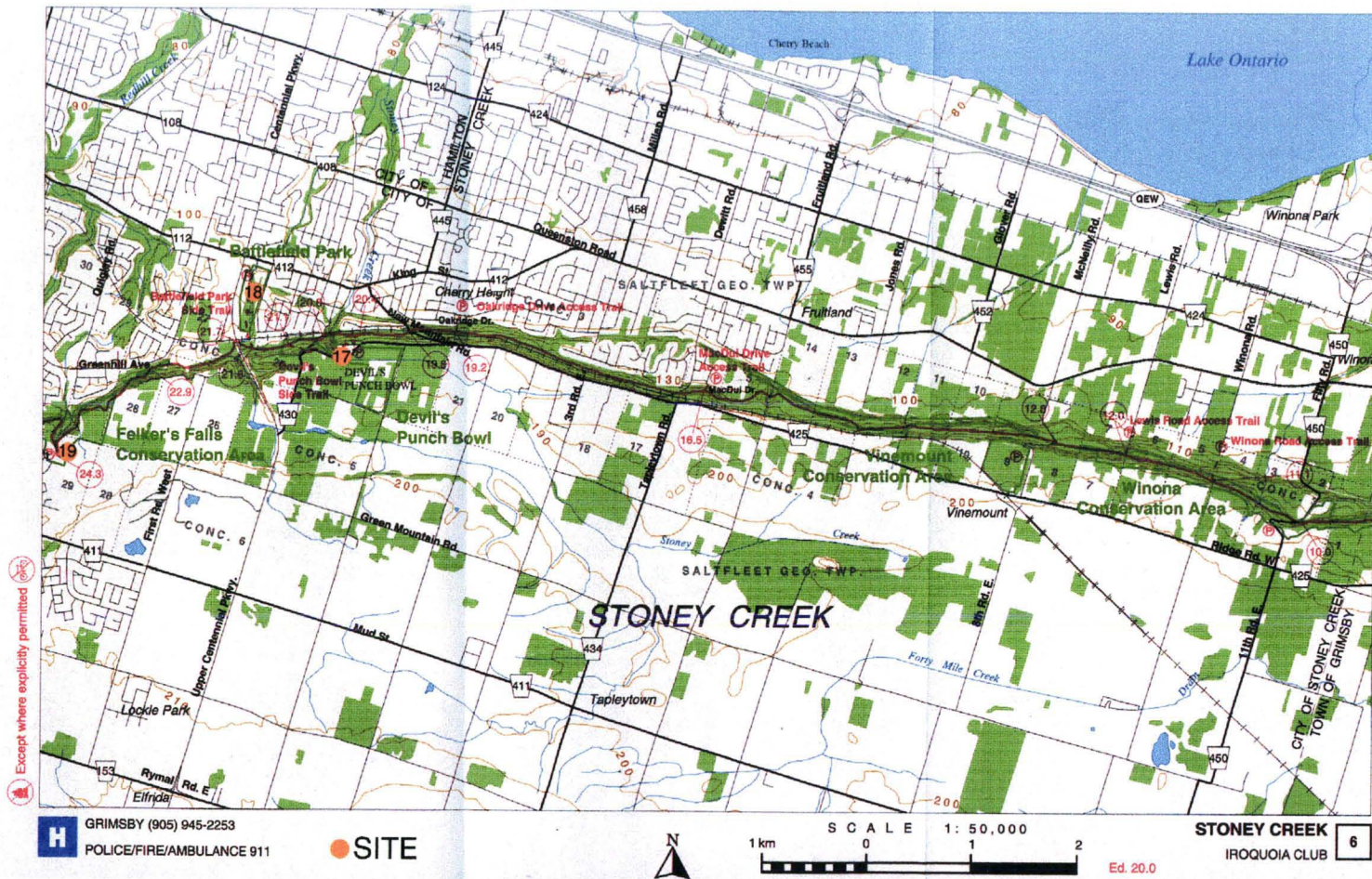
C) The Niagara Peninsula is really just one big sprawling suburb, with little "clean" countryside left.

D) The Escarpment from Hamilton to Grimsby is narrow, steep and straightforward.

E) The preservation of the escarpment is the responsibility of developers.

THERE'S A LONG, LONG
TRAIL A - WINDING
INTO THE LAND OF MY
DREAMS
WHERE THE NIGHTINGALES
ARE SINGING
AND A WHITE MOON BEAMS.
- The Long, Long Trail / King





The above map was obtained from "The Bruce Trail Reference 20th Edition 1998" and has been modified for this project.

THE RED HILL VALLEY

FUTURE RED HILL EXPRESSWAY?

The Red Hill Creek stretches for seven kilometres within the Valley, from Albion Falls in the south to Windermere Basin in the north. The Red Hill Valley is named for its steep stream banks of red clay.

Buttermilk and Albion Falls are the same in height. Water drops 21 metres over both falls to Red Hill Creek below. The crest of Albion Falls is 10 metres while Buttermilk's is 1.5 metres wide. Both Albion and Buttermilk are "ribbon" waterfalls because their heights are greater than the width of their crests.

The southern portion of Red Hill Valley is part of the Niagara Escarpment, which has been named a World Biosphere Reserve by the United Nations.

A woodland Indian site dating to 900-1400 AD. was recently found in the Valley. There is also evidence of native camps dating back 5,000 years.

The Red Hill Valley is the only place in the region where Scow whet owls have nested.

There was once a salt mine in the Valley north of Melvin Avenue. The salt gave Saltfleet Township its name.

The pine and spruce plantations in King's Forest were planted in the late 1920s and early 1930s.

The 1990s have seen the on going debate over whether a north - south freeway should be built through the valley.

Answer:

Not (B). Red Hill Creek was one of the few streams big enough in the Hamilton area to provide mill sites.

Believe it or Not?

A) Mills were commonly built on streams near the edge or base of the escarpment.

B) Big Creek (Red Hill Creek) was one of the many streams big enough in the Hamilton area to provide settlers with hydro-electric power.

C) At the turn of the 18th century, natural gas was discovered when a pit was being quarried for a new waterwheel at the Albion Mills.

D) The gas, despite its unpleasant sulphurous odour was used to light the mill for many years.

E) Natural gas can still be seen bubbling up through the water in the bed of Red Hill Creek.

LET OTHERS PROBE THE MYSTERY IF THEY CAN.
TIME-HARRIED PRISONERS OF SHALL AND WILL-
THE RIGHT THING HAPPENS TO THE HAPPY MAN.
THE BIRD FLIES OUT, THE BIRD FLIES BACK AGAIN;
THE HILL BECOMES THE VALLEY, AND IS STILL;
LET OTHERS DELVE THAT MYSTERY IF THEY CAN.

- The Right Thing / Roethke



SEE - MAP# 7, PG # 45, SITE# 20



THE ESCARPMENT RAIL TRAIL

ENGINE, ENGINE NUMBER NINE

During the mid 1800's, the City of Hamilton supported the development of two railway lines to meet the city's growing transportation needs; the Great Western (east/west) and the Hamilton & Lake Erie (north/south). The Escarpment Rail Trail has been developed on a portion of the former route of the Hamilton & Lake Erie.

During 1835, a charter was granted to the Hamilton & Port Dover Railway (H&PD) to construct a line between the two communities. Funding was not available and the project remained inactive.

In 1853, the charter was revived and the H&PD was officially incorporated. The H&PD succeeded in making the cut in the escarpment face but incurred enormous costs in scaling the Hamilton mountain. Construction of the remaining lines was postponed and the company later succumbed to financial difficulty.

In 1869, the Hamilton & Lake Erie Railway (H&LE) was established, which extended the line to Jarvis by 1873. In 1875, the H&LE amalgamated with the Hamilton & Northwestern Railway (H&NW) and extended the line to Port Dover by 1878.

The H&NW merged with the Northern Railway of Canada in 1879 and became known as the Northern and Northwestern Railway (N&NW). In 1888, the N&NW was acquired by the Grand Trunk Railway System. The Grand Trunk had previously acquired the Great Western Railway and numerous other small rail lines. The Grand Trunk went bankrupt in 1919 and the Canadian Government placed it under the management of Canadian National Railway CN.

In 1923, CN assumed control and became the largest railway in Canada. CN maintained active operations on this line for years and after a period of abandonment, sold the right of way to the Region of Hamilton Wentworth.

The Region developed the right of way into a pedestrian / bicycle trail in 1993 and transferred maintenance to the City of Hamilton.

Answer:

Not (A). The first locomotives were imported from England and the United States

Believe it or Not?

A) The first locomotives were imported from France.

B) Some of the early freight engines from England had such descriptive names as Rhinoceros, Hippopotamus and Elephant.

C) The Daniel C. Gunn engine shop on Wellington Street North produced the first Canadian built locomotives in 1856.

D) The early engines with their tall smoke stacks burned wood. Frequent stops at the huge piles along the track were necessary.

E) Coal came into use in the 1860's but it was disliked by many engineers who prided themselves on the cleanliness and shine of their engines.

I'VE BEEN WORKING ON THE RAILROAD
ALL THE LIVELONG DAY,
I'VE BEEN WORKING ON THE RAILROAD
TO PASS THE TIME AWAY.
DON'T YOU HEAR THE WHISTLE BLOWING?
RISE UP SO EARLY IN THE MORN.
DON'T YOU HEAR THE CAPTAIN SHOUTING,
"DINAH BLOW YOUR HORN."

- I've Been Working on the Railroad / Anonymous



SEE - MAP# 7, PG # 45, SITE# 21



TORSO MURDER

“HOW COULD YOU MRS DICK”

The torso of John Dick was found just below the escarpment near what is now Mountain Brow Boulevard.

Evelyn Dick was charged with her husband's murder, along with her father and Bill Bohozuk.

Evelyn Dick was Hamilton's favorite party doll, infamous sex kitten, notorious play - for - pay pussycat. She admittedly slept with around 150 men, including the presiding judge's son.

Evelyn Dick was found guilty and sentenced to hang on April 1st, 1949.

Dick's murder verdict was overturned but she was later found guilty of manslaughter in the death of her baby son. She was sentenced to life in Kingston Penitentiary. She was released on parole under a new identity in 1958 and was pardoned under the Royal Prerogative of Mercy in 1985. Her whereabouts are unknown to the majority of Canadians.

Believe it or Not?

A) On March 16th, 1946, John Dick's torso was found just below what is now Mountain Brow Boulevard, decapitated with arms and legs sawn off.

B) While investigating the crime, police found money in the attic of her Carrick Avenue home.

C) Evelyn Dick changed her story numerous times, first blaming Dick's murder on a hit man, then on Bohozuk, a steelworker.

D) Bohozuk was released and Evelyn's father was found guilty of being an accessory to murder and sentenced to five years in prison.

E) While Evelyn was in jail, it was thought there was a stash of money belonging to her buried on a Spirit Lake property.

**EVERY MURDERER IS PROBABLY
SOMEBODY'S OLD FRIEND.**

- The Mysterious Affair at Styles / Christie

Answer:

Not (B). While investigating the crime, police found her infant son's body encased in concrete in the attic of her Carrick Avenue home.



SEE - MAP# 7, PG # 45, SITE# 22



ROCK CASTLE

A TWO STOREY PRIVY

Rock Castle, the Gothic style mansion that sits perched on the edge of Hamilton Mountain has had a bird's eye view of the downtown for more than a century.

The original owner, Alexander Carpenter, ordered construction of Rock Castle to begin about 1848. For nearly three years, highly skilled Scottish stone masons used locally quarried escarpment limestones to fashion one of the most elegant homes in all of Upper Canada.

When the castle was originally built, the view it afforded was somewhat different than today's panorama of apartment buildings and office towers, but was none the less spectacular.

Heavily involved in iron and steel, the Carpenters grew immensely wealthy and joined the ranks of Hamilton's rich elite. And like many prosperous men of his day, Carpenter was also heavily involved in municipal affairs and was even an alderman on Hamilton's first city council.

Although the names of the castle's builder and architect have been lost, with time, it is interesting to note that when it was first built Rock Castle was most admired for its two storey privy. Connected to the master bedroom by an open bridge, the privy was an innovation that only a man of Alexander Carpenter's wealth could indulge.

'MID PLEASURES AND PALACES
THOUGH WE MAY ROAM,
BE IT EVEN SO HUMBLE,
THERE'S NO PLACE LIKE HOME.

- Home, Sweet Home / Payne

Answer:

NOT (A). After Alexander Carpenter's death in 1866, the mansion was purchased by his daughter Margaret and her husband, Hugh MacInnes, for \$13,000.

Believe it or Not?

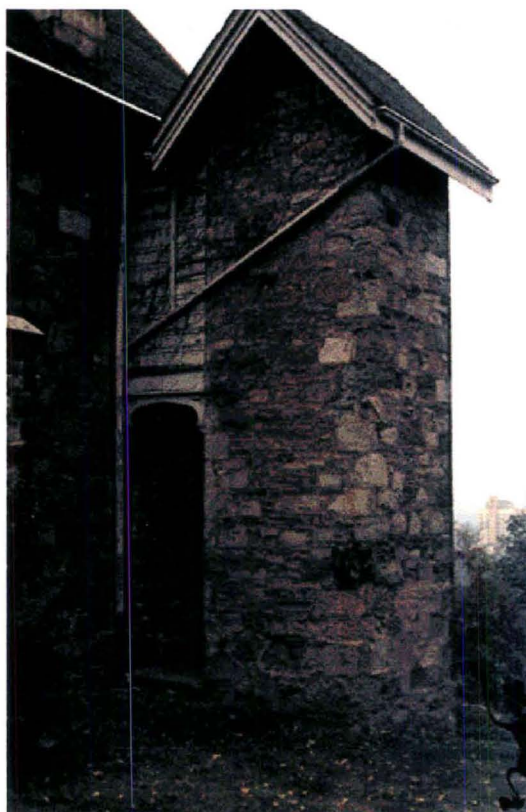
A) After Alexander Carpenter's death in 1866, the mansion was purchased by Thomas Robertson - lawyer, Member of Parliament and later judge.

B) In the late 1940s, prospective buyers were interested in converting Rock Castle into a restaurant, apartments and some form of charitable institution.

C) Local legend now has it that both Margaret and her father still haunt the castle.

D) The encounters with Margaret Carpenter have included voices in the night and sudden temperature changes.

E) The 30 room Rock Castle mansion is located at the head of Arkledun Avenue (called Upper John when the house was built).



THE HAMILTON AND BARTON INCLINE RAILWAY(1892 - 1931)

THE SEVENTY-FIVE SECOND RIDE

Known locally as "the mountain", the Niagara Escarpment is Hamilton's most prominent geographic feature.

While providing a scenic panorama of the City, it was also a significant impediment to travel. To address this problem a group of businessmen formed the Hamilton and Barton Incline Railway Company.

Construction began in November of 1890 with the clearing of a right of way between the head of James Street South and the Caledonia Road near the site of the Mountain View Hotel.

The double tracks were 700 ft in length on a grade of 31% to overcome the 195 ft rise of the escarpment. Over half of the line was supported on trestles which at their maximum held the 30 ft long cars 50 ft above the ground.

Opened June 11th, 1892, it was heavily used by residents and tourists alike. The 75 second ride provided a convenient link between the city and Barton Township for both pedestrian and horse drawn traffic.

Improved mountain access roads and the use in popularity of motorized traffic caused a steadily declining number of customers. The line ceased operation December 26th, 1931.

The abandoned rails and equipment were removed during World War II and the right of way came under the jurisdiction of the Hamilton Parks Board.

Believe it or Not?

A) Incline railways were constructed at James Street in 1892 and at Wentworth Street in 1899.

B) Steps were built beside the two incline railways and at Dundurn Street and Ferguson Avenue for those who wanted to save their money or for those who wanted exercise.

C) Each railway consisted of two sets of tracks running parallel to each other up the face of the escarpment.

D) As one platform or "car" went up one set of tracks, the other platform came down on the other set of tracks.

E) Each platform could only accommodate mountain residents going to and from the city. They paid two cents for a trip.

ONCE I BUILT A RAILWAY, NOW
IT'S DONE.
BROTHER, CAN YOU SPARE A
DIME?

- Americana / Harbury

Answer:

Not (E). Each platform could hold two farm wagons and horses, several bicycles and up to forty passengers. With the arrival of the automobile the existing access facilities were soon taxed to the limit. Adequate access roads were needed.



THE HAMILTON ASYLUM

The Hamilton Asylum was opened for reception of patients on the 17th March, 1876.

In selecting patients for the Asylum, the following instructions were given to transferring Medical Superintendents.

Firstly, only such patients were to be selected who were beyond doubt incurable and who were at the same time quiet and well conducted.

Secondly, no patients were to be selected who were possessed by homicidal or suicidal tendencies, or were even subject to recurrent mania of a violent type.

Thirdly, patients of the class referred to, whose friends resided in the vicinity of Hamilton, were to be taken first.

In his reports to the Inspector of Asylums for the Province of Ontario, Richard Bucke's recommendations were:

- A) Extension of the Asylum, by the addition of two wings and a rear extension.
- B) Houses for Medical Superintendent, bursar, engineer and farmer.
- C) Fences around the farm, and division fences for fields and garden.
- D) Brick coal sheds, cow stables, piggery, hennerly, and other out houses.

The cost of maintaining the Asylum from the time of its opening up to the close of the official year, a period of 198 days, amounted to \$20,948.56.

In 1975, amidst political controversy, the old Barton Building was demolished. Today, the Century Manor is a reminder of early psychiatric care.

Answer:

Not (B). The hole was made by scraping the skull with a small flint blade.

Believe it or Not?

A) Trepanation, or cutting a hole in the skull of a living person for therapeutic reasons, is among the earliest surgical procedures.

B) The hole was made by using a hand held drill while the patient was restrained by several attendants.

C) Signs of new bone growth in the hole indicated that patients often survived the operation.

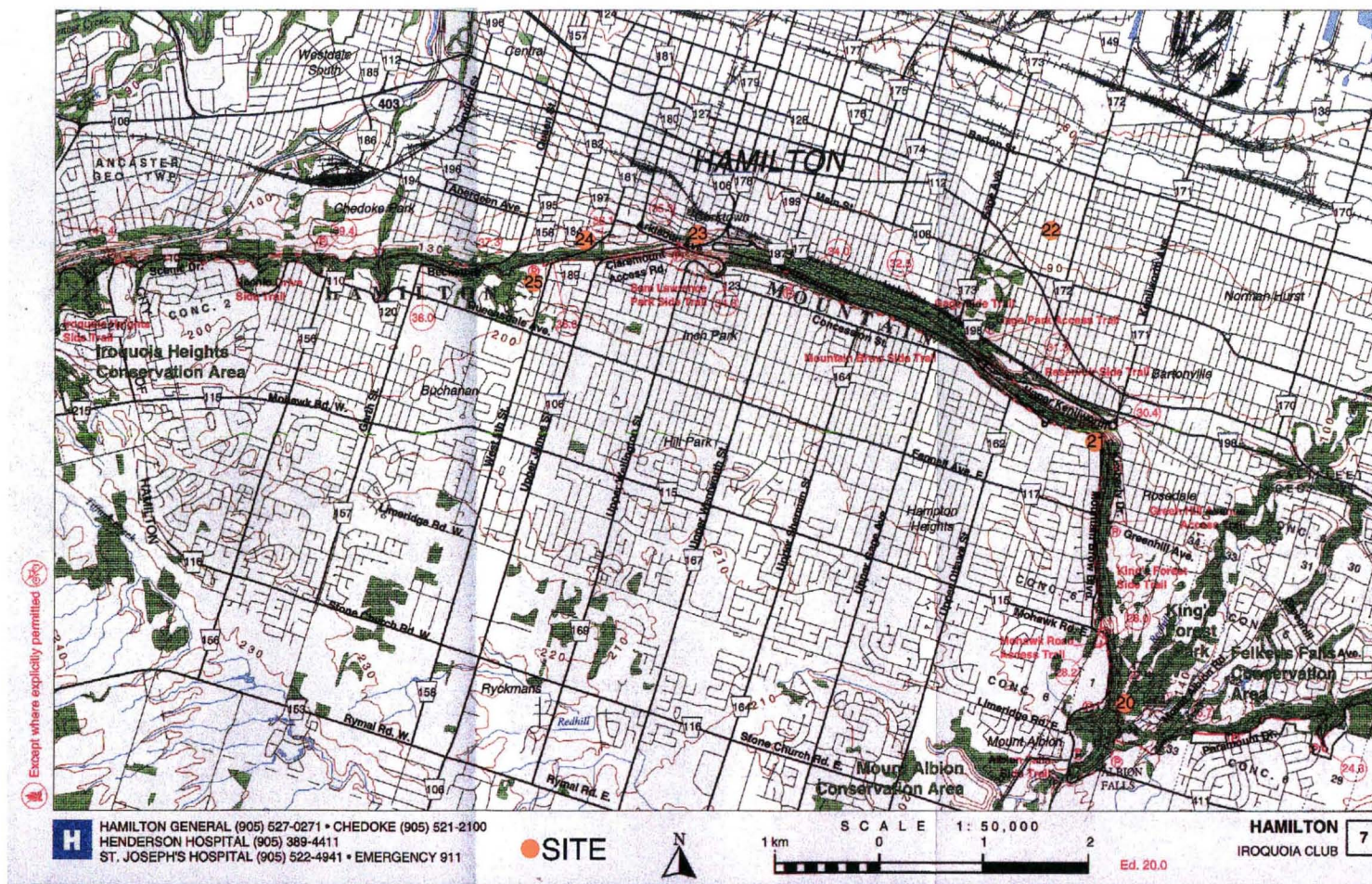
D) Some people believe that this operation was performed to relieve severe chronic headaches or as a cure for epilepsy.

E) The Natives, it was said, also believed that the trepanation allowed the escape of an evil spirit or demon which had taken possession of the soul.

"I WISH THAT MY ROOM HAD A FLOOR, I DON'T CARE SO MUCH FOR A DOOR, BUT THIS WALKING AROUND WITHOUT TOUCHING THE GROUND IS GETTING TO BE QUITE A BORE."

- Anonymous





The above map was obtained from "The Bruce Trail Reference 20th Edition 1998" and has been modified for this project.

TIFFANY FALLS

A JEWEL-LIKE SETTING

The name "Tiffany" suggests the beauty of this jewel like setting. Located in a steep wooded valley, off Highway 2 in Ancaster, the nature trail gives access to the Bruce Trail. Bring your binoculars or your camera to the scenic lookout, or have a picnic by the waterfall.

In 1791, James Wilson and Richard Beasley built a mill "on a creek that empties into the head of Burlington Bay, near the road leading from said Bay to the Mohawk village." The town of Ancaster gradually grew around this mill and several others were built upstream from it.

Lest the settlers be over charged at these mills, the first parliament of upper Canada passed an act forbidding millers from taking more than one - twelfth of the settler's grain as a charge for their services. The story is told that one - tenth was the rate being considered but when a miller was asked his opinion, he said that this was not enough. Unfortunately, his ability with numbers did not equal his knowledge of milling. He suggested one - twelfth as a more reasonable amount and this was the figure adopted!

Many millers established a distillery as a profitable sideline. Cheap whiskey was produced from the poorer grades of wheat and from the share the millers gathered as payment.

FROM THE WATERFALL HE NAMED HER,
MINNEHAHA, LAUGHING WATERS.

- The Song of Hiawatha / Longfellow

Answer:

Not (A). The first industrial mills were sawmills, built and operated by the government to help the Loyalists build their first houses and barns.

Believe it or Not?

A) The first industrial mills were sawmills, built and operated by the government to build forts such as Fort Henry.

B) Once the fields had been cleared and grain sowed, the grist mills appeared.

C) Locations with more reliable water - power would often see the appearance of flour mills, woollen mills and carding mills.

D) Even the smallest of mills became the focus for busy villages, as stores, taverns and other pioneer shops would locate near them.

E) Most mill villages were ignored by the railways, and while the raiiside towns boomed, these mill towns became forgotten backwaters.



SEE - MAP# 8, PG # 67, SITE# 26





THE ROAD NOT TAKEN

TWO ROADS DIVERGED IN A YELLOW
WOOD,
AND SORRY I COULD NOT TRAVEL BOTH
AND BE ONE TRAVELLER, LONG I STOOD
AND LOOKED DOWN ONE AS FAR AS I
COULD
TO WHERE IT BENT IN THE UNDER-
GROWTH;

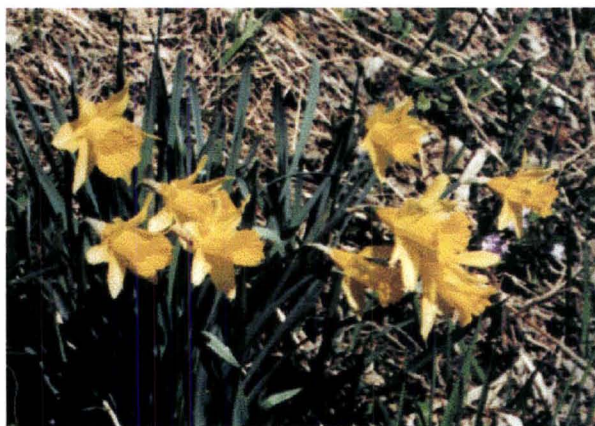
THEN TOOK THE OTHER, AS JUST AS FAIR,
AND HAVING PERHAPS THE BETTER
CLAIM,
BECAUSE IT WAS GRASSY AND WANTED
WEAR;
THOUGH AS FAR THAT THE PASSING



THERE
HAD WORN THEM REALLY ABOUT THE
SAME,
AND BOTH THAT MORNING EQUALLY LAY
IN LEAVES NO STEP HAD TRODDEN BLACK.
OH, I KEPT THE FIRST FOR ANOTHER DAY!
YET KNOWING HOW WAY LEADS ON TO
WAY,
I DOUBTED IF I SHOULD EVER COME BACK.

I SHALL BE TELLING THIS WITH A SIGH
SOMEWHERE AGES AND AGES HENCE:
TWO ROADS DIVERGED IN A WOOD, AND I -
I TOOK THE ONE LESS TRAVELED BY,
AND THAT HAS MADE ALL THE DIFFERENCE.

- Robert Frost



THE GRIFFIN HOUSE

THE HOUSE ON THE HILL

The Griffin House is a historically significant component of Ancaster's history. The house and lot were sold in 1834 by George Hogeboom to Eneals Griffin (1794-1878) an African -American man who was born into slavery in Virginia. Mr. Griffin and his wife Priscella (1795-1850) arrived to freedom in Canada in 1828, settled in Ancaster, and gave birth to a son, James, in 1833.

The house is small, consisting of a dining room and living room on the main floor and two bedrooms on the upper floor. A significant portion of the original clapboard, horizontal siding is relatively well preserved because it was later covered with a board and batten cladding. Because the house remained in the possession of Griffin family descendants until its sale in 1988 to the Hamilton Region Conservation Authority, much of the interior had also survived. The Griffin House also stands as a testament to the determination of African-American men and women who settled in Canada.

The Griffin House, "The House on the Hill," is located at 733 Mineral Springs Road in Ancaster.

Believe it or Not?

A) Many immigrants were skilled hand craftsmen who had been put out of work by the rise of factories in the industrial revolution that was sweeping England.

B) From Scotland came thousands who had been evicted from their little crofts by landowners eager to turn Scotland into a huge sheep pasturage to feed the looms in English factories.

C) Most numerous of all were the Irish immigrants who fled over - population, famine and religious oppression.

D) Some immigrants were retired soldiers who had served Canada with the Spanish army.

E) Other immigrants were soldiers who had served in the campaigns against Napoleon in Europe and were unable to find employment upon their return to Britain.

I HAVE A DREAM THAT MY FOUR LITTLE CHILDREN WILL ONE DAY LIVE IN A NATION WHERE THEY WILL NOT BE JUDGED BY THE COLOUR OF THEIR SKIN, BUT BY THE CONTENT OF THEIR CHARACTER.

- Speech at Civil Rights March on Washington / Martin Luther King, Jr.

Answer:

Not (D). Some immigrants were retired soldiers who had served in Canada with the British army.



SEE - MAP#8, PG # 67, SITE# 28



THE HERMITAGE

SCOTTISH LANDSCAPE MEMORIES

The Hermitage had several owners before it was acquired by George Gordon Browne Leith (1812 - 1887) in 1855.

Mr. Leith, a wealthy Irish - born Scottish immigrant settled his family on the land because of its proximity to the privileges of the British upper class establishment in the Hamilton area. It was also a fitting location because its rolling hills and gentle streams brought back emotional memories of the Scottish landscape. He built a large stone house with limestone quarried from the property. The Leiths used the Hermitage as a summer residence and spent winters in either Hamilton or Scotland.

Eleanor Alma Dick - Lauder, the only one of the five Leith children to be born in Canada was devoted to her family's home.

Even after its destruction by fire in 1934, she built a modest house within its ruins and lived there until her death in 1942.

The ruins of the Hermitage, found on the Headwaters Trail, are all that remain of the graceful splendour of the Leith estate. The Gatehouse museum, part of the original estate, housed the gatekeeper and his family. It now exhibits artifacts excavated from the ruins which tell the story of the Leith family.

Answer:

Not (A).
Reverend Sheed bought the property in 1830 and built a frame home on the low ground to the east of the present ruin.

Believe it or Not?

A) Sir Allan MacNab bought the property in 1812 and built the Hermitage near the stream.

B) In 1833, the land was sold to an Englishman, Otto Ives.

C) There is a legend that Ives' coachman, William Black, fell in love with Mrs Ives' niece who had accompanied her to Canada. He asked Ives for permission to marry, but was emphatically refused.

D) The next morning, Black did not appear with the carriage and was later found hanging from the stable rafters.

E) A suicide could not be buried in a churchyard so he was buried at the crossroads where Lover's Lane joins Sulphur Springs Road. On moonlight nights, he can be heard crying for his lost love.

A MAN IS A GOD IN RUINS.

- Nature / Emerson



SEE - MAP# 8, PG # 67, SITE# 29



SULPHUR SPRINGS

HAMILTON TO BRANTFORD RAIL TRAIL

The Hamilton to Brantford Rail Trail was completed in 1996. It joins its namesake cities over the 32 km route of the abandoned Toronto, Hamilton & Buffalo Railway. It became Canada's first fully developed, entirely off - road interurban trail.

One of the special attractions of the Dundas Valley is the Trail Centre, a fascinating and faithful reproduction of a Victorian railway station. The Dundas Valley Conservation Area is located on Governor's Road (highway 99) in Dundas.

THE TRAIL ROUTE

0 km - Hamilton Trailhead & Parking Area.
3.3 km - Sanctuary Park (rest area & washroom in season).
5.5 km - Dundas Valley Visitor Centre Trailhead & Parking Area (washrooms, interpretive hikes and programs in season - historic train displays).
13 km - Copetown Parking Area and crossing of former Hwy 52.
13.4 km - Steam engines used to fight the steep grade from Hamilton west bound to Summit - Observation deck overlooking Summit Muskeg Preserve.
18.5 km - Jerseyville - Redland Quarries and TCG Materials Trail head & Parking Area.
25.5 km - "Duck Under" Hwy 403 beside Fairchild Creek.
26.7 km - Bridge crossing of Fairchild Creek.
30 km - Site of the 1986 Brantford Landslide which caused abandonment of the railway line on which the trail runs.
32 km - Brantford - Brantford Jaycees Trailhead & Parking Area.

Answer:

Not (D). The Great Western is credited with the construction of the world's first sleeping car.

Believe it or Not?

A) The building of the Toronto, Hamilton and Buffalo Railway along the base of the escarpment and several spur lines to connect it with the line across the northern part of the city made available much new property suitable for small manufacturing firms.

B) In 1859, the Great Western set up shops in Hamilton for the building and repairing of locomotives.

C) In 1863, a rolling mill was put into operation to reroll the English rails which easily broke in the harsh Canadian winters.

D) The Great Western is credited with the construction of the world's first caboose.

E) The immigrants that helped with the construction of the railways added to the city's population. In addition, the locomotive shops and rolling mill provided employment for hundreds of local residents.

TRAINS ARE WONDERFUL....TO TRAVEL BY TRAIN IS TO SEE NATURE AND HUMAN BEINGS, TOWNS AND CHURCHES AND RIVERS, IN FACT, TO SEE LIFE.

- Growing Up / Christies



DUNDAS VALLEY

51

A LARGE RE-ENTRANT VALLEY

The Dundas Valley was initially carved into the Niagara Escarpment by a preglacial river, but was later widened and deepened by intense ice scouring to create the present U - shaped form characteristic of glaciated valleys. Deepening was so extensive that in the lower reaches of the valley the bedrock surface now lies in excess of 100 m below the level of Lake Ontario. Vast glacial till, meltwaters and lake deposits now deeply cover the area and completely bury the Escarpment rocks in the upper portions of the valley.

Dundas Valley played an important role in the development of Dundas Street. The valley provided a natural route for the highway. Dundas Street, named for Henry Dundas, Secretary of State for the British Home Department (1791-1794), was built on Lieutenant Governor Simcoe's orders.

The road, cut by a party of Queen's Rangers from Burlington Bay to the upper forks, a navigable point on the Thames River, was part of a land and water communications system linking Detroit and Montreal. The road also connected the site of Simcoe's proposed capital, London, 16 miles downstream, with the larger network. In Simcoe's plans Cootes Paradise (Dundas) was to be a garrison town. But when York, instead of London, became the capital his plans for Cootes Paradise were developed no further. While Simcoe's primary consideration was military, Dundas street also helped to open the region for settlement.

Answer:

Not (E). The Dundas Valley is rimmed with vertical cliffs of Lockport stones.

Believe it or Not?

A) The Dundas Valley is one of the large bedrock re-entrant valleys along the Niagara Escarpment.

B) It is over 4 km wide before penetrating over 12 km into the escarpment.

C) The bedrock is about 110 m below Lake Ontario on the Burlington Bar and therefore approaching 350 m below the top of the escarpment.

D) The Dundas Valley is highly urbanized with Hamilton being one of the largest cities in Ontario.

E) The Dundas Valley is rimmed with vertical cliffs of sandstone.

DOWN IN THE VALLEY, THE
VALLEY SO LOW,
HANG YOUR HEAD OVER, HEAR
THE WIND BLOW.

- Down in the Valley / Anonymous



SEE - MAP# 8, PG # 67, SITE# 31



THE DARNLEY GRIST MILL

THE BUTCHER, THE BAKER, THE CANDLESTICK - MAKER

Named after Lord Darnley of Scotland, a famous ancestor of James Crooks, the Darnley grist mill was constructed between 1811 and 1813. The mill was made of stone from a quarry near Morden's Mills downstream. Originally, the building was square and three storeys high.

A nine - metre - high overshot waterwheel was mounted on the outside wall beside Spencer Creek. Water was drawn over the wheel to power the mill. Inside the building were four sets of grindstones used for feed and flour production.

After Crook's death in 1860, the mill was sold to James Stutt and Robert Sanderson who converted it into a paper mill. After Stutt bought out Sanderson in 1880, he added a steam boiler to heat water for papermaking and to have an alternative power source. On July 9th, 1885, the boiler exploded causing much damage and killing two men. While leased to the Greensville Paper Company in the 1930's, the wooden floors were replaced by concrete. In 1943, the mill was gutted by fire and left in ruins. The Hamilton Region Conservation purchased the Darnley mill in 1969.

Believe it or Not?

A) James Crooks was involved in many business ventures, including the development of several industries along Spencer Creek and Crook's Hollow Road.

B) A small community formed, and by 1850, Crooks' Hollow was one of the largest industrial areas in Upper Canada.

C) Business operated by Crooks included a gin distillery, a general store, a cooperage, a sawmill and a linseed oil company.

D) The arrival of the canal era doomed the village and the industries shut down.

E) The grist mill lasted until it burned in 1934.

RUB - A - DUB - DUB,
THREE MEN IN A TUB,
AND WHO DO YOU THINK THEY BE?
THE BUTCHER, THE BAKER,
THE CANDLESTICK - MAKER;
TURN 'EM OUT, KNAVES ALL THREE!

- Rub - a - Dub - Dub / Anonymous

Answer:

Not (D). It was the
arrival of the railway
era that doomed the
village.



SEE - MAP#8, PG # 67, SITE# 32



DUNDAS PEAK

A SPECTACULAR VIEW

Dundas Peak is at the mouth of Spencer Gorge and provides a spectacular view of the "Dundas Valley" from Stoney Creek and the Hamilton Harbour in the distance, to Dundas and Ancaster immediately below and to the west. Look for familiar landmarks such as McMaster University, Cootes Paradise and Highway #403 as it climbs the escarpment towards Brantford.

If a local resident of Canada's birthday in 1867 was capable of returning to Dundas Peak today, would he/she recognize the area he/she once knew? He/She might identify a few vaguely familiar landmarks such as the enduring escarpment, the bay, Gore Park, Central School, St Paul's Church, the stone customs house on Stuart Street, and the 1860 pump house near the lake. His/Her mind would undoubtedly reel, however, at the sights of the throngs of people, the streams of cars, trucks, and buses, the unusual store displays, the towering buildings of glass and concrete, and the huge factories hugging the bay shore.

Dundas Peak is a place where we can look back over our proud past and from where we can look ahead to an exciting future.

Answer:

Not (C). In 1930 the University moved from McMaster Hall in Toronto to Hamilton.

Believe it or Not?

A) McMaster University was named after Senator William McMaster (1811 - 1887), who bequeathed substantial funds to endow "a Christian school of learning."

B) The University was incorporated under the terms of an act of the Legislative Assembly of Ontario in 1887.

C) In 1930, the University moved from McMaster Hall in Ottawa to Hamilton. The same year, the British Empire Games were held in Hamilton.

D) McMaster University is located beside the Royal Botanical Gardens. It is a stone throw from Cootes Paradise.

E) McMaster students today have a wide choice of courses in many fields including the arts, humanities, sciences, business, engineering, theology and medicine.

HE WHO ASCENDS TO MOUNTAINTOPS SHALL
FIND THE LOFTIEST PEAKS MOST WRAPT IN
CLOUDS AND SNOW; HE WHO SURPASSES OR
SUBDUES MANKIND MUST LOOK DOWN ON
THE HATE OF THOSE BELOW.

- Childe Harold's Pilgrimage / Byron



TEW'S FALLS

SPENCER GORGE'S BOWL SHAPED BASIN

Tew's Falls flows over a bowl shaped rock formation. It is the most recent and smallest of a series of bowl shaped basins in the Spencer Gorge. Over the past 12,000 years, erosion from ancient waterfalls have caused these formations. The widening of the gorge downstream suggest the falls was once as wide as the Horseshoe Falls in Niagara. The gorge at Tew's Falls is 41m high while Horseshoe Falls is 52 m. Layers of bedrock common to the southern Niagara Escarpment are exposed at the falls. Look for red lenses of Queenston shale, fine grey sandstone and harder more resistant ledges of blue grey limestone.

The Areas of Natural and Scientific Interest (ANSI's) on the escarpment supports the theory that about 14,000 years ago a catastrophic flood of glacial meltwater in Hudson Bay burst south with tremendous pressure on the escarpment.

In the Spencer Gorge, geologist Phil Kor counted 10 punchbowls that increase in size the further they are from Tews Falls. Kor states that erosion from ancient waterfalls caused these basins, with small volumes of water producing small punchbowls, and huge volumes causing massive basins. The largest punch bowl suggests that it was once the site of a waterfall as large as the Horseshoe Falls at Niagara Falls.

Answer:

Not (E). Mammals living along the escarpment include the white - tailed deer, coyote, red fox, porcupine, raccoon and groundhog just to name a few.

Believe it or Not?

A) The Niagara Escarpment is home to a wide variety of plants and animals, some of which are rare or found nowhere else in Ontario.

B) Today, only a small fraction remains of Southern Ontario's pre - pioneer landscape and much of that is found on the Niagara Escarpment.

C) The topography and calcareous soils associated with the escarpment combine with other factors to produce ideal habitats for 37 species of fern, 40 species of orchid and in the Niagara / Hamilton area, other flora characteristics of the Carolinian Forest Zone that extends up from the southern U.S.A.

D) The forest ecosystem along the edge and face of the escarpment cliffs is probably the oldest, most intact, and most undisturbed place in eastern North America.

E) Mammals living along the escarpment include moose, wolf, cougar and grizzly bear just to name a few.

MID PLEASURES AND PALACES THOUGH
WE MAY ROAM,
BE IT EVER SO HUMBLE, THERE'S NO
PLACE LIKE HOME.

- Home Sweet Home / Payne



WEBSTER'S FALLS

SPENCER GORGE

With its panoramic view, its glistening waterfalls, its wide range of plant and animal life, Spencer Gorge Wilderness Area is a favorite spot for photographers, birders, hikers and anyone with a love of nature or an eye for beauty.

From the rugged escarpment brow to the forested gorge below, Spencer Gorge exhibits all the physical features which makes the Niagara Escarpment one of Canada's most magnificent geological formations.

One of the most beautiful aspects of the Spencer Gorge Wilderness Area is majestic Tew's Falls, only a few metres shy in height of Niagara Falls. Webster's Falls and Park are nearby. All three of these areas can be accessed from Harvest Road.

It was in the Webster's Falls Park locale that Joseph Webster in 1819 bought land- complete with a 10 year old distillery, conveniently located under a stone house above the falls. In 1830, his son, also named Joseph, built the Ashbourne Mills which flourished until 1898 when fire destroyed the structure. A George Harper in 1899 then built below the falls the second hydro generating electric power plant in Ontario. Foundation ruins can still be seen at the base of the falls. This power gave the Town of Dundas its first street electricity.

The Ashbourne Mills site was acquired by the Town of Dundas. The resultant park remains a shrine in his memory and that of Joseph Webster who created and maintained an early industry there.

The Spencer Gorge Wilderness Area can be reached by taking Highway 5 west of Highway 6, south on Brock Road, east on Harvest Road.

Answer:

Not (C). Explosions and fires were common occurrences in the early mills which were usually built of wood.

Believe it or Not?

A) Spencer Creek with its many tributaries originating back in Beverly Swamp was a particularly fine mill stream.

B) In 1826, the first paper made in Ontario was produced on the banks of the Spencer in Crooks' Hollow.

C) Rock falls and flooding were common occurrences in the early mills which were usually built of wood.

D) By the end of the 19th century it had become difficult to compete with the new "manufactories" in the large centres and the mills gradually ceased operation.

E) Little evidence remains today of the scores of mills which once dotted the Spencer Creek area.

WITH SHOUTS THE TORRENTS DOWN
THE GORGES GO,
AND STORMS ARE FORMED BEHIND THE
STORM WE FEEL:
THE HEMLOCK SHAKES IN THE RAFTER,
THE OAK IN THE DRIVING KEEL.

- Battle-Pieces / Melville



THE DESJARDINS CANAL

A HIGHWAY TO DUNDAS

In pioneer days, waterways provided the essential means of transportation. Dundas, located at the head of navigation on Lake Ontario and the eastern terminus of the "Governor's Road" were thus in a favoured position. However, in 1823, the government authorized the construction of a canal for larger vessels through the Burlington Sand Bar. Since its completion would make the shallow approach through Coote's Paradise marsh inadequate, Peter Desjardins, an enterprising settler from France, formed a company in 1826 to build a canal there.

Many years and several government loans were required before the project was finished. Finally, on August 16th, 1837, the Desjardins Canal was officially opened.

For several years, it was a busy waterway as a steady flow of produce made its way from the hinterland down the valley to the Dundas wharves. The depth of the water in the marsh gradually became shallower. In addition, the boats were getting larger. Therefore, the boats could no longer navigate the natural outlet of the marsh into the bay. A channel was cut through Burlington Heights in the 1850s but it did not raise the water level in the marsh, as had been hoped.

From that time forward, Dundas steadily declined in importance as a commercial centre. Hamilton, on the south shore of one of the finest inland harbours in the world, became the chief port and distributing centre for the whole lakehead area.

Answer:

Not (B). York became the capital and Simcoe's plans for Cootes Paradise were developed no further.

Believe it or Not?

A) The combined action of wind and current caused the formation of a high gravelly bar across the lower Dundas Valley. This ridge of high ground, today known as Burlington Heights caused the water from the creeks and streams flowing through the valley and into the lake to become partially impounded. This gave birth to Cootes Paradise.

B) In 1792, the first parliament of Upper Canada assembled at Niagara. In Lieutenant - Governor John Graves Simcoe's plans, Cootes Paradise (Dundas) was to be a garrison town. But London, instead of York, became the capital and his plans for Cootes Paradise were changed.

C) Today, the Royal Botanical Gardens includes several hundred acres of land around Cootes Paradise.

D) In 1782, Captain Thomas Coote hunted waterfowl in the marsh area. Because of the good hunting the area became known as Cootes Paradise.

E) At the turn of the 19th century proposals to make Cootes Paradise a bird sanctuary or a duck farm were introduced but never achieved success.

SHIPS THAT PASS IN THE NIGHT, AND
SPEAK EACH OTHER IN PASSING,
ONLY A SIGNAL SHOWN AND A DISTANT
VOICE IN THE DARKNESS; SO ON THE
OCEAN OF LIFE WE PASS AND SPEAK ONE
ANOTHER, ONLY A LOOK AND A VOICE;
THEN DARKNESS AGAIN AND A SILENCE.

- The Theologian's Tale / Longfellow



ROCK CHAPEL

THE STAIRWAY THROUGH TIME

As you climb the Niagara Escarpment each step descends through millions of years.

Each rock layer is a time capsule, from hard limestone and dolomite made from the remains of ancient shelled animals to soft shales and sandstones laid down at the mouth of an enormous river.

Ripple marks, worm tunnels and fossils tell the story of life 410 to 430 million years ago when this area lay submerged under a warm equatorial ocean.

As you descend the steps, you will pass the following formations:



A) Glacial Till -
unsorted clay, sand,
and gravel.



B) Lockport Formation
Ancaster Member
Dolomite



C) Lockport Formation
Gasport Member
Dolomite

E) Irondequoit
Formation
Dolomite



F) Reynales
Formation
Dolomite

G) Thorold
Formation
Sandstone &
Shale

H) Grimsby
Formation
Shale



Answer:

Not (E). The original
Rock Chapel, a frame
building was erected in
1822.

Believe it or Not?

A) Rock Chapel is under the jurisdiction of the Royal Botanical Gardens.

B) The Armstrong Trail begins with a stairway down the escarpment.

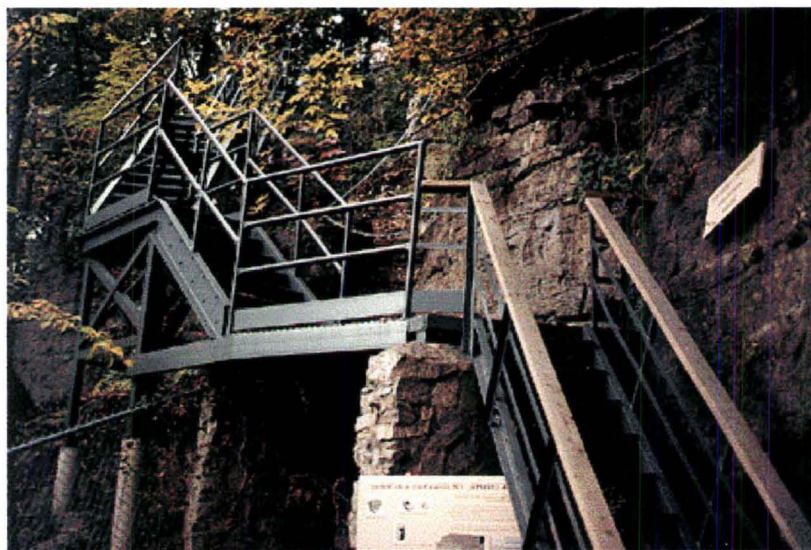
C) The trail is named for Dr. H. S. Armstrong, a former Professor of Geology and Dean at McMaster University.

D) The exposed formations along the trail are labelled with explanatory notes.

E) The Original Rock Chapel was built from limestone obtained from the Old Nelson Quarry.

AS I WAS GOING UP THE STAIR
I MET A MAN WHO WASN'T THERE.
HE WASN'T THERE AGAIN TODAY.
I WISH, I WISH HE'D STAY AWAY.

- The Psychoed / Mearns



ALDERSHOT BAR

58

MASTODON

Mammals had appeared on this continent by the time of the Ice Age. The bones of a large elephant like creature known as the mastodon have been found in many parts of Southern Ontario including the Hamilton area. From these remains, scientists are able to determine what the animal was like. The mastodon was about the size of an elephant and it had a flexible trunk. In addition to the two long ivory tusks projecting from the upper jaw, the mastodon also had a pair of short tusks which were possibly used to strip leaves and twigs from trees. The body is believed to have been covered with coarse, shaggy hair.

Evidence suggests that the mastodon survived the Ice Age by moving southward as the ice sheets advanced and returning to this area as glaciers melted. As Southern Ontario became warmer and drier, the coniferous forest and swamps favoured by this beast disappeared. This probably led to the eventual dying out of the animal.

Most mastodon remains in Ontario are associated with muck, peat, and marl. Chances for preservation are good in bogs because there is immediate burial. The body of an animal that dies on high ground is seldom preserved because predators and scavengers scatter the bones. Such exposed bone usually becomes decayed or badly weathered before it can be carried downslope to a lake or stream to be preserved in the sediments deposited there. Bones that come from a bog are usually very dark in colour due to the acids produced by the decaying organic matter.

Bogs were apparently places of retreat for mastodons during the winter months. They would have been protected from strong winds, and the surrounding forest would have offered abundant food. But the deep muck and peat proved to be potential traps for the Mastodons.

Answer:

Not (B). The Aldershot Bar was built later than the Hamilton Bar.

Believe it or Not?

- A) The Aldershot Bar is about 3 m lower than the Hamilton Bar.
- B) The Aldershot Bar was built earlier than the Hamilton Bar.
- C) The Aldershot Bar was built from the north shore of Lake Iroquois to the southwest.
- D) This Iroquois Bar testifies to the fact that the regimes of Lake Iroquois were similar to the regimes of Lake Ontario.
- E) The Aldershot Bar is a large wave built bar.

FIEND BEHIND THE FIEND BEHIND THE
FIEND BEHIND THE FIEND. MASTODON
WITH MASTERY, MONSTER WITH AN
ACHE
AT THE TOOTH OF THE EGO, THE DEAD
DRUNK JUDGE:
WHERESOEVER THOU ART OUR AGONY
WILL
FIND THEE ENTHRONED ON THE DARK-
EST ALTAR
OF OUR HEARTBREAK PERFECT, BEAST,
BRUTE, BASTARD. O DOG MY GOD!

- Sacred Elegy / Barker



SEE - MAP# 8, PG # 67, SITE# 38



THE HIGH LEVEL BRIDGE

THE ENTRANCEWAY COMPETITION

In 1912, Thomas McQuesten was elected to Hamilton's city council. Shortly after his election, McQuesten organized the north west entrance competition to spruce up York Boulevard, which was at the time a sandy area that contained houses and was dotted with advertising billboards.

Members involved in the competition were Hamilton architect John Lyle, the husband and wife team of Howard Burlington Grubb and Lorrie Alfreda Dunington (designers of Gage Park and Sunken Gardens at McMaster University which stood on the site of the medical centre) and Carl A. Borgstrom, a Swedish landscape architect, who created the Rock Garden in the Royal Botanical Gardens.

The judges of the entranceway competition eventually settled on a plan that amalgamated elements from all three architectural submissions.

Due to the Depression and political opposition the full plan never went ahead. The water garden was put in and it's still there (unused). The rock gardens were done as part of the plan.

The High Level Bridge was officially opened to traffic on June 17th, 1932. It wasn't as grand as the original proposals, however, it was "A bridge we could afford".

Believe it or Not?

- A) The Hamilton Bar was built by Lake Iroquois.
- B) The Hamilton Bar is 35 m above Lake Ontario.
- C) The top of the Hamilton Bar consists of cross-bedded gravels with a carbonate cement.
- D) The High Level Bridge crosses a passage in the bar dug for boat traffic into Cootes Paradise.
- E) The Hamilton Bar separates Hamilton Harbour from Lake Ontario.

THE YOUTH GETS TOGETHER HIS MATERIALS TO BUILD A BRIDGE TO THE MOON, OR, PERCHANCE, A PALACE OR TEMPLE ON THE EARTH, AND, AT LENGTH, THE MIDDLE-AGED MAN CONCLUDES TO BUILD A WOODSHED WITH THEM. - Journal / Thoreau

Answer:

Not (E). The Hamilton Bar separates Hamilton Harbour from Cootes Paradise.



SEE - MAP#8, PG #67, SITE #39



Dundurn Castle

THE HAUNTED MANSION

This villa was completed in 1835 for Allan Napier MacNab. Incorporating an existing farmhouse, it was designed by the local architect, Robert Wetherell, as a statement of its owner's place in Hamilton society. The house features an eclectic blend of classical and Italianate motifs, French windows, broad verandahs and a panoramic view of Burlington Bay. With its outbuildings and grounds, Dundurn Castle stands as an important example of the Picturesque Movement in Canada.

Dundurn has not always been a masterpiece of restoration. It was an asylum for the deaf and blind (1864-68). Its fate was somewhat uncertain during a period from 1900-1964.

However, after years in private hands, the property was bought by the city and from 1964 to 1967 restored to its former splendour.

The restoration committee authentically decorated and furnished Dundurn in the style of the Victoria Era using, whenever possible, objects that actually belonged to the MacNab family. Authentic restoration was made possible by the discovery of the personal and detailed diary of Sir Allan Napier MacNab's daughter, Sophia. It is believed that Sophia's ghost still visits the Castle.

Today, tours are conducted by guides in authentic 19th century costumes.

Answer:

Not (D). It was Sir Allan Napier MacNab that was knighted by Queen Victoria and later served as Premier. However Beasley did establish a trading post near the present day Dundurn Castle.

Believe it or Not?

A) The Battery House, once the estate gate house, is now a military museum.

B) The present - day small theatre was an enclosed pit for cock fighting in Sir Allan's day.

C) The interior of Dundurn Castle has been very carefully restored to show how a wealthy family of the mid 1800's lived and worked.

D) In the 1790's Colonel Richard Beasley established a trading post. He was later knighted by Queen Victoria and served as Premier of the United Canadas from 1854 to 1856.

E) Native mounds and artifacts found on the site indicate a long history of native peoples in this area.

FOR A MAN'S HOUSE IS HIS CASTLE,
- Third Institute / Coke



SEE - MAP#8, PG #67, SITE# 40



ROYAL BOTANICAL ROCK GARDENS

FROM RAG TO RICHES

The escarpment was regarded by many people as a nuisance, an obstacle between the plain below and the plateau above. Quarrying operations hacked into its limestone layers. Brick yards gouged out the clay from its base. Roads were blasted along its face. Picturesque ravines became garbage dumps.

After years of abusing the escarpment, citizens and civic officials came to realize that the escarpment was one of the area's most distinctive features and worthy of better preservation. The City of Hamilton purchased the property along the face of the escarpment from Chedoke Falls to the Albion ravine in 1913. Thousands of trees were planted to cover the scars of the past.

Hamilton's Royal Botanical Rock Gardens were built in an abandoned quarry. This project provided employment for a number of men during the Depression.

Located north of York Boulevard, directly opposite the Tourist Information Centre, the Rock Garden is a mecca for photographers and those who simply wish to enjoy the delightful panorama.

The internationally famed garden boasts waterfalls, ponds and streams. They are set in a horticultural back drop of exceptional beauty and design.

The initial impression of oriental elegance and subtlety can be savoured from the Tea House, a popular spot for family outings.

Answer:

Not (E). The first major development of the Royal Botanical Gardens was to convert this site into a world famous rock garden.

Believe it or Not?

A) Prior to 1930, the Rock Garden was the remains of Kerr's Gravel Pit.

B) Today, the garden displays an excellent selection of alpine and rock garden species.

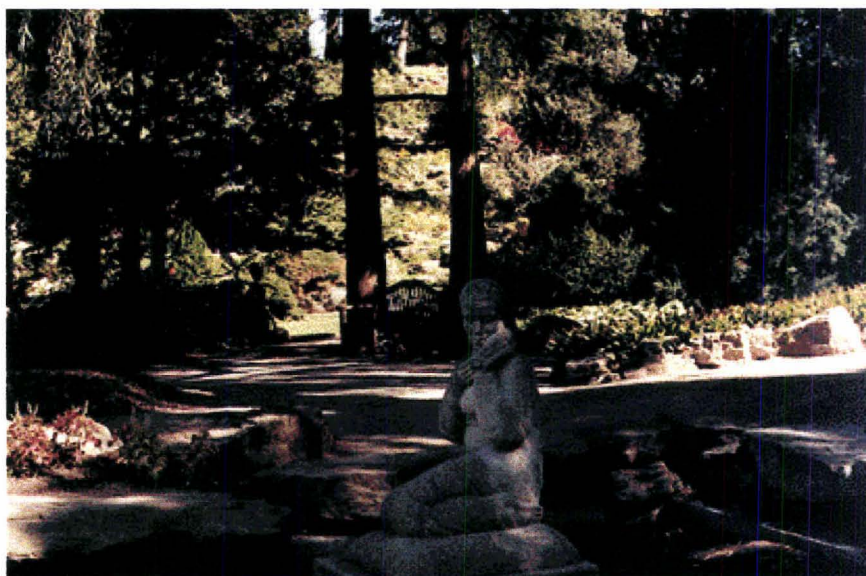
C) The Tea House is a good spot for lunch and offers a panoramic view of Cootes Paradise.

D) In 1925, Thomas McQuesten, a Parks Board Commissioner, and Cecil Langs applied the necessary political pressure to acquire the property for a botanical garden.

E) The last major development of the Royal Botanical Gardens was to convert this site into a world famous rock garden.

FOOTFALLS ECHO IN THE MEMORY
DOWN THE PASSAGE WHICH WE DID
NOT TAKE
TOWARDS THE DOOR WE NEVER
OPENED
INTO THE ROSE GARDEN

- Four Quartets, Burnt Norton / Eliot



SEE - MAP# 8, PG # 67, SITE# 41



THE BRANT HOUSE

THE HOUSE THAT BRANT BUILT

The original house was built about 1800 by Joseph Brant (Thayendanegea). It was a large two - storied frame house facing a sheltered pond on the bay side of the sand strip at a time when most of his white neighbours still lived in log cabins.

In this home Brant lived the life of a country gentleman. He had taken a number of Negro slaves as captives during the Revolution and these he retained in his service.

Even though Brant's children were educated in the ways of the white man he did not forsake his Native brethren. He continued to devote his life to securing recognition and opportunity for his people. Their canoes were often drawn up on the shore in front of his house.

In 1807, the great chief died. The bell of the Mohawk Chapel, beside the Grand River where he was laid to rest, tolled for twenty four hours.

The present house, a replica of the original, was completed in 1938. A female ghost, dressed in white, has been sighted on several occasions in the upper portions of the house. She has been reported to throw books at individuals how have entered her space. So beware and remember to bring a hard hat when visiting the Brant House.

Believe it or Not?

A) Joseph Brant translated the Gospel of St. Mark and the Book of Common Prayer into the Mohawk tongue for his people.

B) Joseph Brant became the chief of the Mohawks, the leading tribe of the Six Nations Confederacy.

C) During the American revolution, Brant and the majority of his Six Nations tribesmen sided with the British.

D) In 1784, a land grant which extended for six miles on each side of the Ohio River from its mouth to its source, was made to the Mohawks and any other of the Six Nations who wished to settle there.

E) Joseph Brant was born a full - blooded Mohawk in an Indian hunting camp on the banks of the Ohio River.

THE INDIAN ... STANDS FREE AND UNCONSTRAINED IN NATURE, IS HER INHABITANT AND NOT HER GUEST , WEARS HER EASILY AND GRACEFULLY. BUT THE CIVILIZED MAN HAS THE HABITS OF THE HOUSE. THE HOUSE IS A PRISON.

- Journal / Thoreau

Answer:

Not (D).
The land
grant was
extended
for six
miles on
each side of
the Grand
River from
its mouth to
its source.



The Burlington Bay Canal

Let's Get Physical!

The Burlington Bay Canal provides an entrance into Burlington Bay. The original inlet to the bay was at the north end of the Burlington Bar. This inlet has silted up and is no longer visible. The Burlington Bar is a baymouth bar that was constructed by the longshore drift of sand. Easterly storms, which had an unbroken fetch (sweep) of nearly 300 km across Lake Ontario were responsible for the construction of this bar.

The Canada Center for Inland Waters, a large research institution, is located under the Burlington Skyway Bridge which spans the canal.

Drilling into the bar found a bedrock valley which is an extension of the Dundas Valley. This valley extends downwards under the Burlington Bar to bedrock about 110 m below sea level. The Hamilton side of the canal is referred to as "The Beach Strip." It is still mostly residential while the Burlington side known as "Burlington Beach" is public parkland.

Lastly, the author and his family grew up on this narrow piece of land (12 Renfrew Ave).

Believe it or Not?

A) The Burlington Bay Canal was proposed as one of a series of waterways to provide uninterrupted navigation from Lake Erie to the Atlantic Ocean.

B) Area residents wanted a canal to make Burlington Bay a usable harbour.

C) The waterway was officially opened by Lieutenant Governor Sir Peregrine Maitland on July 1st, 1826.

D) James Crooks, a Hamilton merchant, was instrumental in getting the House of Assembly to authorize the construction of the canal.

E) The Burlington Canal Lighthouse was built in 1859 to replace an earlier wooden structure which was destroyed in the War of 1812.

LIKE A BRIDGE OVER TROUBLED
WATER I WILL LAY ME DOWN.

-Bridge over Troubled Water / Paul Simon

Answer:

Not (E). The Burlington Canal Lighthouse replaced an earlier wooden structure which caught on fire. The Lighthouse, although still standing, was retired in 1961. Its function has been taken over by modern navigational equipment.



SEE - MAP#8, PG #67, SITE #43



THE BURLINGTON CANAL LIGHTHOUSE

A CANDLE IN THE DARK

In 1837, a 54 foot wooden lighthouse was built at the canal by John L. Williams, an American. It was a frame, octagonal shaped, clapboard structure, and set on a stone foundation. The new light could be seen 15 miles onto the lake.

On July 18th, 1856, sparks from the government supply vessel, the steamer Ranger, bringing barrels of whale oil to the lighthouse, set the piers aflame. The fire engulfed the main lighthouse, the pierlight, the ferry house and the lightkeeper's house.

The Burlington Bay Imperial light station was built in 1858 by John Brown of Thorold.

The new lighthouse and pier light were the first in Canada to be adapted to burn coal oil instead of whale oil.

From his new vantage point at the top of the stone lighthouse, keeper George Thompson became a trained observer. In his lightkeeper's diary, he noted the name of each vessel that came through the canal and he clocked the amount of time it took for a steamer to reach the canal from the moment he first heard its paddle-wheels.

After 29 years of faithful service as lightkeeper at Burlington Bay, George Thompson retired.

Ghosts have haunted the lighthouse for years. Keeper Thompson, a spiritualist, often heard voices and noises coming from the stone lighthouse. Other keepers have spoken of footsteps and lights appearing in each consecutive window of the tower.

Lighthouses and keepers seem very remote from late twentieth century technology. Vessels are now guided by electronic computer and "Loran" systems, while navigational aids are controlled by light sensors and solar panels.

THE SHIP WAS CHEERED, THE HARBOUR
CLEARED,
MERRILY DID WE DROP
BELOW THE KIRK, BELOW THE HILL,
BELOW THE LIGHTHOUSE TOP.

- The Ancient Mariner / Coleridge

Answer:

Not (E). In the early 1790s, the sandstrip was set aside as a "military reserve" and all land grants were thus refused for this area.

Believe it or Not?

A) Long before the first white settlers appeared in Upper Canada, Hamilton Beach was known to local Indians as "Daonasedao" - "where the sand forms a bar."

B) The 19th century discovery of two large burial mounds on the Beach supports the belief of an Indian battle between the Ojibwa and the Iroquois.

C) September 18th, 1669 can be said to mark the coming of the white man to Hamilton - Burlington area. On that day, LaSalle entered by canoe through the narrow inlet at the Beach and landed on the shores of Burlington Bay.

D) It is unclear whether the Beach Strip was included in the "Mississauga Tract" purchase of 1784, although the Indian tribe still retained "customary usage of the Beach."

E) In the early 1790s, the sandstrip was set aside as a bird sanctuary.



SEE - MAP# 8, PG # 67, SITE# 44



BURLINGTON BAY

OR HAMILTON HARBOUR

The first recorded commercial venture on the shores of Burlington Bay took place in 1669 when LaSalle's party exchanged "gifts" with the Natives.

When Mrs. Simcoe and her husband visited this area in 1796, she wrote in her diary that they purchased some fine salmon from Natives fishing in the bay. The Natives gathered at the mouths of the creeks to await the yearly migration of the salmon upstream to spawn. The sandstrip was a popular place to camp while they smoked their catch for the months ahead. Any surplus was kept for trade with other tribes.

Commercial activity on the bay shore began in earnest when Richard Beasley established his trading post at Burlington Heights. By 1800, a wharf and a sizeable storehouse had been built. There the local Mississauga Natives exchanged furs for the alluring trade goods stocked by Beasley.

Further to the east near the foot of today's Wellington Street, Abel Land built a wharf and carried on a successful shipping business. The chief exports were (from Saltfleet Township), potash, whiskey, grain and flour.

In early times, the only outlet from the bay to the lake was a shallow natural channel about a quarter mile west of the present canal. Goods were taken across the bay and through the outlet in flat bottomed bateaux to sailing schooners anchored in the lake.

Answer:

Not (D). Captain Richardson had the honour of being the earliest person to navigate a schooner into the Bay.

Believe it or Not?

A) Ice was cut in large chunks and stored in ice houses along the bay shore to await summer delivery to city homes. Pollution and electric refrigeration put an end to this activity in the 1920s.

B) The harbour was known to the local Natives as "Macassa" - "beautiful waters".

C) One of Simcoe's first acts as new Governor (June 1792) was to change the name of Macassa Bay (named Lake Geneva by the first whites) to Burlington Bay.

D) Captain Richardson had the honour of being the first person to see the harbour.

E) Today, pleasure boating is still permitted, but unlike the 1930s, industrial shipping and receiving ranks first among all the Harbour's activities.

THE FOG COMES
ON LITTLE CAT FEET.
IT SITS LOOKING
OVER THE HARBOUR AND CITY
ON SILENT HAUNCHES
AND THEN MOVES ON.

_ Fog / Sandburg



THE BURLINGTON RACES

66

BRITAIN AND THE COLONY TAKE THE GOLD

The Burlington Bar was also the setting of a rather strange naval encounter dubbed by historians as "The Burlington Races".

On September 28th, 1813, the long sand-strip had enabled a number of British ships to escape a far superior American naval force. Six British vessels, in flight from the enemy in the midst of a storm, entered Burlington Bay through the narrow natural inlet that originally cut through the sandbar. The storm had swollen the channel, normally only shallow enough for Indian canoes or flat bottomed barges - to allow the "slippery six" to safely enter the shelter of the Bay, leaving the American fleet still searching for them in the lake.

Though safe from immediate harm, the British still had to somehow return their ships to Lake Ontario. This time around, the shallow inlet would not be as co-operative. The six vessels eventually were stripped of all heavy objects and very gently dragged back through the channel with only minimal damage. This interesting episode in "naval warfare" on the Great Lakes can be seen as a small victory of sorts for the British Colonial forces.

Believe it or Not?

A) Commander of the small British naval fleet on Lake Ontario was Sir James Yeo.

B) The American fleet under the direction of Commodore Isaac Chauncey consisted of two ships, three brigs and six schooners.

C) The two squadrons met off the port of Montreal.

D) As the two squadrons engaged, it was the two flagships, HMS Wolfe and USS Pike, that took the brunt of the action.

E) Yeo broke off the action and headed for shelter at the Head of the Lake while Chauncey, in fear of becoming caught in wind and current after a hardy chase, turned to Niagara.

I SAW THREE SHIPS COME SAILING BY,
COME SAILING BY, COME SAILING BY,
I SAW THREE SHIPS COME SAILING BY,
ON NEW YEAR'S DAY IN THE MORNING.

- I Saw Three Ships / Anonymous

Answer:

Not (C). The two
squadrons met off the
port of York
(Toronto).



SEE - MAP# 8, PG # 67, SITE# 47



GRINDSTONE CREEK

SMOKEY HOLLOW

Grindstone Creek valley was a very busy milling area during the 1800's.

Alexander Brown built a simple saw mill above the falls.

The valley earned the name "Smokey Hollow" from the smoke that chimneys released.

By the 1900's steam and electricity mill operators replaced the water powered ones. Mill operators were faced with declining markets and more efficient competitors.

Fire destroyed several of the mills and the final blow came in 1912 when the railway was laid through the valley. The last of the mills closed. The ruins were left to crumble and vanish. All that remains of this once busy milling area is the name "Smokey Hollow."

Believe it or Not?

A) The first inhabitant, Alexander McDonnell, was a Loyalist who arrived in the vicinity about 1796.

B) Alexander Brown established the first mill at Great Falls in around 1805.

C) In 1823, Ebenezer Culver Griffin purchased the mill.

D) Griffin's son, James Kent Griffin, built a toll road from Hamilton to Carlisle in 1853, now known both as Reptile Road and Centre Road.

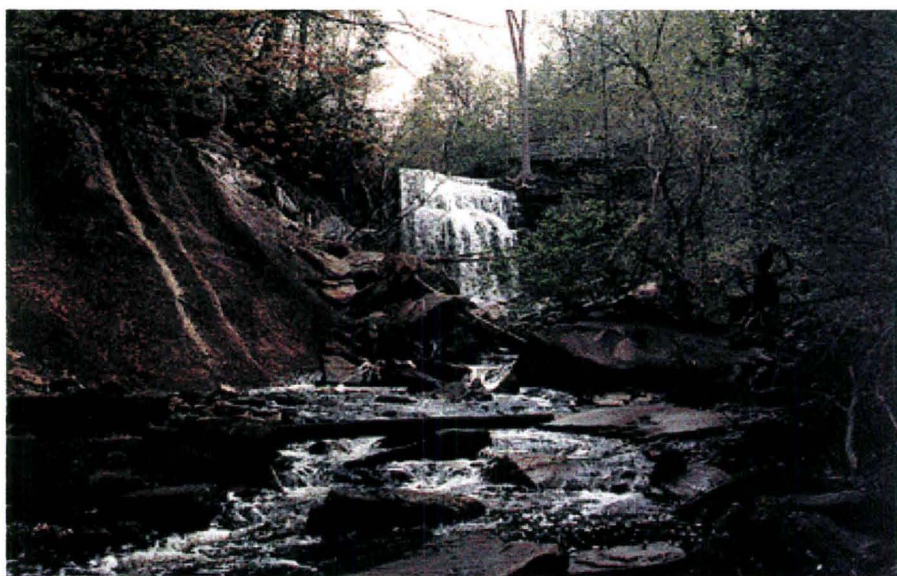
E) Grindstone Creek runs through the village of Waterdown.

WE ARE THE MUSIC - MAKERS,
AND WE ARE THE DREAMERS OF DREAMS,
WANDERING BY LONE SEA BREAKERS,
AND SITTING BY DESOLATE STREAMS;
WORLD - LOSERS AND WORLD - FORSAK-
ERS,
ON WHOM THE PALE MOON GLEAMS:
YET WE ARE THE MOVERS AND SHAKERS
OF THE WORLD FOREVER, IT SEEMS.

- O' Shaughnessy

Answer:

Not (D). The toll
road is now
known as Snake
Road and Centre
Road.



SEE- MAP#9, PG #70, SITE# 45



THE OLD NELSON QUARRY

THE BIRTH OF THE CONSTRUCTION INDUSTRY

Many quarries, some active and some worked out, exist along the escarpment (60). They have provided materials for construction province wide and for the blast furnaces of the Hamilton steel mills.

The old Dundas Quarry has been recommended as an historic site. The Old Nelson (Kern Road) quarry is important in understanding the stratigraphy of the Niagara Escarpment and thus should be preserved as a park.

This abandoned quarry is situated on the brow of the escarpment and provides a fine view over the City of Burlington and Lake Ontario.

Believe it or Not?

A) The escarpment was a natural source of early construction material, including limestone, brick and tile, marble, sand and gravel.

B) The lime - mortar industry used the dolostone from the escarpment to make plaster, mortar and whitewash.

C) From the 1920s to the 1940s marl was dug up, dried in kins and used in whitewash, culvert tiles and an insecticide called Climax BugKiller.

D) Commercial lime was used in the building industry, in the manufacture of glass, and as a disinfectant.

E) Queenston shale was made into concrete blocks.

I TOOK A DAY TO SEARCH FOR GOD,
AND FOUND HIM NOT. BUT AS I TROD
BY ROCKY LEDGE, THROUGH WOODS UNTAMED,
JUST WHERE ONE SCARLET LILY FLAMED,
I SAW HIS FOOTPRINT IN THE SOD.

- Vestigia / Carman

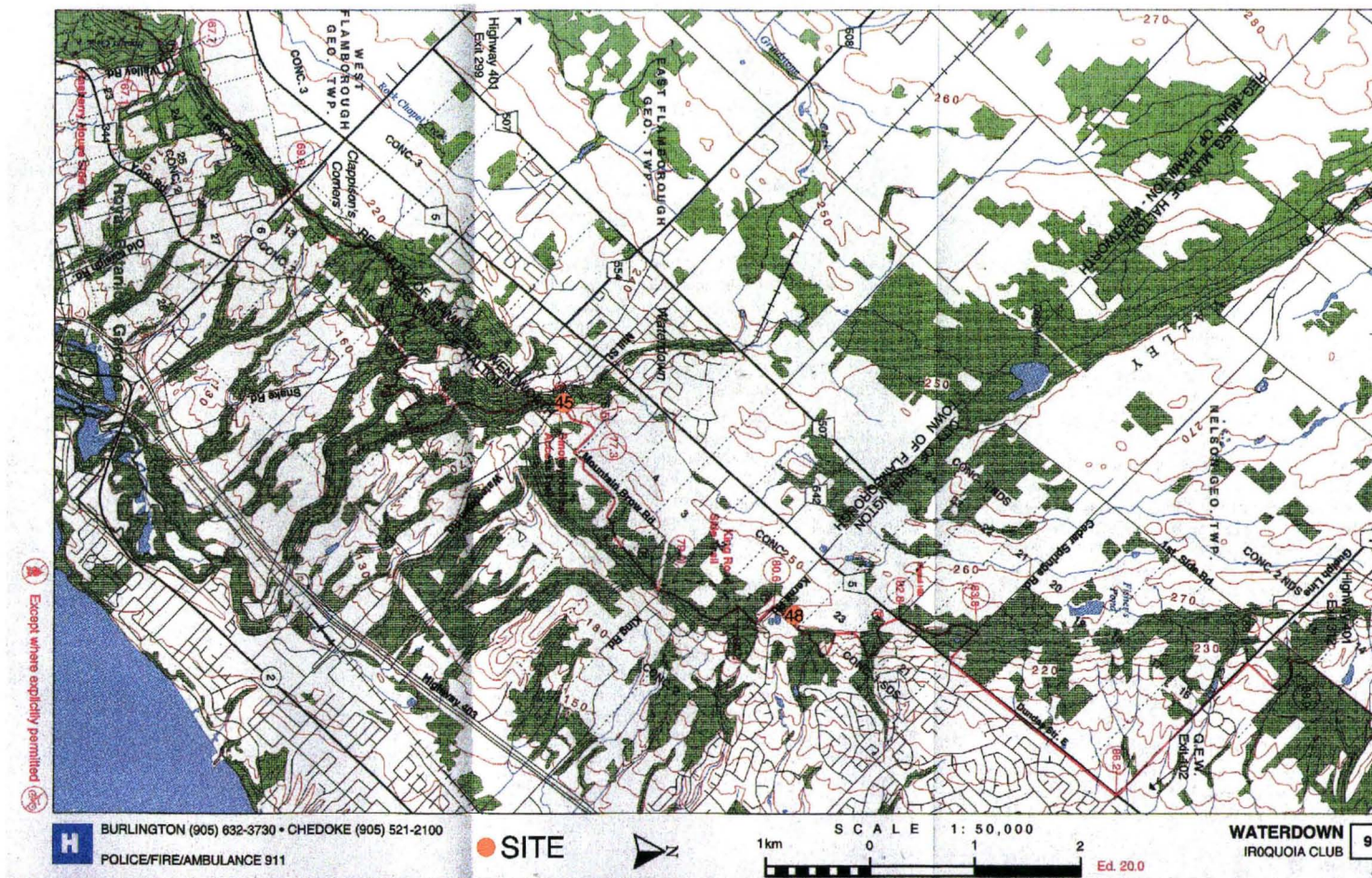
Answer:

Not (E).
Queenston shale
was made into
bricks.



SEE - MAP# 9, PG #70, SITE# 48





The above map was obtained from "The Bruce Trail Reference 20th Edition 1998" and has been modified for this project.

MOUNT NEMO

CAVES TO EXPLORE

Mount Nemo rises majestically above Burlington. From a lookout perched atop its 23 m high limestone cliffs, the CN Tower is visible in the distance. Below is a valley of fertile farmland and spring fed creeks. Burlington, with a foot in each world, embraces the best of city and country.

If large blocks of firm dolostone break away, the openings between the blocks form crevice caves. They can be explored in the Mount Nemo Conservation Area. Microclimates on the cave floors permit the growth of specialized plants, such as unusual species of ferns. Ice may remain in the caves during the summer months.

It has been suggested that most of the large rock movements associated with crevice caves were initiated while the last of the glacial ice was melting away and the climate was wetter than today, perhaps with great variations in temperatures. Whether this is true or not, their downslope movements continue today.

Believe it or Not?

- A) Mount Nemo is home to some of the oldest eastern white cedars east of the Rockies (700-800 years old).
- B) Cedars are safe from human exploitation and from biological competition on the cliff faces.
- C) The eastern white cedars grow with virtually no soil, taking the water and nutrients they need from the rock face.
- D) A large root usually anchors the tree and hundreds of small fibre like roots search cracks and fissures for bits of mineral laden moisture.
- E) The eastern white cedar grows between 40 and 50 metres tall.

BEHOLD! HUMANBEINGS LIVING IN
A GROUND DEN...LIKE OUR-
SELVES...THEY SEE ONLY THEIR
OWN SHADOWS, OR THE SHADOWS
OF ONE ANOTHER, WHICH THE FIRE
THROWS ON THE OPPOSITE WALL
OF THE CAVE.

- The Republic / Plato

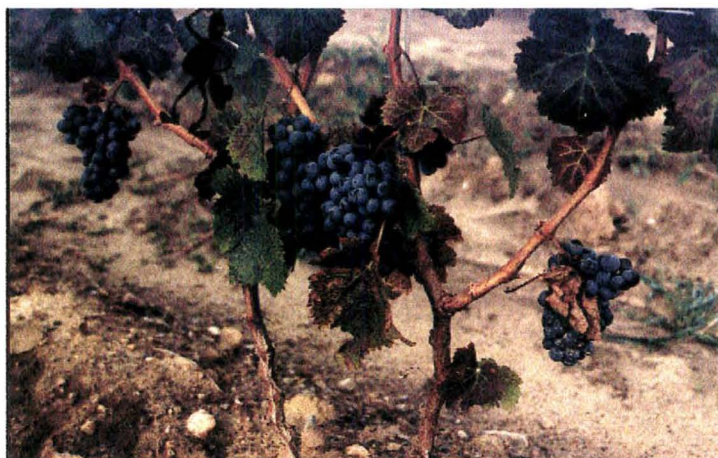
Answer:

Not (E). They only grow between 2.5 and 9 metres tall; however, they twist and bend in their search for light and heat, growing at odd angles and in some cases growing down toward the base of the cliff, not the sky.



SEE - MAP# 10, PG # 73, SITE# 49

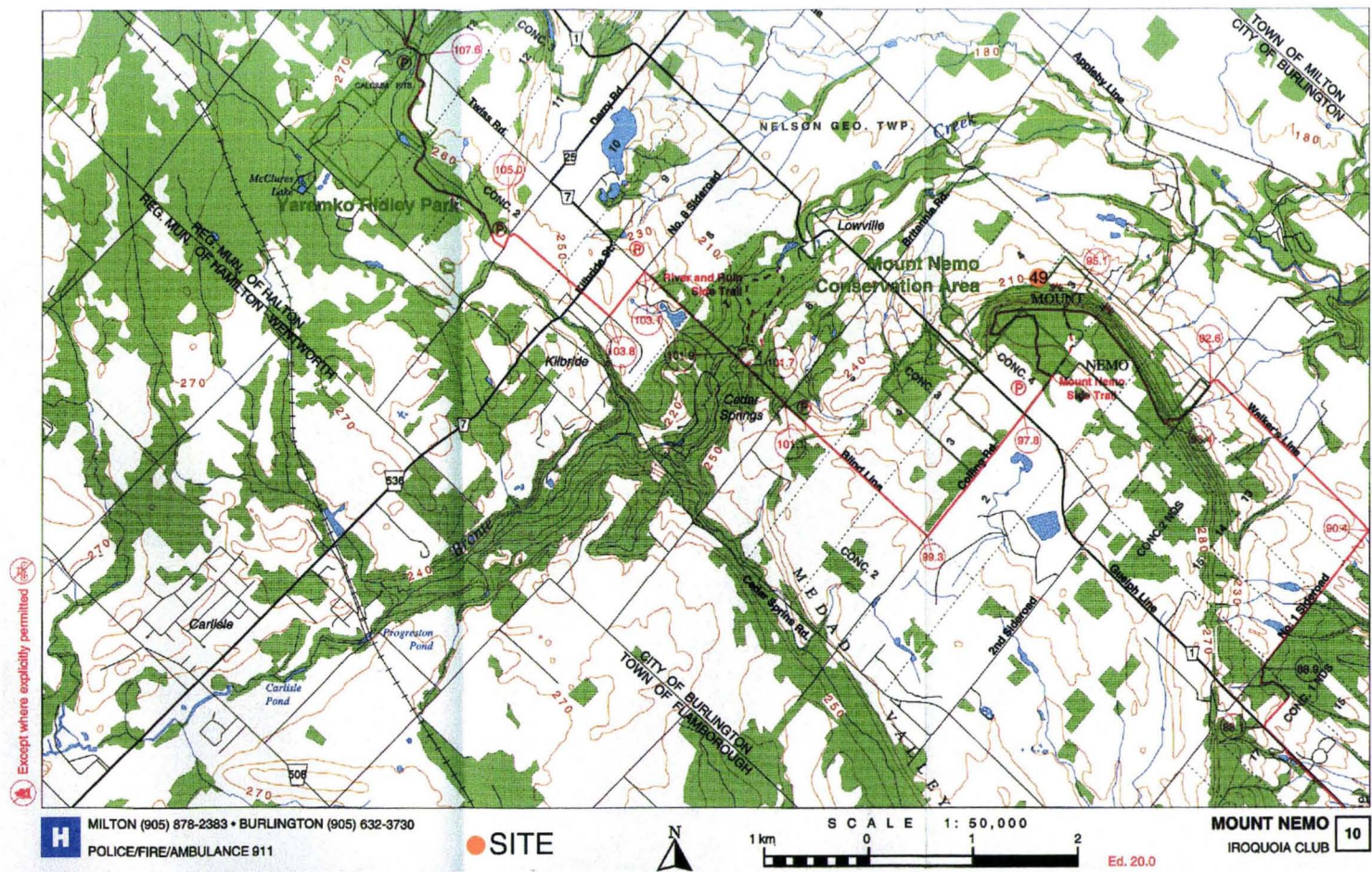




THE HARVEST TRULY IS PLENTEOUS,
BUT THE LABORERS ARE FEW.

- The Holy Bible / Matthew





The above map was obtained from "The Bruce Trail Reference 20th Edition 1998" and has been modified for this project.

CRAWFORD LAKE

THE MEROMICTIC LAKE

Crawford Lake lies in a conservation area managed by the Halton Region Conservation Authority. Excellent on site interpretive displays describe the area. Crawford Lake is a bedrock lake covering 1.5 ha with a depth of 24 m. The waters are contained within 6m cliffs.

The oldest sediment cored in the lake is sand containing abundant spruce pollen, so Crawford Lake is at least 10,000 years old. The origin of the lake is uncertain.

The waters of Crawford Lake undergo no seasonal mixing of the oxygen rich surface waters with the colder bottom waters. Under these conditions calcite (lime) is dissolved in the upper warm waters each summer and is precipitated when these waters become supersaturated. The calcite forms white layers in the bottom sediment. In the fall, conditions also favour the deposition of iron sulphide (pyrite), which forms dark layers. Thus, couplets of white and dark layers are formed each year. Each couplet forms a varve. By counting the number of varves in a core obtained from the sediment, the number of years required for a measured thickness of sediment can be determined.

The top 83 cm of the bottom of the lake was cored for pollen analysis. Pollen grains of sorrel and ragweed were found, indicating that Native agriculture was practised nearby 1360 and 1660 AD. This was based on the fact that maize pollen, because of its weight and size, does not disperse far from the parent plant. Archeological investigations located several sites in the immediate area.

Answer:

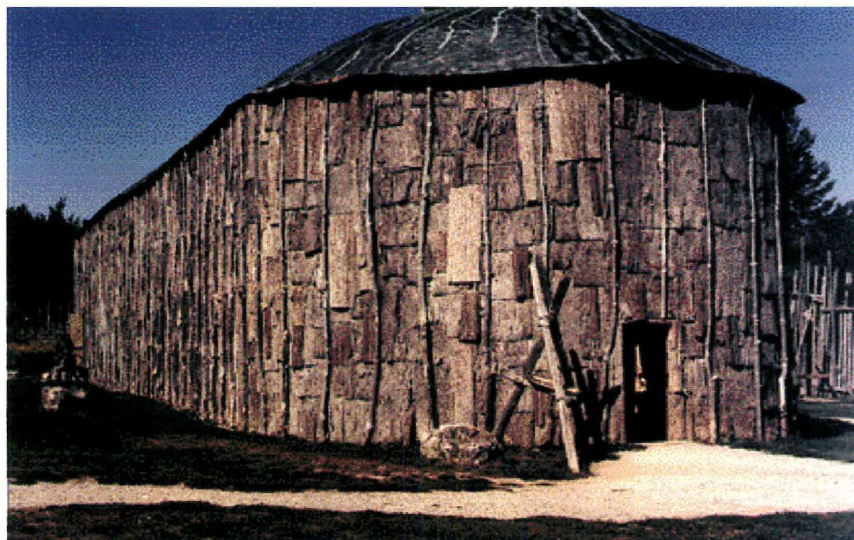
Not (A). Crawford Lake is one of only two meromictic lakes found in Ontario. Found Lake in Algonquin Park being the other.

Believe it or Not?

- A) Crawford Lake is the only meromictic lake found in Ontario.
- B) A meromictic lake is deeper than its surface area.
- C) The upper half of its water mixes hardly at all with the bottom half, and can be described as one body atop another.
- D) Crawford Lake is about 15,000 years old, a creation of the retreating glaciers.
- E) Murray Crawford was a pioneer who purchased the tract to provide wood for his steam sawmill, which he operated at the southern end of the lake.

OUR WHOLE PAST EXPERIENCE IS CONTINUALLY IN OUR CONSCIOUSNESS, THOUGH MOST OF IT SUNK TO A GREAT DEPTH OF DIMNESS. I THINK OF CONSCIOUSNESS AS A BOTTOMLESS LAKE, WHOSE WATERS SEEM TRANSPARENT, YET INTO WHICH WE CAN CLEARLY SEE BUT A LITTLE WAY.

-Collected Papers / Peirce



NASSAGAWEYA CANYON

THE TURKEY VULTURE

The majestic soaring of the Turkey Vulture high above the Nassagawega, an Indian word for the meeting of two rivers, (in this case, Sixteen Mile Creek and Bronte Creek) is a spectacular site. Many species of fauna are able to exist in this area because of the wide range of habitats created by the Niagara Escarpment. The Turkey Vulture can frequently be seen in this valley from April to October after migrating from its wintering range south of New Jersey. The bird is attracted to the area because of the abundance of food, nesting sites and frequent updrafts which enable the bird to soar with little effort. This carrion eater feeds on dead or decaying animal matter which can be spotted from great distances through the birds keen eyesight and sense of smell. During April and May, the Turkey Vulture nests along the cliffs of the Nassagaweya Canyon where one to three spotted eggs are laid on ledges in caves and in hollow logs. The adults feed their young regurgitated carrion which creates a foul smell that often attracts predators such as foxes, skunks and snakes. The inaccessible location of the nest helps protect the young which learn to fly by eleven weeks. This species can be easily identified in flight by its large size, black colouring and characteristic flight of soaring in wide circles. The six foot, two toned wings are held in a broad "V" with the bird often rocking and tilting steadily as it floats along. At close range, the bald red head of the adult or the black heads of young birds can be seen.

The Turkey Vulture plays an integral part in the ecology of the area as a result of its highly specialized role as scavenger.

Answer:

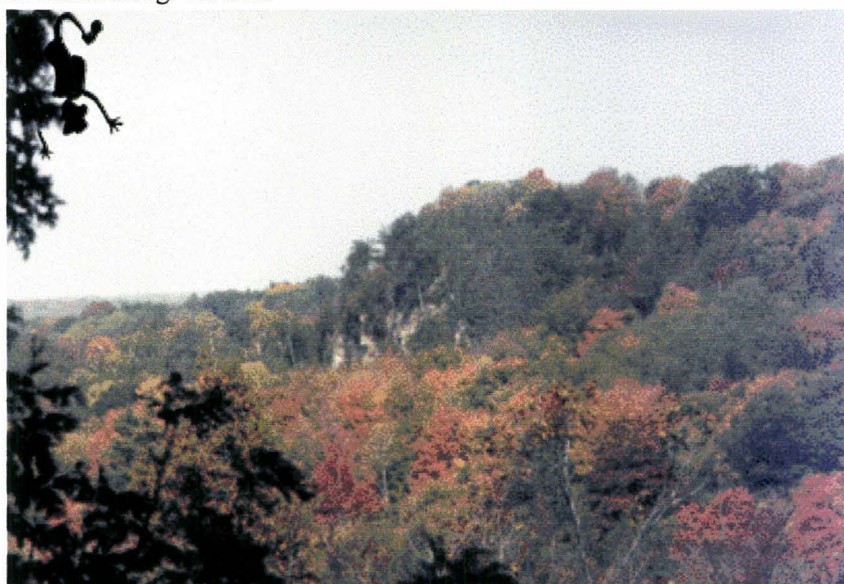
Not (A). In Tobermory, in June of 1967, the cairn at the northern terminus to the Bruce Trail was unveiled.

Believe it or Not?

- A) In Tobermory, in June of 1967, the cairn at the southern terminus to the Bruce Trail was unveiled.
- B) In 1977, the cairn at Queenston was unveiled in celebration of the trail's tenth anniversary.
- C) The Bruce Trail is the oldest marked hiking trail in Canada.
- D) There are nine regional Clubs responsible for maintaining and building the 800 km trail.
- E) The preservation of the Niagara Escarpment was one of the original aims in the conception of the Bruce Trail.

LEAVE ONLY YOUR
THANKS AND
TAKE NOTHING BUT
PHOTOGRAPHS.

- Trail User's Code



SEE - MAP# 11, PG # 79, SITE# 51



RATTLESNAKE POINT

OUTLIERS

The Niagara Escarpment is a ridge of sedimentary rock that formed the outer rim of a shallow sea approximately 450 million years ago.

Outliers, such as the one where Rattlesnake Point and Milton Heights are situated, are among the Niagara Escarpment's most prominent geological landmarks. An outlier is a part of the escarpment that is detached from the main section by a stream - eroded valley, Rattlesnake Point and Milton Heights at Kelso Conservation Area are part of the Milton Outlier, with Rattlesnake Point forming the southern tip and Milton Heights forming the northern end.

The legendary promontories of the Halton watershed are also home to the oldest and least disturbed forest in all of eastern North America. The oldest, living white cedar has been dated at 850 years.

Rattlesnake Point is probably the most intensively used climbing cliffs in Ontario. Located approximately 64 km west of Toronto, these ten to thirty metre high dolomite cliffs provide a wide variety of climbing grades. Most of the routes are well protected by resident pitons and virtually all climbs can be top roped.

Believe it or Not?

- A) Evidence indicates that Rattlesnake Point was an encampment during the Paleo - Indian period of 900 to 5000 B.C.
- B) Rattlesnake Point is home to the southwestern, black rattlesnake.
- C) Many crevice caves have formed, making this location a favourite for spelunkers.
- D) The principal cave is a multi-level one leading to a small chamber approximately 15 metres below ground.
- E) At one time, massive white pine covered the area. The pines have all but vanished, logged in the settlement rush of the 1800s.

NO MAN IS AN ISLAND, ENTIRE OF
ITSELF; EVERY MAN IS A PIECE OF THE
CONTINENT, A PART OF THE MAIN.

- Hymn to God My God, in My Sickness / Donne

Answer:

Not (B).
Rattlesnakes, shot
in obscene num-
bers by
settlers, are no
longer found.



SEE - MAP# 11, PG # 79, SITE# 52



THE CHRISTIE - HENDERSON LIME KILNS

77

KELSO HOME OF THE KILNS

The remains of the Lime Kilns can be seen in Kelso Conservation Area. There are no signs directing you to their locations. They are found in the south - western corner of the park. Most of the trails in this area are overgrown with vegetation so locating the kilns can be quite challenging. The kilns are caged in an eight foot frost fence compound.

The Kilns were constructed in 1880 by D.D. Christie. They were used to burn limestone extracted from a nearby quarry.

The burnt stone turned into lime which was used for the production of mortar, plaster and in the production of chemicals, iron and steel.

The three kilns ceased operations in 1929. They are today an important local landmark, being the most complete kilns remaining on the Escarpment and representing the importance of the Escarpment to Ontario's industrial heritage.

The bell that originally stood on the site of the Christie - Henderson Lime Kiln can be seen on top of a tower near the Museum in Kelso Conservation Area.

THE FUTURE...SEEMS TO ME
NO UNIFIED
DREAM BUT A MINCE PIE,
LONG IN THE BAKING,
NEVER QUITE DONE.
- One Man's Meat / White

Answer:

Not (B). The rocks of the Niagara
Escarpment occur in horizontal layers
called strata.

Believe it or Not?

A) The Niagara Escarpment includes a variety of rocky scarps, wave - eroded shorelines, gentle slopes, gorges, magnificent valleys and outliers.

B) The rocks of the Niagara Escarpment occur in vertical layers called horizons.

C) These rocks were formed from sediments deposited in ancient seas between 445 and 420 million years ago.

D) The Niagara Escarpment has undergone many changes, some caused by nature, some by humans.

E) The Bruce Trail follows the Niagara Escarpment from Queenston on the Niagara Peninsula to Tobermory at the tip of the Bruce Peninsula.



SEE - MAP# 11, PG # 79, SITE# 53



HILTON FALLS CONSERVATION AREA

POTS AND PANS

Before Sixteen Mile Creek drains into Lake Ontario, it cascades over the Lockport - Amabel dolostones forming a 10 m. high waterfall with a 3 m. crest line.

It was here that Edward Hilton constructed the first sawmill around 1835. Trees were a great source of commerce. The tall hemlocks and pines were cut as masts for English sailing ships. Cedars were used for fence posts. Maples were chopped for furniture.

The mill fell into ruin when Hilton fled to the United States after William Lyon Mackenzie's rebellion of Upper Canada in 1837 failed. Nineteen years later, Dr. George Park constructed another large mill.

Potholes can be found near the waterfall. Potholes form along a watercourse when rocks collect in a shallow depression, swirling water rotate the rocks in the depression and they gradually "drill" a hole into the bedrock.

Hilton Falls is not only a spectacular natural area, it is also a significant cultural heritage site. A legend of gold, said to have been discovered nearby and kept in a cave with iron gates, enhances the falls' natural mystique. Another tale claims that it was a stop on the Underground Railway, an informal network of people who conducted slaves from the United States to freedom in Upper Canada.

Believe it or Not?

A) More than 100 bird species breed in these woodlands, including turkey vultures who nest in crevices along the Escarpment.

B) A small cave located on the gorge wall can be seen from the viewing platform and does not include the hidden gold.

C) The large iron gate that guarded the cave is now the entrance gate to Hilton Falls Conservation Area.

D) The once endangered West Virginia white butterfly can be found here.

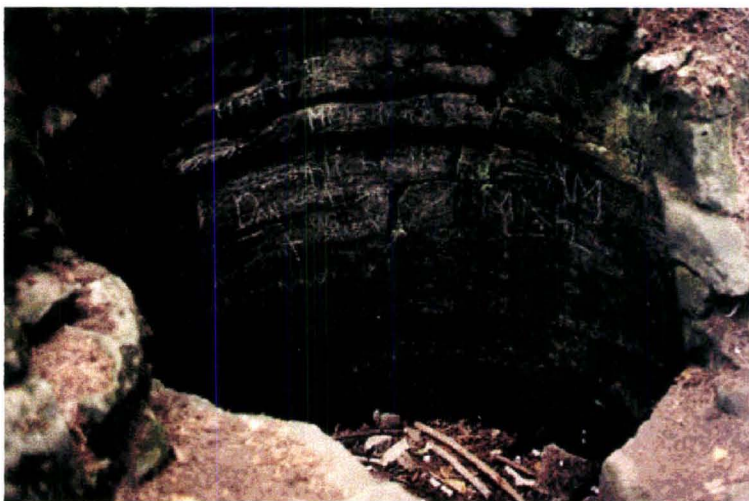
E) Plants such as the green violet, ginseng, and small flowered leafcup, rare fruited bur-reed, yellow lady's slipper, and the walking fern call Hilton Falls home.

NO MOTION HAS SHE NOW, NO FORCE;
SHE NEITHER HEARS NOR SEES;
ROLLED ROUND IN EARTH'S DIURNAL
COURSE,
WITH ROCKS, AND STONES, AND TREES.

- A Slumber Did My Spirit Seal / Wordsworth

Answer:

Not (C):
The large iron gate that guarded the cave is no where to be found. Its fate seems to be a mystery.



SEE - MAP#11, PG # 79, SITE# 54





LIMEHOUSE

GIANT OVENS

The village of Limehouse, known as Fountain Green until the post office opened in 1857, was the centre of Esquesing Township's lime - mortar production. Quantities of rock were heated in ovenlike structures called kilns. Early commercial kilns were simply hollows dug into the escarpment. By 1850 set kilns, a new technological innovation, had further refined the process. Set kilns, approximately 3 m high, could hold 800 bushels of rock and would consume 20 cords of wood over three to four days. Progress continued with the introduction of draw or shaft kilns, which were approximately 16 metres high and could burn day and night.

In the early twentieth century, limehouse boasted ten kilns in full operation. The success of Limehouse also heralded its demise. Production costs soared when the local forest became depleted and the wood required for fuel had to be imported from other regions. Soon the larger, more modern kilns bought out the small operators.

By 1918 the kilns at Limehouse were silent. Today, they are now cold and crumbling. The lands surrounding the kilns are part of a conservation area owned by the Credit Valley Conservation Authority. Presently, these relics, from another day, serve as reminders of an earlier chapter in the industrial history of southern Ontario's mighty giant rib - the Niagara Escarpment.

Answer:

Not (B). The procedure is as old as civilization, having been used in ancient Egyptian, Babylonian and Greek times.

Believe it or Not?

A) Limestone was essentially useless until heated to temperature in excess of 398 C (750 F), ground into powder and mixed with water for mortar.

B) The procedure was discovered at the turn of the 18th century in Great Britain by Alexander Cement.

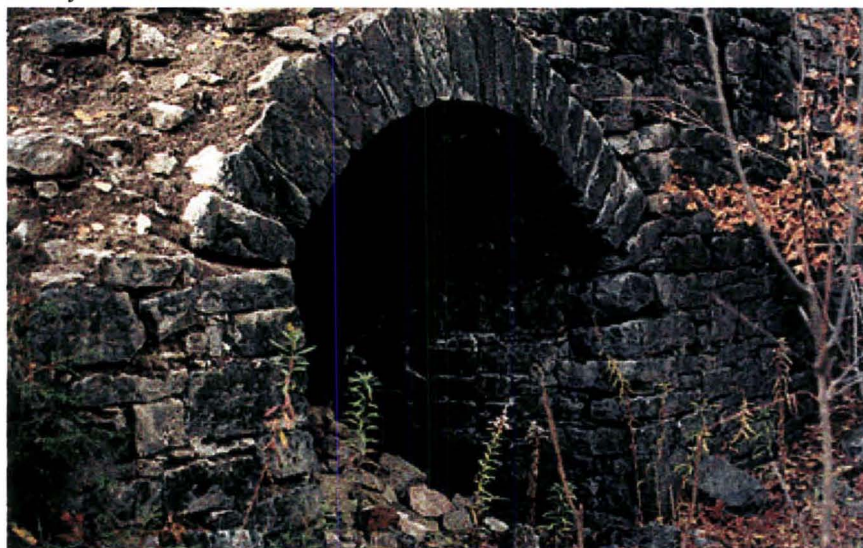
C) Rock would be dumped into the top, because the kilns were level with quarries, and wood was fed from the bottom.

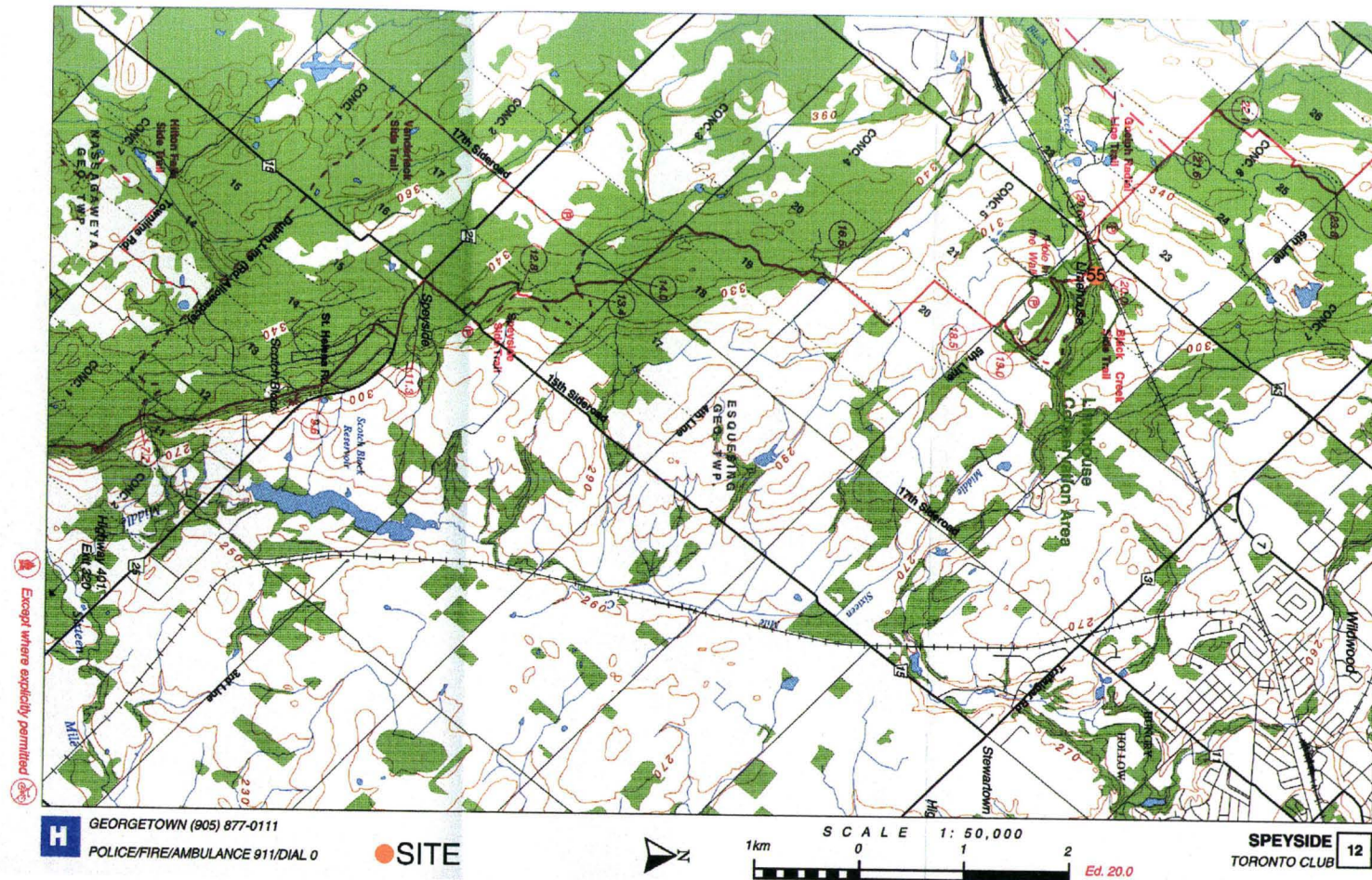
D) One of the hazardous by products of the kilns was carbon dioxide, dispersed by giant water powered fans inside the kilns.

E) Limestone was mined ruthlessly during the latter part of the 18th century and into the beginning of the 19th century.

PAT - A - CAKE, PAT - A - CAKE,
BAKER'S MAN,
BAKE ME A CAKE AS FAST AS YOU
CAN;
PAT IT AND PRICK IT, AND MARK
IT WITH B,
PUT IT IN THE OVEN FOR BABY
AND ME.

- Pat - a - Cake / Anonymous





The above map was obtained from "The Bruce Trail Reference 20th Edition 1998" and has been modified for this project.

SCOTSDALE FARM

WHERE'S THE BEEF?

There are many fine old homesteads along Ontario's Niagara Escarpment and if the walls could talk, one such homestead, Scotsdale farm would reveal a very special tale indeed. It is a story of a historic farm being "saved" and made into a three dimensional snapshot of days gone by.

Rural Ontario in the early 1800's consisted of narrow, rutted, often muddy roads (some now the routes of multi-lane highways). Settlers from England, Scotland, Ireland and other parts of Europe arrived in the rugged, wooded escarpment "wilderness" to start new lives. The War of 1812 was over and by the early 1830's much of this wilderness was rapidly retreating before axe, the saw and the plow as the settlers' skills and entrepreneurial energy was applied to the land.

Scotsdale farm, a fully operating shorthorn beef farm, was bequeathed to the Ontario Heritage Foundation in 1982 by the late Stewart and Violet Bennett for the benefit and enjoyment of the people of Ontario. Located on the Niagara Escarpment this scenic 540 acre property has significant earth and life science features.

The boundaries include Class 1 wetlands, large areas of mature maple - beech upland forest and meadows.

The Scotsdale property provides a permanent route for the Bruce Trail through this area.

The farm can be entered from Trafalgar Road, 2 km north of Highway 7.

Answer:

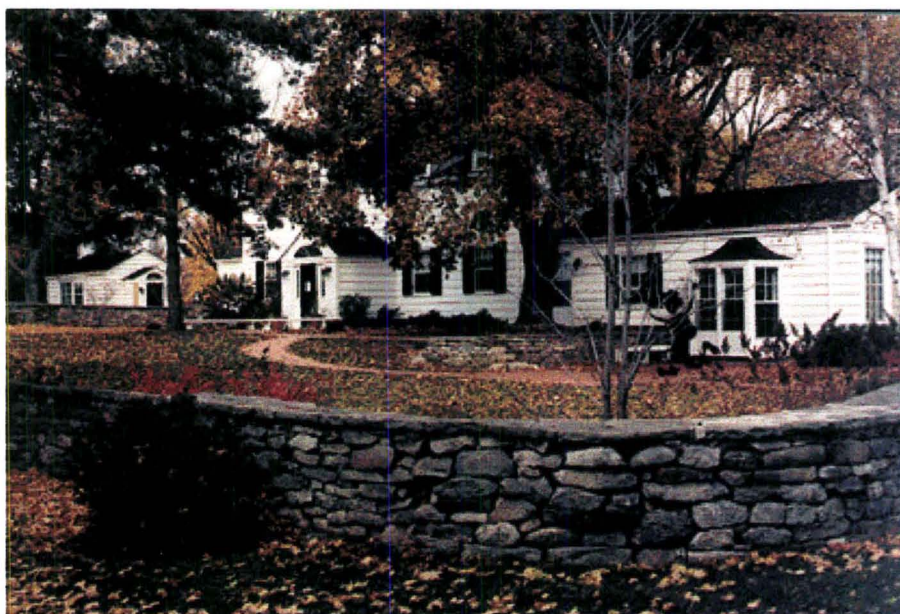
Not (B). The leaves of the plant are always in 3 - leaflet form.

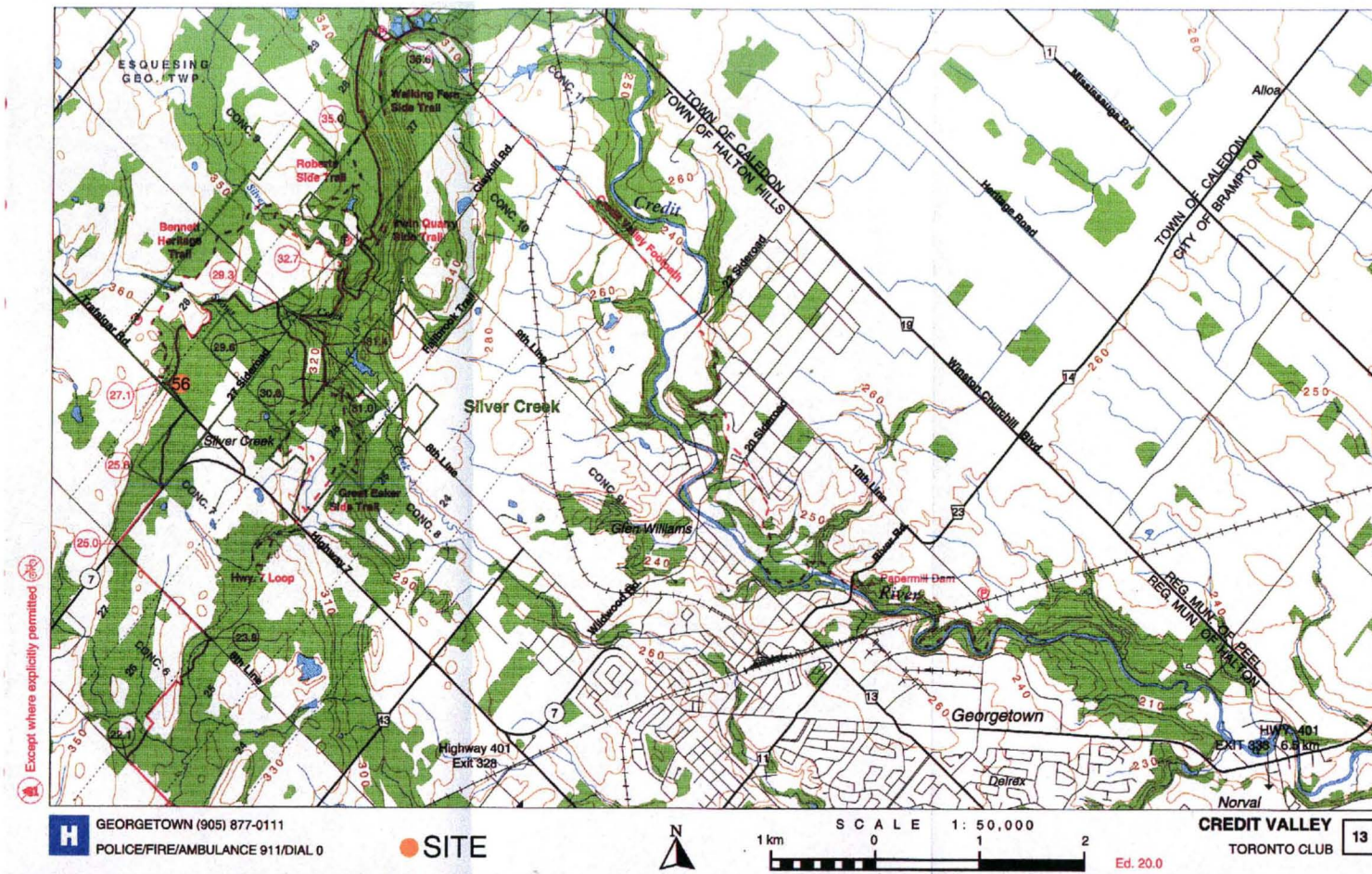
Believe it or Not?

- A) Poison Ivy may be a ground cover or a climbing vine.
- B) The leaves of the plant are always in 4 - leaflet form.
- C) Leaves are purplish in spring, bright green and often shiny in summer, orange - red in sunny areas in the fall.
- D) In June and July, dense clusters of very small, greenish flowers appear on leaf axils.
- E) In late August - September, off - white berries form.

IF YOU PRICK US, DO WE NOT BLEED?
IF YOU TICKLE US, DO WE NOT LAUGH?
IF YOU POISON US, DO WE NOT DIE?
AND IF YOU WRONG US, SHALL WE NOT REVENGE?

- The Merchant of Venice / Shakespeare





The above map was obtained from "The Bruce Trail Reference 20th Edition 1998" and has been modified for this project.

CHELTENHAM BADLANDS

THE BUILDING BLOCKS OF ONTARIO

Limestone, sandstone, granites and clay have been of great significance in the evolution of Ontario. Dolomite limestone is the caprock of the Niagara Escarpment and found underfoot for miles back from the front wall of the ridge. Dolomite makes fine cornerstones. Limestone from a quarry is a creamy white colour that darkens with exposure. Pieces that have lain on the surface for centuries are dappled grey, distinctively pitted by rainwater, including acid rain in recent years.

Sandstone is a softer, layered rock, easy to carve. A pink variety has been shipped widely from the Forks of the Credit River and used for public buildings, among them the main legislative building at Queen's Park.

Granites are Ontario's oldest rocks, formed under pressure and heated a billion years ago. In southern Ontario, they occur as scattered boulders carried by glaciers, more than 12,000 years ago, from the Precambrian Shield to which they belong.

Clay, the raw material for bricks, is widespread.

The most common of all minerals in southern Ontario is gravel, or glacial till, as it may be generally known. Ranging in size from rocks to stones to pebbles to sand to dust, tills are the fractured debris scraped from bedrock by glaciations and deposited irregularly over the surface. Tills produce well drained roadbeds and are the reason that life in Ontario has been rarely impeded by flooding.

Answer:

Not (D). In 1958, Domtar purchased the operation and closed it.

Believe it or Not?

A) The massive skeletal shells that lurk beside Mississauga Road north of Terra Cotta look like war wracked ruins.

B) The Interprovincial Brick Works were built in 1875 three kilometres west of the pretty hamlet of Cheltenham.

C) The massive kilns and chimneys were surrounded by a small workers' village of a dozen or so.

D) In 1880, Domtar purchased the operation and converted it to a tar production site.

E) While the cabins were removed, the looming skeletons of the kilns became a magnet for amateur archaeologists and film crews.

YE SHALL NO MORE GIVE THE PEOPLE

STRAW TO MAKE BRICK

- The Holy Bible / Exodus 5:7



SEE - MAP# 14, PG # 85, SITE# 57



CREDIT RIVER GORGE

A LITTLE BIT COUNTRY / A LITTLE BIT ROCK & ROLL

The Rock face, at this location, displays an excellent contact between grey sandstone of the Whirlpool Formation and red shales of the underlying and older Queenston Formation.

These layered sedimentary rocks were deposited in ancient seas of the Paleozoic Era, over 400 million years ago and form part of the Niagara Escarpment.

The significance of the shale - sandstone contact is that it represents the boundary in Ontario of two geological time periods the older Ordovician and younger Silurian.

Legend suggests that an old native visited a scottish family, often displaying gold nuggets. In gratitude to the family for their kindness, he promised to take their son to his secret place. The mother, alarmed that their son should go alone, had the father follow the two men, trailing them to an underground passage. The trek failed there. The native disappeared between two rocks, and the secret of the gold was gone.

That legend prompted a gold rush along the Credit in 1837. Forty percent of the prospectors died before ever reaching the Credit Valley. The people in the mining camp contracted scurvy. No gold was ever found.

Answer:

Not (C). By the mid 1880s, when the quarries operated at their feverish peak, more than 400 quarrymen toiled in three quarries.

Believe it or Not?

A) The Forks of the Credit was once a busy mining community.

B) From the cliffs of the Niagara Escarpment miners hacked out massive chunks of building blocks that now sit in such prominent Toronto landmarks as the provincial legislative buildings, Old City Hall, and Casa Loma.

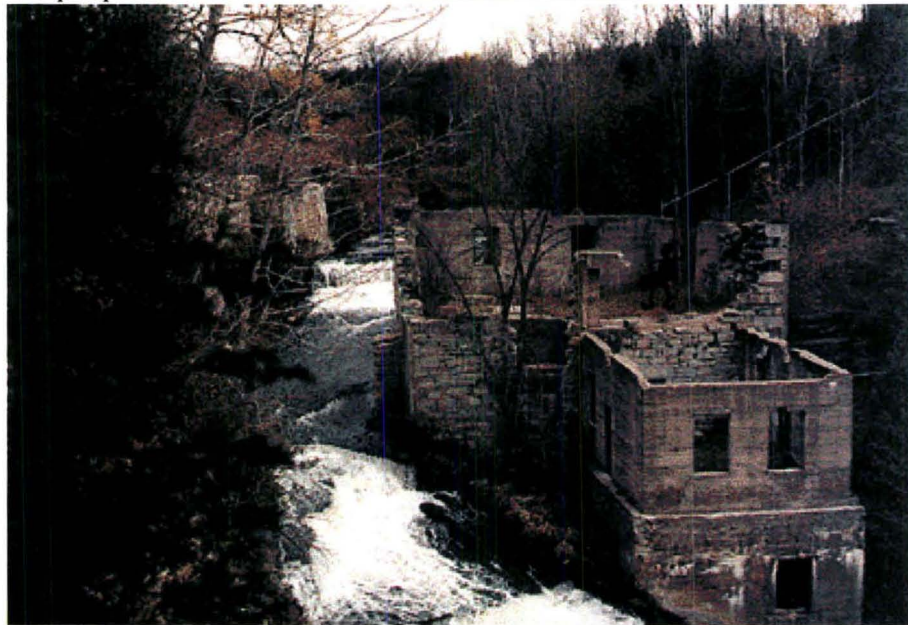
C) By the Mid 1880s, all was quiet in the quarries. People started to seek out employment elsewhere.

D) A lime kiln near the Forks Quarry and a brick and tile yard across the valley from Brimstone all made the congested, little valley a busy industrial centre.

E) New buildings began to use concrete instead of quarry stone and by 1920 the little valley was at peace.

ON LIMESTONE QUARRIED NEAR
THE SPOT BY HIS COMMAND THESE
WORDS ARE CUT: CAST A COLD EYE
ON LIFE, ON DEATH. HORSEMAN,
PASS BY!

- Under Ben Bulben / Yeats



CHAPTER FOUR

CONCLUSIONS

The concept of self-learning through mentorship highlights the distinction between schooling and education. Schooling refers to all those processes of control, coercion, and socialization through which the values, attitudes, behaviour and common knowledge of individuals are molded to produce shared “realities”. Schools, the institutions of the media, the business world, churches, the political and legal framework and “the family” can be seen variously as instruments in the process of schooling. Education, by contrast, provides a critical perspective on the processes of schooling with the object of liberating individual expression and action in the exploration of experience in order to draw out alternative possibilities.

It is hoped that this project will be used as a main educational tool and not just gather dust on a book shelf. Its use, however, is quite specific. The object is to bring out the student’s learning strengths; to make the issues associated with learning a part of the normal everyday curriculum and processes of educational activity.

Action is the basic theme. Education divorced from self-expression, from the right to know and the right to be involved in decisions and actions that affect one’s own life becomes trivial and irrelevant. Education, at heart, is concerned with the processes of freedom, self-development, self-expression and the issues surrounding access to, and the limits on access to information, resources and “knowledge”. The use of this project is in promoting educational reflection upon values in society and their realization in action.

After reading this project, teachers should have no doubt that self-learning through mentorship can be easily applied to the teaching of geography. More important, strategies which focus on response and sharing as the basis for further study assist teachers in addressing the expectations established by the Ministry of Education. Teachers and students will look into geography more deeply than just words found in a textbook or spoken in a classroom. Students develop skill at analysis and criticism, while exploring the ways in which self-discovery can and does have personal relevance to them. Students will come to experience geography, instead of simply reading about

it. One only needs to hike up the side of the escarpment on a hot, humid day, while fighting off attacking insects, to experience the working conditions related to laying a railway up the side of the escarpment. In order to appreciate the amount of physical labour and materials that were involved, one only has to walk ten metres along any railway and count the number of tiles, spikes, and rails that are found. Only by physically interacting with the escarpment can one fully understand and appreciate how it was such a huge barrier to early transportation routes.

How well students will initially become self-learners will depend on how they were taught previously, and by whom. For example: some students may have lost marks for colouring grass blue instead of the standardized green, thus suppressing any form of creativity. It may be very difficult for these students to become risk takers.

In addition, teachers may have never developed thinking levels higher than knowledge or comprehensive in their students. True and false testing along with multiple choice testing fall well short in evaluating how well a student can analyze or create. Unfortunately, marking time sometimes becomes the determining factor in choosing what test is to be given.

One will never identify with the dilemma of Robert Frost unless one physically puts oneself in the woods and is forced to make a choice between the two paths.

Teachers must inspire their students to live life to the fullest. "Carpe Diem, students! Seize the day. Make your lives extraordinary!" should be the message we are sending out to our students. Too soon we will be food for worms, faces of the past, and dirt fertilizing roses. The main goal for self-learning through mentorship is to have students think for themselves. Words and ideas can change the world. The powerful play of life (education) goes on and every one may contribute a verse. Through self-learning through mentorship, what will your verse be?

Self-learning through mentorship focuses on developing the thinking skills and strategies people will need as students and as members of society. If students discover in themselves an appreciation of self-learning as they progress through their studies, then it can only be regarded as a bonus; however, appreciation of self-learning is something which must come from within, and can only be fostered if the student is allowed the autonomy of his or her own response. Therefore, if one teacher introduces self-learning into his/her course of study as a result of the reading of this project, and if his/her students finish their study of geography feeling a little more confident about their abilities to express themselves, believing that their individual observations and opinions are every bit as important as those they find in textbooks, then the sound of a

tree falling in a forest with no one around will indirectly be heard. Seize the Day!

The Next Step

The Bruce Trail served as an educational pathway of discovery to the Niagara Escarpment. What started out as a simple hike evolved into a love affair with the Escarpment. The trail that winds along its edge gives us the means to explore its richness and allows us to be moved and inspired by its sheer beauty. The self-learning that took place through the mentorship of several individuals far exceeded any text or movie. Leaning over a cliff to get that perfect picture of the waterfall was scary and yet very exciting. Coming face to face with a Massasauga rattlesnake was hopefully a once in a life time encounter.

I will continue to hike the Bruce Trail with the purpose of completing all four sections of my field guide. Every hike begins and ends with a single foot step. Most of the time, the first step has a lot more spring to it than the last one. However, every step reveals something new about the escarpment; whether it be a family of raccoons climbing a tree in search of safety, a cedar tree clinging to the escarpment side for its existence, or myself listening to my own breathing as I take a break halfway up Devil's Pulpit.

My mentorship club continues to expand. Some mentors will stay with me for the duration of the hikes. While others will come and go, Some may only last as long as a single conversation.

Sharing my experiences with others generally results in me gaining new insights into something I had not considered or thought of before. For example, near Grimsby, Ontario, I came upon a dome-like structure sitting on top of what appeared to be an old reservoir. What was it and what possible purpose did it have? These were questions I kept asking myself. After sharing my picture of this unknown structure with several individuals, I finally found a person who supplied me with the answer. The dome was part of a float that measured how much water was in the reservoir. From the shores of Lake Ontario one could see the top of the dome with a set of binoculars thereby regulating the pumping of water to the reservoir. In short, the answers to all questions are out there. It's just a matter of discovering the answers wherever they may lie. Self-learning consists of obtaining answers to your questions. If one has no questions after a hike one could wonder how much self-learning has taken place.

The Next Next Step

The concept of hiking, canoeing, cycling, etc., any route from start to finish in order to learn something about what's in between can be used anywhere. For example, one might want to explore the Grand River by canoe. The Grand River has a very interesting past. Few people know its history and how it ties in with our Native people.

The Six Nations were given, by terms of the Haldimand Grant, the land six miles on either side of the Grand River from its source to its mouth in 1784.

In 1793, Governor John Graves Simcoe decreased the amount of land to be included in the Six Nations reserve. He then went on to state that none of the native land was to be leased, transferred or sold.

Over a period of years, Joseph Brant sold more than 140,000 hectares of Six Nations land, despite objections from Governor Simcoe and others. Among the areas sold were the sites of present day Brantford and townships of Woolwich and Waterloo.

Our self-learning through mentorship model here would involve two canoeists. Like the hikers, the students would plan to paddle the river separately. At the end of their voyage, they will share their own experiences with each other. In order to make their assignment open, they are permitted to take anything they want on their trip. A life jacket might come in handy.

Lastly, their teacher will serve as one of their mentors. Other mentors can be sought out during the term of the exercise.

Some Final Thoughts Concerning Self-Learning

Only in their dreams can men be free.

I stand on my desk in order to look at things in a different way.

Strive to find your own voice, break out and find new ground.

Learning should not be ordinary.

Find your own walk.

Free thinkers think for themselves.

I sound my barbaric Yawp over the rooftops of the world.

Gather these rose buds while ye may.

Carpe Diem.

Seize the Day.

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• THE END •

