

INTRODUCTION

THIS BOOK STARTS IN A SMALL FIELD. The field is hidden behind a sagging split-rail fence, moss-covered with age, and the thick growth of small trees and brush that have grown up around the posts and rails of that narrow refuge. The field is at the end of a long dirt track, at the very back of a farm in south-central Ontario. At the far end of the field, a flat bench of sandy ground slopes down to a large cedar swamp, a tangled and gloomy place that extends for miles eastward into the next township and beyond. The field is quiet except for the raucous cawing of some crows in the trees along the fence row and the dry rustle of grasshoppers darting from the stubble under the feet of a lone human figure walking across the field. At first glance the field seems quite distant from the modern world, and unaffected by it. Yet the dimly heard rush of cars and trucks on unseen roads is a reminder that the world is not far away. This nearness is also evident in the large tree stumps scattered along the fencerow and in the bits of glass, rusty metal, and brick exposed in the sandy earth thrown up by a farmer's plough. Clearly the world and its turbulence have visited this field and changed it. But after that brief intrusion the field was as quickly abandoned. And the slowly walking figure enjoys the sense of abandonment, and the feeling of suspended time it brings.

Despite its peacefulness, the field is not as empty and unremarkable as it seems. This is an illusion, which the slowly walking figure will realize in just a few short steps. For the field and adjacent cedar swamp are actually a sort of museum. This museum without walls is filled with the bits and

pieces of previous times and different worlds. Relics of the past are everywhere – in the rise and fall of the land and the sediments they contain and in the fossils they entomb – and yet are jumbled together and camouflaged by our preoccupations with our own lives and the thin veil of the present. In a moment this veil will disappear briefly for our hiker, interrupting his walk and changing him in a small but important way. He suddenly pauses and looks again at something on the ground that seems out of place. Angular and symmetrical, it stands out from the clump of soil within which it is partly embedded. He pulls at it tentatively, frees it from the earth, and then picks it up. For an instant he is uncertain and then realizes with growing excitement that it may be an Indian relic, possibly even an arrowhead. As he turns it over carefully in his hand, almost unbelievably, he admires the way in which the stone was shaped. The distinct weight and feel of it immediately stimulate a strong sense of connection with the past and an empathy for another human being, long dead. Who did it belong to, he wonders, and how long ago did the person live? The hiker stands for a long time lost in thought and wonder and then carefully pockets the artifact and turns to go, thinking of the story of discovery he will tell his friends.

But that story is sadly incomplete. Our hiker would be surprised to learn that the artifact was not made within the last few hundred years but over 11,000 years ago. He would also undoubtedly be impressed that what he thought was an arrowhead was actually the tip of a throwing spear used for hunting caribou. And that the person who made this spear point was a member of a small band descended from a group of colonizing people who were the first humans to occupy the land after the retreat of glacial ice at the end of the Ice Age. Finally, our hiker might be astonished to learn, because he wouldn't have imagined the very same place to have once been so different, that the family of the person who made the spear point lived for a short time on that very spot, not on the edge of a cedar bog as today but on the shore of a glacial lake. That lake, larger by far than any of the Great Lakes today, was bordered to the north by the retreating ice sheet. And from the shoreline where our hiker now walks, a vast parkland tundra began. Filled with small clusters of spruce in protected areas and along water courses and large open areas of grasses, mosses, and lichens, this parkland tundra extended far south and beyond the future city where our hiker would be born and live.

The story of the Ice Age people who lived in this place, hidden within the small tool in the hiker's pocket and in widely scattered corners of the modern landscape itself, was written only after a very long search. This book is about that search and the story it revealed.

Both the search and the story recounted here are told from the perspective of my own personal journey in archaeology over almost thirty years, a long career that I am happy to say is not yet over. While autobiographical, this is not my last work but more a progress report. And being autobiographical, it is a personal document rather than a textbook. It is also, as these things must be, a reflection of a particular time, in this case the period from the mid-1960s to the present. Consequently, my story encompasses only a very small part of the total history of archaeology and the centuries-old effort to determine when people first colonized the Americas and how they lived when they arrived. Although I am a late-comer to the long chain of scholars who have worked before me on this problem, I have faced questions – and personal doubts – that I believe are felt by all who wish to learn and to expand knowledge.

The task is difficult and involves asking appropriate and sometimes new questions, obtaining the information relevant to answering those questions, and interpreting the information correctly. All are crucial, influencing the final results of the research, but the first two – asking the appropriate questions and finding the relevant information – are often very difficult to translate into actual fieldwork. This is true, in part, because archaeological sites become more difficult to find as one moves deeper into the archaeological record. And clearly without archaeological sites and the information they contain, nothing further can be done. This problem of finding sites – of knowing where to dig – intrigues people, as do the many challenges of interpreting the archaeological record. These interests, shown time and again by all kinds of audiences after public talks, are what stimulated me to write this book. Although the ultimate objective of my work is to write about an ancient people and the world in which they lived, that story contains within it a parallel one about the actual process of doing archaeological work and the successes and failures along the way. These stories, one scientific and the other more personal, are inextricably bound because as individual scientists our interpretations of the lives of the people we wish to know are shaped by the strengths and weaknesses of our own scholarship. There is an irony in this: that the story of the past can unknowingly be altered, through error and bias, by the very people who wish to discover it. It is therefore comforting to know that the final picture will be drawn by the synthesis of numerous individual accounts such as this. For that purpose, this is my story.

As a student and would-be scholar of the initial peopling of North America, I've had opportunities to visit and work at some very important sites, but since 1970 my fieldwork has been focused in Ontario. While this

province is very large and obviously important to the people who live here, it is also clearly a very small place in the western hemisphere as a whole. How and why, you might ask, is the study of the early peopling of Ontario important to those outside Ontario? The answer to that question has to do with the way in which science progresses. It is generally uneven, with advances in knowledge leapfrogging from one place to another. Only a few decades ago archaeological interpretations of the earliest peoples in Ontario, indeed much of eastern North America, were based on discoveries in the southwestern United States, where the earliest discoveries were made, and in the western Plains, where many kill sites had been found with preserved animal bone. Over the past fifteen or twenty years that situation has changed, and today nearly everywhere in North America archaeologists can look to local and regional discoveries for their interpretations. Archaeologists now realize that the earliest peoples in different parts of North America may have led quite different lives under different ecological conditions. This is certainly true for the Great Lakes region and possibly part of the northeastern United States, which may have constituted a single, distinct ecological zone at the end of the last Ice Age, requiring somewhat different kinds of human adaptations than those required in the Plains, the southeastern United States, or the far north. Furthermore, in recent years, archaeological research on the earliest peoples in Ontario has in some respects outpaced that in neighbouring provinces and states. For now, at least, the data from Ontario provide one of the most detailed pictures of the nature of early human occupation in the Great Lakes region as a whole. The data therefore serve both as a framework for interpreting new discoveries and as a target for other archaeologists to challenge. For these reasons, the developing story in Ontario is of widespread interest.

Finally, I had another motive for writing this book. I wish to give something back to the general public for the years of funding that supported my work. Generally speaking, the public hears very little about the results of tax-funded research. Even the academic community frequently sees only fragments of scholarship from larger projects. Final reports, whether technical or written for the general public, are much rarer. There are probably many reasons for this, but judging from my own experience, perhaps one of the most important is that from day to day or even year to year, most scholars are completely preoccupied with the demands of the academic world. And this world places a very high value on productivity and excellence. This is not unreasonable. Considering the freedom in academic research to work when and how you want, these standards are necessary. But there is a drawback. The most common ways in which

productivity and excellence are achieved are by publishing short papers (which add up quickly and therefore contribute to productivity) on narrow topics (which can be researched in depth and therefore demonstrate excellence). Inevitably, the average academic will find him- or herself in a kind of closed loop, writing up short papers to establish a track record and simultaneously to obtain future opportunities to improve that record. The danger in this, aside from the risk of never accomplishing anything substantial, is that a person may also become progressively more concerned with beginnings – grant proposals, abstracts of yet unwritten papers to be delivered at conferences, plans for future fieldwork, and so on. This treadmill goes in only one direction – forward – and at one setting – ever faster. And sometimes it turns in on itself and focuses on ever narrower subjects. There is no time left for endings, such as final reports that have been thoroughly and completely researched or books for the general public.

This book is an attempt to change that, at least with respect to my own actions. And thus it is about endings, the results of research.

Technical Note

The Early Paleo-Indian peoples discussed in this book are known primarily from their stone tools. These tools include distinctive types of spear points (such as Clovis and Folsom) that give their names to the total assemblage of objects. These assemblages are often technically referred to as complexes (the Clovis complex, Folsom complex). In this book I have somewhat loosely referred to complexes as cultures. At best this is an oversimplification because the stone tools and other objects that survive in the archaeological record were once just a small, and possibly even unimportant, part of any human group's cultural identity. Nevertheless, for my purpose here I prefer the word culture because it humanizes the story.

Academic opinion is divided over whether the word *mastodon* should end with or without a final "t." The difference of opinion involves questions about evolutionary relationships and the most appropriate names for reflecting those relationships, as well as about the correct way to form vernacular words derived from Greek. As there appears to be no consensus, I have decided to use the term most familiar to the general public, *mastodon*, following the third edition of the *Oxford Dictionary of Current English* and other modern dictionaries.

All radiocarbon dates are expressed in radiocarbon years before present (years BP). By convention the present is regarded as 1950, a time before the ratio of radioactive and non-radioactive carbon atoms in the atmosphere, a property crucial for calculating dates, was affected by nuclear

testing. Attempts to correlate radiocarbon years with calendar years, by dating, for example, objects of known calendar age, indicate that radiocarbon dates falling between 10,000 and 11,500 years ago, the age span we are concerned with here, are *younger* than their equivalent calendar dates. Thus, a radiocarbon date of 11,000 years BP, for example, represents a calendar date of approximately 12,950 years ago. The disparity between radiocarbon years and calendar years is not important for the discussion in this book, however, and as there is no universally used correlation scheme uncorrected radiocarbon dates are presented.

Time also has other meanings in this book. The story of my research is written chronologically, as it occurred. I tried to write from the perspective of what I knew, or thought I knew, at particular times and of what was then generally known, or thought to be known, in my discipline. The additional, boxed information, however, represents current knowledge, at least for the period 1997-2003, when I wrote and made final revisions to this book. Thus in the following pages, time flows in several dimensions simultaneously: geological and archaeological time, as measured through radioactive decay; calendar or historic time; and personal time (as I remember it). All flow at vastly different rates yet are part of a single story.