CHAPTER 1

Readying Muskoka for Its Map-Makers

BEFORE HUMANS showed up to explore and map Muskoka, a primal universe clawed and spread, cooked liquid and solidified hard, merged and rose up. Then it broke, and drifted, and sank; held itself firm in ice, then flooded itself in meltwater. For millions of centuries, Planet Earth formed and evolved through epochs of cooling and heating, splitting and colliding, pushing up and plunging down—cycles that were neither neat nor sequential because Nature makes its own laws, follows its own timetable, and works its chaotic planet-shaping phenomena in overlapping stages.

This drama of interacting primordial elements had to reach its current state of equilibrium before humans could find and map the landscape which Nature had created; before a First Nation family could silently glide the surface of its lakes by canoe; before a pale-skinned woman in her Muskoka chair could sip chilled white wine on a dock at noon.

To just sketch how Muskoka's landscape, and hence its map, came to have the nature it does, we must skip several billion years of geological history—events outside time as humans understand it—to the most recent of Earth's five major ice ages. The Pleistocene Ice Age began its reign of icy devastation about 2.6 million years ago and

FACING PAGE *Muskoka's physical underpinning: ancient Canadian Shield bedrock, its present surface the result of millions of years of erosion and then successive scourings by continental glaciers.* FRANK MICKLETHWAITE

Continental ice sheets during the Pleistocene era extended south of the Great Lakes. This map shows the southern-most position of the final advance, known as the Wisconsin. At that point, the land that would emerge as Muskoka District lay beneath a crushing weight of solid ice some 1.5 kilometres thick.

lasted some 2.5 million years. Depending on latitude, those glaciers began retreating between 12,000 and 11,700 years ago and are now finishing that ice age's cycle at Earth's polar extremities where its Arctic and Antarctic remnants melt away under apprehensive scientific observation and "breaking news" coverage.

The advance and subsequent melting of these glaciers left Muskoka and the larger territory of which it is part with a rugged yet compelling landscape. Muskoka specifically became ice-free during a period of fairly rapid melting some 11,200 to 11,000 years ago. The local glaciers "retreated" across a broad front, from Kirkfield east of Lake Simcoe to the Mattawa River valley in the north. Glacial withdrawal is a ragged-edged affair. Ice held longer in cold deep valleys, for instance, even as high adjacent ridges and neighbouring hills were becoming exposed to open air warmth for the first time in millions of years.

Then as today, rock surfaces of Muskoka participate in above-ground events. Battlefield evidence of ground and ice exchanging blows during "glacial scouring" includes the grinding swirls of the French River's rock-face embankments, the elongated parallel lakes

gouged out like farm field furrows across southwestern Muskoka, and round "pot-holes" drilled into the rock by stones swirled at high speed by torrents of glacial meltwaters.

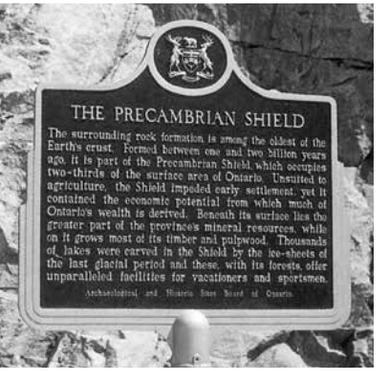
The retreat was not a pulling back, but a melting away. The glacier might even have still been moving forward, but because climate warming meant its melt-rate exceeded its speed of advance, the ice front receded. It probably took less than 100 years for the melting to liberate Muskoka's landmass from its prison of ice. Two things then came into play: what the weight of that ice had done to the terrain, and where all the water from that melting ice went.

Muskoka's glacial cover had been roughly 1,200 to 1,500 metres, or nearly a mile, thick. That weight was so immense that it pushed the land mass far down, almost to sea level. In a gargantuan version of today's annual spring freshets—when meltwater from snow and ice overflows Muskoka's river banks, lake shores, and low-lying areas—that century-long melt turned the whole region into a gigantic flooded area. The rising waters filled and then overflowed the rock basins today known as Georgian Bay, Lake Huron, and Lake Michigan. Geologists named this single extensive post-glacial waterbody "Lake Algonquin."

Despite deglaciation, much of Muskoka's land surface was not exposed to air when the ice receded. Lake Algonquin flooded in, right up against the face of the melting glacier. How this watery edge across Muskoka interacted with the land depended, naturally, on its slope and height. Prior "geologic uplifting" of the Algonquin Dome resulted in the District gradually sloping downward from northeast to southwest. Muskoka's highest land, in Finlayson Township beside Algonquin Park, sits about 1,775 feet above sea level, while Muskoka's western boundary on Georgian Bay is almost 1,200 feet lower, at 580 feet above sea water. While today we understand this significant tilt as the foundation of Muskoka's watershed, causing all the waterfalls and rapids on rivers draining down it to Georgian Bay, back in the days of the Pleistocene Ice Age's departure, that same slope meant that only Muskoka's higher central, eastern, and northeastern parts stood above water. The rest of Muskoka's land, half of the present-day District's territory, was submerged under Lake Algonquin, its abutting edge constituting the shoreline.

Archeologists and historians specializing in Indigenous peoples

believe it quite likely that humans visited what is now Muskoka during the Lake Algonquin period. One archaeological study conducted a dig at a location just northeast of Bracebridge, selected as a possible place for an encampment on the shore the glacial lake. While nothing was found there, Indigenous artifacts in north Muskoka, unearthed near the former shore of Lake Algonquin, were dated to the period 11,300 to 10,400 uncalibrated radiocarbon years ago. In 2014–15, when Huntsville teacher Shelly Yearly was researching her 2019 history of



Most plaques have precise locations, such as a fish weir marker where the fish were trapped at the Narrows between lakes Simcoe and Couchiching, or in the village of Port Carling to celebrate the "disappearing propeller" boats because that is where they were built. But marking the vast Canadian Shield is a fielder's choice. Of the endless possible locales, the Ontario Historic Sites Board chose Bala—as rocky a place as any, and in Muskoka which makes for conspicuous viewing. This plaque is conveniently in a parking lot, just south of the village's south bridge on the east side of Road 169, at coordinates N 45 00.684 W 79 36.876.

The marker's officially approved text, reproduced below for easier reading, has three shortcomings. Saying the Precambrian Shield is "unsuited to agriculture" simply parrots the insensate view of farming in Muskoka. Referring to "mineral resources" and "pulpwood," although certainly true for areas of the Shield, is not applicable to Muskoka. And, finally, only using the geologist's term "Precambrian" is confusing for a general public far more familiar with popular usage "Canadian Shield" for identifying this landform. MUSKOKA LAKES MUSEUM

THE PRECAMBRIAN SHIELD

The surrounding rock formation is among the oldest of the Earth's crust. Formed between one and two billion years ago, it is part of the Precambrian Shield, which occupies two-thirds of the surface area of Ontario. Unsuited to agriculture, the Shield impeded early settlement, yet it contained the economic potential from which much of Ontario's wealth is derived. Beneath its surface lies the greater part of the province's mineral resources, while on it grows most of its timber and pulpwood. Thousands of lakes were carved in the Shield by the ice-sheets of the last glacial period and these, with its forests, offer unparalleled facilities for vacationers and sportsmen.

the family's generations-old Springfield Farm at Fairy Lake, she consulted specialists Bill Allen and Dick Day about numerous Aboriginal stone-cutting tools, pounding tools, arrowheads, and spearheads retrieved over the decades at or near the farm's beach. Sections of Springfield Farm are high enough to have remained just above Lake Algonquin's shore (see map page 7).

The Lake Algonquin strandline, which extended in a north–south direction through Muskoka, also appears from archaeological information to have played an important role in determining the extent and era of Indigenous settlement of the Lake Simcoe lowlands.

Settler society's written records support some of this history as well. Florence Murray notes, in her 1963 collection of original Muskoka and Haliburton documents, how surveyors laying out Muskoka's townships "frequently saw signs of Indian occupation." In 1862 for instance, George Rykert, working in the Lake of Bays area's Ridout Township, "noted that it was the favourite hunting ground of the Lake Simcoe Indians who also made large quantities of maple sugar." From McLean Township, Robert T. Burns reported how "a few acres have been cleared by the Indians, on which I noticed corn and potatoes growing." J. P. Vansittart's survey report on Brunel Township observed "it is highly valued by Indians as a hunting ground, two or three families of whom camp here every fall and winter."

Yet whatever happened in the 1800s, and even over past millenniums, does not nail down the beginnings of Indigenous occupation of Greater Muskoka following the Pleistocene Ice Age. Establishing even approximate dates for initial First Nation presence has value because of its nature, the ongoing realities of present-day Canada, and the trajectory it provides for Indigenous history. In 2021, several non-Indigenous individuals promoting Muskoka Discovery Centre's work-in-progress First Nations heritage exhibit *Misko-Aki* in Gravenhurst asserted that Indigenous presence in the District began 13,000 years ago—one of those miracles that typically accompany an enthusiast's hype. However, both the established evidence of when Muskoka's deglaciation occurred and Lake Algonquin's subsequent presence combine to suggest a date considerably more recent than that.

A 1994 report jointly to Muskoka District and Wáhta Mohawks, prepared by Archaeological Services Inc., indicates that initial First

Nation presence inland from Lake Algonquin "took place when the climate and vegetation was comparable to that of the modern sub-Arctic." While that is a helpful marker as something people today can compare with what is currently visible and understandable, it just means that humans and other creatures couldn't live in Muskoka until conditions, temperature and food supply especially, were right.

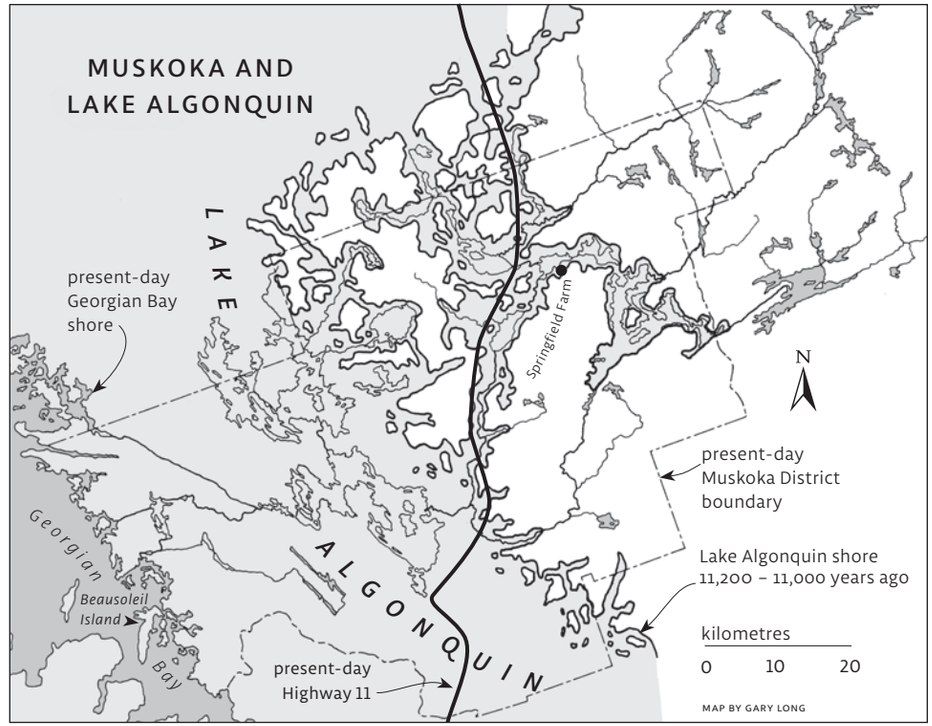
Two sources for more specific dating are scientific deductions of archaeologists and anthropologists, and Oral Tradition accounts of First Peoples.

The Sagahanirini—"People of the Inland Lake"—were Ojibwe who lived along Georgian Bay's shore and its interior drainage basin. Although it is unclear the extent to which their small bands and families hunted and fished in the Greater Muskoka region, it is certain that they did because archaeological evidence indisputably proves their presence. Radiocarbon dating of artifacts from the Sagahandah site on the eastern portion of Manitoulin Island in Georgian Bay establishes that it was occupied some 9,500 years ago.

In Muskoka itself physical proofs also endure, from the extensive collection of points and tools at North Muskoka's Springfield Farm to similar artifacts gathered at the permanent settlement of *Obajewanung*, and elsewhere. While the science of carbon-dating such items establishes how old they are, determining their provenance is sometimes just as important—to know how long they have been at a particular site. For instance, a spear point or stone tool found in Muskoka carbon dated to have existed for 5,000 years may mean it had been crafted where found, but could also mean that it had been traded, as an already venerated specimen, and brought to the site more recently. There are many possibilities.

At Springfield Farm, for instance, Bill Allen photographed and measured each, while Dick Day addressed their provenance. Although many artifacts had been unearthed at or near the beach, decades of extensive clearing and ploughing the fields had not produced a single Indigenous specimen. Focusing then on watery areas, their research indicated a probable early presence of eels in the creek draining the property, drawing First People to the area to catch them and hunt for larger animals of the local food chain.

From the time of first humans exploring and testing habitation



Lake Algonquin inundated more than half of present-day Muskoka District. The dark line down the centre of this map—route of Highway 11—makes it readily apparent how far inland the glacial meltwater lake extended. Lake Algonquin stood just 20 feet higher than present-day Georgian Bay, but the extensive flooding of Muskoka, and other regions, was because the enormous weight of the ice had so greatly depressed the land surface. This depression increased in a northeasterly direction, towards the thickest part of the glacier.

As the glacial front retreated north, Lake Algonquin immediately filled in behind it, meaning that until Lake Algonquin itself began receding, beginning 11,000 years ago, western Muskoka was suitable habitat only for fish. Lake Algonquin dropped quickly once the ice front pulled back from the Mattawa valley, allowing its confined waters to then drain down the Ottawa River, the St. Lawrence, and into the North Atlantic. At the same time, the depressed land, relieved of its icy burden, began to rebound (a process called "isostatic uplift"). The Muskoka Lakes emerged about 10,700 years ago, Beausoleil Island about two centuries after that—the earliest that birds, animals, and humans could have inhabited western Muskoka.

Isostatic uplift has raised the former Lake Algonquin shoreline about 300 feet at the southeast corner of Muskoka, and more than 500 feet at the north end.

possibilities of newly de-iced Muskoka, to the time of European colonization of the District in the 1800s, is a long jump. Because archaeological evidence suggests that First Nations were present as long as 5,000 or even 8,000 years ago, turning to additional Muskoka geological experience with Lake Algonquin helps shed needed light on the chronology.

As time passed and the ice front receded ever farther, it finally exposed a series of progressively lower outlet channels from Lake Algonquin, the last of these along the floor the Mattawa River valley east of North Bay. Like a suddenly unplugged drain, all that blocked water could now escape east to the Ottawa Valley. Lake Algonquin steadily dropped and its waters receded from Muskoka.

Lake levels fell until today's recognizable Georgian Bay, Lake Huron, and Lake Michigan each emerged as a distinct water body, all at the same level. In time the land rebounded upward, readjusting to the absence of the crushing weight of the ice. Some 5,000 years ago this region of water and land reached its general equilibrium familiar to us today.

It did not take long for resilient Nature to reintroduce living things across the now exposed area. Almost as soon as land felt sunlight and got oxygen, plant and animal life moved in. Birds and small mammals quickly appeared. This rebirth, in its post-glacial stages of succession, was comparable to what we witness with similar ecological gradations today. Moving southward from Canada's Arctic environment and tundra conditions, for example, next come areas where plant and animal life adapt to a slightly more nourishing habitat. Then, farther south of the tree line, comes boreal forest and, finally, the mixed deciduous-coniferous forests of Muskoka. Another example of this shifting sequence is seen when ascending a mountain's graduated climatic zones, from a lush valley at its base through colder temperatures and diminishing life forms until

Gordon Lightfoot in Muskoka woods.
Everett Collection Inc. / Alamy

reaching snow-covered peaks where oxygen is limited to none existent. A reverse version of that is offered by the many different "climates" in deeply recessed gorges of Collingwood's Blue Mountains, which become increasingly colder with more primitive life forms the lower one descends.

In similar fashion, the chronological era of Muskoka becoming habitable varied. "Little Ice Ages," less dramatic than the glaciation dramas of Earth's large-scale recurring ice ages so far, have altered regional climates and ecology. Following the "Mediaeval Warm Period," for example, several cold snaps extended from the 16th to 19th centuries. NASA's Earth Observatory identified three especially cold intervals, one that began about 1650, another around 1770, and most recently in 1850—all separated by periods of slight warming. These frigid interludes, to reiterate, were not globally synchronized events incorporating the extended glaciation such as experienced many times, most recently during the Pleistocene Ice Age, but instead regional phenomenon. As the *Third Assessment Report from the Intergovernmental Panel on Climate Change* notes, these "independent regional climatic changes" touched such widespread locales as Alaska, Patagonia, and New Zealand.

Scientists attribute these significant temperature fluctuations to a half-dozen different causes: cyclical lows in solar radiation, heightened volcanic activity, changes in oceanic circulation, variations in Earth's orbit and axial tilt, the inherent variability of the global climate, and major decreases in the human population. Big drops in population levels occurred, for instance, during the years-long Black Death, and the epidemics throughout the Americas in the wake of European Contact with Indigenous peoples. If not a "Little Ice Age," Muskoka at least once felt the temperature impact of "heightened volcanic activity." In the early 1800s, ice remained on the lakes one summer because clouds of ash, drifting east from Mount St. Helens's long-smouldering volcano that year, blocked the sun's rays and cancelled seasonal warmth.

Over the more than four billion years that planet Earth has been continuously creating itself, Nature radically re-sculpted Muskoka's landscape many times. Extreme makeovers, continuing upheavals, and intermittent glaciation changed far more than any road-contractors' dynamite, or even atomic bombs, ever could.

"Big Bend" on the Big East River in Arrowhead Provincial Park, just north of Huntsville. The stream carved this 20-metre-high bank through thick deposits of sand and silt laid down some 11,000 years ago as a delta in glacial Lake Algonquin by a meltwater spillway coursing down the Big East valley. Photo by Gary Long

"This rock I'm sitting on is about two billion years old," gestures Gordon Lightfoot as gentle waves rhythmically lap a Muskoka shoreline near his feet. "It will probably be here another two billion years."

Suddenly a dynamite blast startles him and interrupts filming. Road-crews are reworking a section of the ancient Canadian Shield he is in the process of celebrating. "That is," startled Lightfoot blurts out in anger, "if they don't destroy all this natural beauty first!"

The seasoned performer pauses, takes long slow breaths, and regains composure. The cameraman resumes filming. "I remember these rocks," says the becalmed 29-year-old, "from a long time ago. A lot of the images in my songs are drawn from this kind of country."

It is the summer of 1967. Canadians are celebrating a century of Confederation, a modest timespan indeed, in the context of Lightfoot's "billions of years" message. The cameraman is recording the creator of soulful ballads and heartfelt love songs describe for a national CBC Television audience how he draws inspiration from Muskoka.

"This is part of the Canadian Shield, this rock. It starts about four miles south of here and you don't see any more of it going south after that. I've been a lot of places and I've seen some nice country, but I don't think any of it will stay with me or impress me as much as this country here in Muskoka. It's the country I grew up in."

During his 1950s summers, Gordon Meredith Lightfoot Jr. drove a Wagg's Laundry delivery van north from Orillia, a guitar his constant companion, making the rounds of Muskoka's resort hotels to exchange clean bed sheets, towels, and table linens for soiled ones to be laundered. "Long before he was famous," wrote Kirsten Worley in her 2019 memoir describing Bala Bay Manor and its mostly American vacationers, "Lightfoot would often sit in the Manor lounge and play guitar for the guests."

Driving farther north to Lake Rosseau, the touring troubadour arrived at Windermere House to swap more laundry and check in on Ruth Crouchly, a welcoming waitress in the summer resort's coffee shop. "Gordon would sometimes steal an hour from his summer job to serenade teenagers down on the docks," she fondly recalled, or create music with "local lads who played guitar."

For Lightfoot and thousands of others, Muskoka's ancient rocks, fresh lakes, green pines, and particular people became a hedonistic paradise. In his own words, he sometimes "stole away in the noonday sun," or after "the mill shut down," to Bill Skinner's Windermere farm and entered a "wonderland in love among the flowers where time got lost." Summertime loving meant a young couple could "rendezvous" and "live like a king and a queen in a one-horse way" down a road by a butternut grove and pond. These lyrics, a few years later, would convey his rich Muskoka imagery to millions of North Americans when Lightfoot's hit "Summertime Dream" soared up the charts.

In someone born and raised in adjacent Simcoe County, Gordon Lightfoot's Muskoka adventures awakened awe for the Shield's magnetic presence. Lured north from Simcoe's warm-water mud-bottom

lakes, the athletic and sensitive youth could swim the invigorating rock-rimmed fresh waters of Muskoka, hike its green-canopied back roads, clamour up its massive outcroppings, gaze across its deeply forested landscapes, and loose himself in Time …

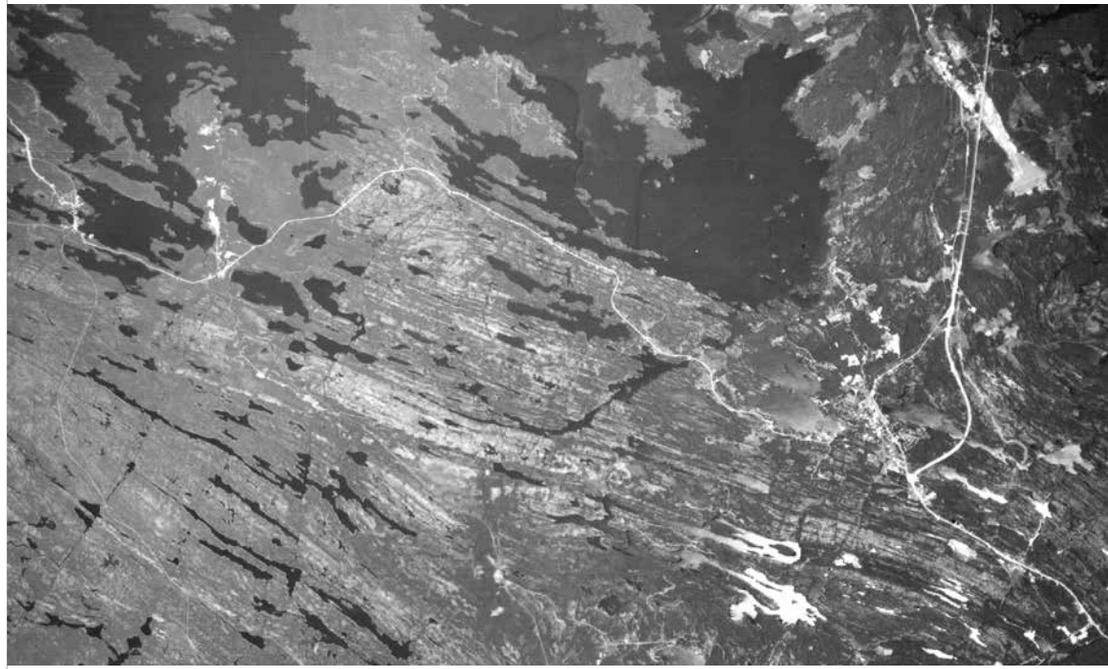
When the green dark forest
Was too silent to be real

THE PROMINENT Canadian Shield, if seen from high above or on a map, resembles a gigantic mid-continent horseshoe, open at the top, holding the waters of Hudson's Bay. Not entirely within Canadian borders, its pre-Cambrian rock can also be found above ground in Minnesota, New York State, and where it extends across to Greenland.

However, below grade this ancient bedrock reaches extensive parts of North America where people never think of themselves as being on, or above, the Canadian Shield—simply because general maps do not disclose its substratum presence and deep soil hides this foundational rock so well that it is almost never encountered in southern Ontario or beyond, except by very deep excavation. That is why Gordon Lightfoot observed, about leaving Muskoka, "you don't see any more of it going south after that."

What he came to cherish, and several millions more have come to know over time, is how the differential erosion of harder and weaker bands of the folded and tilted gneiss produced Muskoka's present structure of hills, ridges, basins, and valleys, with the most durable parts capping their summits. Parallel ridges and lines of hills separated by valleys, a typical characteristic of eroded gneiss, dominate Muskoka's typography. "This attribute shows up," notes geographer Gary Long, "in western and southwestern Muskoka—the long narrow islands and peninsulas on the western side of lakes Joseph and Muskoka."

NATURE MAKES THINGS by constantly revising them, its variety pack of changes we give the single name "evolution." Even the Pleistocene Ice Age was no single event but rather a series of four glaciations—advances and retreats. This icing and de-icing of Muskoka and the larger Canadian Shield section to which it is integral meant that over millions of years high ranges were ground down and heavy ice dragged substrata rocks out and over the land's surface, gouging out



This aerial photo of part of Lake Muskoka and country to its south shows the parallel ridge physiography characteristic of southern and western Muskoka, caused by erosion of Canadian Shield gneiss and subsequent scouring by continental glaciers. ONTARIO MINISTRY OF NATURAL RESOURCES

both large and small rocky basins that filled with water and have left Muskoka dotted with lakes and wetlands.

Today's extensive waterbodies throughout the District owe much to rock's impermeable nature. River banks, lake shorelines, and lake bottoms that are rock encasements do not readily allow water to seep out. The majority of Muskoka's flowing and standing waters thus differ from lakes in regions covered in deeper layers of unconsolidated materials where surface water levels may vary with the rise and fall of surrounding water tables.

Glaciation also removed much of Muskoka's soil. When the last glacier melted, it left behind on the bedrock an uneven layer of "till"—a variable mixture of boulders, stones, sand, and finer materials that had been swept up into the ice during its advance. Meltwater

pouring from the receding ice front laid down thicker stratified layers of gravel, sand, and silt along many valleys east of the Muskoka Lakes—"glaciofluvial" deposits which today are an importance source of sand and gravel, extracted for use as fill and for the production of concrete and asphalt. On the floor of Lake Algonquin finer particles carried in by the meltwater streams settled and accumulated as thick layers of clay. In the vicinity of Bracebridge and Huntsville this clay once supported a thriving brick-making industry. But the glacial till thinly blanketing the greater part of the District severely limited the opportunities for traditional farming.

The retreating ice sometimes stranded giant pieces of rock, souvenirs geologists call "erratics," atop flat open fields and table rocks. These lone sentinels on the landscape are Nature's inuksuks. To the Inuit, an inuksuk is a reassuring landmark and guide, the marker of a prior human presence signifying "someone has passed this way before." For Muskokans, an erratic is the Pleistocene Ice Age's reminder that "a glacier has passed through here."

Greater Muskoka includes the exposed rock between Georgian Bay and the Ottawa Valley. By the early 1800s, when "Huron Tract" became the term military engineers, explorers, surveyors, cartographers, land companies, and government officials used for more southerly territory east from Lake Huron, a different term came into vogue for this northern zone. The "Huron–Ottawa Tract" name prevented confusion about two different zones inland from Lake Huron. Muskoka and Parry Sound, on Lake Huron's Georgian Bay shore between the Severn and French rivers, anchored the western part of this much larger quadrant.

Central to watersheds of the Huron–Ottawa Tract is the "Algonquin Dome," a huge upward bulge of the Canadian Shield's rock. Its loftiest central part, more than 350 metres above Georgian Bay, comprises the beautifully rugged Algonquin Highlands. At slightly lower elevations on the Dome's perimeter, these hills merge into equally rugged terrain extending, on the southeast, well into Muskoka. For a number of decades, before Muskoka came into its own as a destination, the District was promoted as a part of a generic "Highlands of Ontario" that also included the Almaguin Highlands to the north, the Algonquin Highlands to the northeast, and the Haliburton Highlands

to the east. Since then the geology has not changed, just Muskoka's tourism marketing.

The Algonquin Dome's rounded pinnacle, and the slopes running downhill from it, cause its rivers to flow away in all directions. The dominant drainage, however, is eastward to the Ottawa River and westward to Georgian Bay (see map page 115). Because the primary way to travel through Canadian Shield territory was by water, the network of rivers and lakes determined human orientation. The Dome not only provides the characteristic features of Muskoka's watershed and the idyllic vacation economy which this lakeland eventually fostered, but this east–west orientation also influenced larger patterns of Ontario's forestry, mining, agriculture, transport, and military defence. Essential to exploration and surveying, these drainage networks set the ground rules for Muskoka's mapping by canoe and the District's economic and social development until the 1970s.

ONCE NATURE had adjusted all its liberated water, and after Great Lake levels and Georgian Bay's shoreline achieved their present state, plants, birds, fish, and animal life re-colonized the Great Lakes basin and Muskoka. It was inevitable that humans would follow, to likewise work with whatever landscape Nature had prepared for them.

Sometime after that, Gordon Lightfoot would walk empty shoreline paths in early morning stillness near Lake Rosseau, where …

Time has no beginnings
And hist'ry has no bounds …