

J. S. Erskine

NOVA SCOTIA PREHISTORY

OUR BOOKS ON CANADIAN HISTORY often begin with a brief sketch of the Indians with whom Europeans first came in contact, but the fact that these Indians had had a long previous history (or prehistory, since it was not written down) is usually ignored. In Nova Scotia there has been much excuse for this situation, as the last archaeological work done in the province was completed in 1914¹ and of it Diamond Jenness wrote that the excavations "have failed to prove conclusively that there was any occupation of this area before the eleventh or twelfth century A.D."² In 1957 the Nova Scotia Museum began a tentative study of the subject. Of course, the best archaeology—and ours has been amateur—has its limitations, for it is trying to reconstruct the history of an area from its rubbish heaps, which is like trying to compile the story of our century from the waste of cans around an incinerator. Yet in seven summers we have changed the picture considerably.

No evidence of the existence of man in America antedates the latest glaciation which, from 70,000 until 11,500 B.C., covered the continent with ice south to the Great Lakes. So much water was locked up in these glaciers that the level of the ocean was lowered by some four hundred feet, which left an ice-free land-bridge linking Siberia to Alaska. During a mild period around 40,000 B.C., the first immigrants seem to have arrived. Skulls, though of a much later date, suggest that these were chiefly coastal food-gatherers of Australoid (early white) type such as were common in southern China three thousand years ago. These people had a very limited equipment of stone tools and depended largely upon wood, quite unlike their contemporaries then invading the European caves.

In the twelfth millennium B.C. the ice began to thaw in earnest, and a new people turned up on the prairies. We do not yet know their race, but their tool-kit is largely familiar—the long blades and well-chipped spearheads and the battery of hide-scrapers that we associate with the Upper Paleolithic people of the Eurasian tundra. The oldest known American group of these hunters, the "Sandia",

often made their spearheads with a single shoulder, but so did some Solutreans of southern France; these early American hunters often struck a longitudinal flake down each face of the completed spearhead, making a groove or fluting which helped in binding point to shaft, but so the Solutreans had done very occasionally. It is a long way from France to the Prairies, but these were nomadic hunters with thousands of years to wander in. They found the American prairies and the tundra south of the ice richly stocked with herds of familiar large mammals—the mammoth, caribou, horse, and bison. A later group of hunters making long fluted spearheads of a type called "Clovis" followed the caribou eastward to the Atlantic.

During the ice-age, Nova Scotia had been pressed down and tilted under its immense burden of ice so that the shrunken ocean cut terraces or built beaches from ten to one hundred feet above the present sea-level. Now the ice melted away slowly from the lowlands, leaving a wrecked confusion of boulders and till on which there soon grew up a scanty vegetation of lichens, moss, and sedges. Into this desolate land came the caribou, probably swimming the channel at Tidnish, plodding southward in grey hundreds through the Parrsboro Gap, following the beach eastward past Truro, and then drifting in bands into their summer pastures. Before long the Clovis hunters followed them and pitched their camp on the sand-plain of Debert where they could harvest the caribou on their way into and out of the peninsula. About a dozen families were there, living in skin tents, chipping the chalcedony that they had brought from near Parrsboro, and even retouching chips as scrapers, since they had come into an area without workable stone. This was in the ninth millennium B.C. When autumn came, the caribou retraced their steps past the camp, abandoning the peninsula with its deep winter snows, and the hunters followed them westward toward the mainland forests which offered adequate fuel and shelter against winter winds. In spring the hunters returned to their old camps, which had been thinly covered by a layer of sand that the west wind up the bay swept from the beach. So their life continued for some years. The melting ice exposed stretches of land to the northward, and caribou and hunters turned to the new pastures. We have found nothing to suggest that these people contributed anything directly to the later Indians of Nova Scotia.

At much the same time a group of quite different people were encamped at the mouth of the Medway River. They built their fires on the gravel bars of the delta, today twenty feet above the highest tide. Layers of ash and chips of schist, locally known as "blue whin", separated by layers of river-laid gravel, rose to a height of eleven feet. Only at the time of the great thaw would the land have been pressed down to this, its lowest point, and only then would the river have been carrying

gravel yearly to the edge of the sea. The lowest hearths touched the glacial boulders and can scarcely have been later than 10,000 B.C.

By mischance the site was destroyed for road-gravel before we were informed of it, and we had only the acute observations of the discoverer on which to base further search. He had noticed the exclusive use of this blue-whin stone, and we had never seen points made of so poor a material. We hunted through local collections and turned up a few of them, clumsy things as thick as they were wide, and we even found one in a gravel pit on the high terrace which had been the river bank in early post-glacial times. The "Blue-whin" people must have fished, for only fishermen would camp on such a delta; they must have hunted, for spearheads as clumsy as these would have been no help in fishing. Probably most of their tools were of wood, and probably they belonged to the food-gatherers who were the first Americans. Along the high terraces of the Mersey and Medway Rivers their points, ground from blue-whin or slate, mingle with others only slightly less crude, and these merge into the relics of the early Archaic culture. The Blue-whin people, rather than the Clovis, are the first true Nova Scotians.

Once the ice had gone, the land began to rise again, a yard or two in the century. Rivers cut down their beds and, in the warm millennia that followed, hardwood forest crept over the land and with it a fauna of moose, beaver, and white-tailed deer. Probably new groups of Indians seeped in, since tools changed along lines familiar to the south of us. For knowledge of these people here we are dependent upon private collections, as the Mersey, once the best fishing river of the province, has also been the most exploited, and we have found no undisturbed sites along its banks. However, gravel pits and cottage foundations have unearthed clusters of implements from the high terrace, and these seem to belong to a very early time. There are medium-large clumsy spearheads chipped by an unusual technique, and rude chisels of blue-whin or sandstone. A broken gouge, very shallow and cumbersome, was found forty feet above the present level of the Medway. These seem to belong to the making of dugout canoes and so to the forest period, but they are only stepping-stones across the millennia that separate Blue-whin from familiar Archaic artifacts. No such tools have been found except on the Mersey and the Medway, but only experienced collectors would recognize these crudities as man-made.

Another important site at the head of tidewater on the Gaspereau River in Kings County has yielded very different antiquities. The southern high terrace, now one-third of a mile from the river and forty feet above it, has produced two points that suggest the spearheads that succeeded the fluted points farther west, and north-

ward along the terrace was a three-quarter-grooved axe of a type that may have come in from China with the Athapascan tribes very long ago. Elsewhere large tools of Upper Paleolithic workmanship have been found on ridges or terraces overlooking marshy shores, perhaps lookouts for game, and blades like these have never been found in fishing sites. Techniques of the tundra hunters were coming in, but we cannot yet tell whether they persisted among separate groups or, as was certainly the case in later times, hunting and fishing were carried on with different equipment by the same people. By 2500 B.C. the fusion of cultures seems to have been complete.

During the late Boreal Archaic period, after 2000 B.C., the whole of Nova Scotia was sparsely occupied, for we find in all areas camps characterized by the fine gouges and plummets that belong only to this period. Gouges were of many shapes and sizes, of ground slate or schist, a few of them with projecting studs so that they could be lashed more firmly to an adze-handle. They were not used only for canoe-making, for every year on the Medway the salmon, digging their spawning-pits in the gravel, unearth gouges which must have been lost in setting up weirs. Plummets of stone, resembling carpenters' plumb-bobs, may have been weights for throwing-nets. Almost always they are found in fishing-sites on rivers. Peculiar to this period but less frequent are beautiful knives ground from slate, bevelled at the edges and often with neat handles. The vast majority of these have been found broken in fishing-sites, and it seems that the type, if not the masterpieces, served chiefly for scaling fish.

Life must have had its good times for these Archaics or they would not have had the energy to make works of art of their tools of ground stone. Fishing, no doubt, was very good in its seasons. The climate, too, was warmer then than now, though in winter this may have been a disadvantage. It was in open winters that later Indians starved, for they were unable to run down their game without the help of hampering snow. We have found no winter hunting-camps of the Archaics inland, so they probably wintered on the shore like their successors, though we cannot be sure. The sea-level was much lower then, and no shore-camps so early have survived. Fishing, too, would have been at its worst in winter. Probably the men hunted seals, and the women watched the brushwood weirs at low tide. Clams spurted water from the sand in front of their feet and oysters were still common in the sheltered bays of the South Shore, but the Archaics paid no attention. Shellfish were not among the things that one ate. Instead, they tightened their belts and starved respectably. It is unlikely that the population of Nova Scotia then exceeded five hundred.

Were these Archaics already Micmacs? No doubt the modern Micmacs are descended from every race that has settled in Nova Scotia since Blue-whin times. The Micmacs themselves have a tradition that they found the Red Indians, the Beothucks of Newfoundland, here when they came, but unhappily we know as little about the recent Beothucks as about the Archaics. The only obvious break in our archaeological record falls a little after 1500 B.C., and even this is far from complete. The old fishing-sites continue to be used, which argues some continuity of population, but gouges and plummets ceased rather abruptly, suggesting the replacement of dug-outs by birchbark canoes and some unknown alteration in fishing techniques. At the same time pottery and the use of shellfish came in.

We have found no undisturbed sites that overlap the arrival of the new culture. At first glance it seems to have had no superiority over that of the Archaics, and the new Micmac people had no artistic work in stone to equal the gouges and slate knives that disappeared; yet there must have been an advantage or they would not have been able to penetrate this fully populated peninsula. On Indian Point in Mahone Bay there was a fragment of a very old shellheap. The road had destroyed the older part of the camp, and ploughing had reduced the newer level. Charcoal from near the top assigned that part to the eleventh century A.D. Some two feet of ash covered the boulders rolled to the edge of an earlier camp of which all else had been lost, and below the boulders was a layer of oyster and quahog shells, both species extinct before the beginning of the middle camp. On Indian Island in Merigomish Harbour we found a similar layer of osytershell underlying several inches of clamshells and ash above which were arrowheads referable to the first centuries of our era. The newcomers knew the resource of oysters but had not yet found the greater boon of clams. No wonder that their culture was able to replace that of the Archaics. We cannot yet date these people, but the oysters seem to have disappeared from Mahone Bay soon afterward, probably when the summer temperature of the water dropped below the 68° which is the lowest that oyster spat will tolerate. There was a cold spell around 600 B.C., perhaps the "Fog-winter" of Scandinavian legend, which stopped the pasturing of cattle there out of doors in winter. This date seems a little too recent but may mark the end of our Age of Oysters.

The meals of shellfish have been a blessing to seekers after history. In our damp and acid soils, bone lasts a very short time, but the addition of tons of shell to a square rod alters the chemical reaction and bone ceases to decay. In the shellheaps we find a battery of bone tools, most of which have been associated with Archaic remains in other areas, though none from that period have survived here. With these and remains of food we have a much more complete picture of the last three thousand years.

By the estuary of Bear River was found our most informative early site. A spring on the slope provided the only fresh water in a mile; a ridge of sandy kame gave shelter from north winds; Bear Island barred the surf from the beach; the tremendous tides were useful for weir-fishing; and the tidal estuary gave canoe access to miles of rich woodland. No doubt the Indians camped on the beach in summer when mosquitoes were bad, but they levelled three shelves on the sandy slope for use in winter. The central shelf was the oldest and had accumulated three feet of ash and shell. Because during the first centuries the wigwam had to be pitched always in the one place, it was possible to determine its shape and some of its organization. The wigwam was the same that the Micmacs build today, conical and about four yards across, the doorway facing south, the men sitting to the right of the door, the women to the left. The central hearth had been dug down several inches into the sand of the shelf and had no frame of stones. Around it must have been the usual cleared circle, for the wigwam had been swept at times and the refuse of stone-chippings, potsherds, and crushed shell had been thrown up the steep slope behind or had been piled around the skirts of the wigwam. Between cleared circle and birchbark wall were the beds, made then as today of fir-twigs, for we found the imprint of fir-needles on the base of some of the pots. It seemed from the skulls of deer, which carried antlers or had just lost them, that this camp was occupied chiefly in winter. In bad weather the men chipped spearpoints beside the fire or repaired their weapons, and in the dim light mislaid points among the fir-boughs. Nineteen points were found to the east of the hearth, only four to the west of it.

Much that was found in these lower levels was simply Indian, common to many tribes and periods. There were anvil stones surrounded by quartz chips and bones cracked for their marrow; there were strong curved sections of antler which had been hammers for shaping the points, and antler tines with rounded butts and tips which had pressed off the finer retouch flakes. For wood-cutting there were crude chipped adzes and some large spalls struck by a single blow from the face of a boulder and then blunted on one side to fit the hand, tools that would not have looked out of place in cultures of a million years ago. There were half lower-jaws of beaver and porcupine which had served as knives until the incisor had splintered, and there were abundant beaver incisors which had been sharpened as blades for wooden handles long vanished, some fashioned as chisels, some as awls.

Pottery was fairly abundant. Sometimes pots were made in the wigwam, where lumps of clay remained among the ashes, but there was also a potting place on the midden. Clay from the shore was tempered with sand from the slope, and the pots were built up by the coil method from rounded bases and then were smoothed

with a pebble or rockered all over with a notched bone. Decoration was applied with the edge of a corded potting-paddle or with the dentate rocker and was elaborated with incised or impressed lines and rows of punched or gashed marks. In the two larger subsites, which had been occupied side by side for nearly two thousand years, the pottery of one bore no close resemblance to that of the other. The lowest pots in the central subsite had erect sides and corded decoration like those in the north of the province and along the St. Lawrence; above these and wholly in the other subsites rockered decoration was more popular, and the lips of the pot usually flared after the fashion of the Atlantic coastal potters. Fashions in arrowpoints altered slowly but consistently, reflecting experience gained at tribal gatherings; potting remained an unsocial affair, an unchanging family custom. If the women made the pots, which I think but cannot prove, the men must usually have joined the band of their wives, since the same pottery decoration characterized particular wigwam-sites for centuries.

Clamshells were always abundant, but clams were probably a food of scarcity, and famine was never far away in winter. In one wigwam, but not in others, they relished sea-urchins for many centuries and then gave them up. White-tailed deer were the principal meat, followed in abundance by moose and beaver. There were many bones of hake and plates of sturgeon, the catch of weirs in early summer. Stone-framed hearths were scattered at random over the shelves, often in places where wigwams could not have stood, so that cooking or smoking must have been done here during the summer while the wigwams were on the beach. It has never been a Micmac custom to occupy sites, except when immobilized by winter, for more than a few weeks at a time.

When the site had been used for about a thousand years, the eastern subsite was enlarged to make room for another wigwam, and a layer of hillside loam was spread over much of the site. Just below this there had been a change in the shape of spearheads from long tanged blades to broad points notched at the corners, made from unfamiliar diorite. The covering of loam had preserved some lumps of charcoal in a summer hearth, and these gave a carbon-date of 160 B.C. Just above the loam there was a revolution in point-chipping. Fine siliceous slate replaced quartzite to make a thin broad-point, but there was no break in the continuity of pottery, so there could have been no great change in the people. Seemingly we have here a new tribal association, a larger group of bands which met for the spring fishing at some common site where the men could chip slate and compare methods.

We had two glimpses of the earliest people. A girl of seven had been buried under the eastern subsite before occupation there had begun, but not long before,

since the shell had come in time to save her bones from decay. She was huddled knees to chin as she must have been bundled in birchbark. No grave-goods had been buried with her, but a moose-splint awl was against her breastbone, and the awl was worn smooth halfway down as though it had been used as the toggle of a cloak. So she had died in winter. She had been hung in a tree or on a trestle, because the ground was frozen, and on their return to the site the family had buried her. Her short span may have ended about the time that Troy was burned or when Italic tribesmen were building the first grass huts on the Capitoline Hill at Rome.

The other burial was a few yards away and must have been a century or two later, for the grave had been dug through four inches of camp refuse. The pit had been made too short, but the body had been thrust in, head erect, knees up, the stiff right arm in a groove and pinned down by a small boulder. This was a woman about five feet four inches tall, very burly, and some thirty-five years of age, since her wisdom-teeth were scooped out as badly as the other molars by grit from clams and dirty food. On her right breast lay a cluster of tiny ribs and two unerupted incisor teeth of shovel shape. The woman's body had been sprinkled with red ochre, and a lump of ochre lay among the baby's bones.

There was an odd difference between the major skeletons. The little girl had had only her first permanent molars, but these were twice as large as those of the woman, which were of modern size. The gap of two centuries between the more Australoid girl and the more Mongoloid woman need have had no significance, since both types may be seen among our very hybrid Micmacs today.

We found the thin broad-points of slate, which had been characteristic of the upper levels of Bear River, at three sites around Port Joli Harbour a hundred miles away. One was the middle level of a camp which had retreated landward for twelve hundred years, driven by the rising sea. Of the lowest level only the inner midden of shell remained, and this contained a broad-point of quartzite referable to the second century B.C. Landward from this midden and partly overlying it was an occupational section of a camp, much of which had been eroded away. Here they had fished for gaspereaux and had left clots of herring-like scales among the refuse. In the upper layers was a burned-down wigwam, two inches of tarry blackness enclosing ten points of slate, four fish-spear points, and a mass of broken pots. In another site two miles away across the harbour the spearpoints were indistinguishable, but the bone tools included a battery of sea-fishing equipment—harpoons, slender bone points, a broken blade of walrus ivory, and gorges, the shallow crescents of bone which were ancestral to fish-hooks. The third site was between the others and two hundred yards back from the sea. It contained few shells and fewer remains

of fish but abundant bones of moose and deer. So we have a picture of three contemporary families having different specialties in the exploitation of the same area—river and shore-fishing, deep-sea fishing, and hunting.

All but one of the Merigomish sites were dug in 1914, and it is now impossible to date them with confidence, but we find among their takings a succession of arrow-head types which roughly parallels that of the southwestern counties. The crude stemmed or side-notched points are probably contemporary with those of lower Bear River levels. In the southwest these are succeeded by broad-points of slate, in the north by small corner-removed points of quartzite. During the period 100 B.C. to A.D. 800 there must have been one subtribe in the southwest, another from St. Croix to Cabot Strait, perhaps a third in Cape Breton, and little exchange of culture between them.

In the Port Joli gaspereau-fishing site the uppermost level is only now beginning to suffer from erosion. Soon after the middle level had been made uninhabitable by the rise of the sea, this trend had stopped and the sea-level had begun to fall. In this we recognize the cold phase that set in about A.D. 1050, worsened until 1300, and continued intermittently until 1800.

The uppermost level in the Port Joli gaspereau-site showed a continuous change in arrowheads. At first they were of slate as before but were small and triangular or leaf-shaped. Probably the reduction in size accompanied a new dependence upon arrows as against spears. Gradually corner-notching was perfected for binding the points to the shafts; soon after this, perhaps 1200, chalcedony and jasper began to be worked, and then the camp was abandoned. A camp of similar age on Mahone Bay, with a carbon-date of 1061, included bones of wintering grebes and charcoal of red oak, the favourite winter firewood of the wigwam. No sites later than this have given evidence of winter use of the shore. It seems that at this time the Micmacs were adopting their later practice of wintering inland, already an immemorial custom along the North Shore. Now the corner-notched points, for choice made of North Mountain stone, became standard throughout the province, a sure sign that the old subtribal divisions had been merged in a new unity, perhaps the Micmac Confederacy. We find no signs of violence in the campsites, but we may suspect that this unity resulted from outside pressures. At about this time Eskimo were camping on the north shore of Prince Edward Island. In the sixteenth century the Mohawks of Stadacona were hunting seals in winter in the Gulf of St. Lawrence and may well have been the "Kwedech" of Micmac legend.³ The Armouchiquois of the Kennebec came up to Cape D'Or to mine copper and jasper, and the fact that the Micmacs described them as misshapen seven-foot giants suggests the fears of an outnumbered people.⁴

The Micmac culture was elaborated in this period to meet the demands of the severe winters. Gaspereau sites were now bordered by long, narrow smoking-hearths, none earlier than 1000. Snowshoe-needles appear in sites for the first time, and these may be connected with the decline of white-tailed deer and the increase of caribou. Deer beat yards in deep snow and may have become easy prey to snowshoe hunters; caribou which did not yard may have taken up the vacated food-supply; by 1500 there are no deer-bones in the sites. One camp near Port Joli specialized in drying clams for winter use, and in this site snowshoe rabbits appear abundantly and dog bones are found also for the first time. Some of the pottery, too, split concentrically instead of breaking along the lines of the coils, suggesting that it had been made by the later technique of beating the clay around a stone.

About 1400 the shellheaps ceased and were replaced by large summer villages with few shells. Many of these sites have been taken by the sea, a sign that they had been pitched on beaches lower than those used three centuries earlier. Such village sites have made excellent gardens and have usually been cultivated out of existence, so that we have been able to salvage only the older pockets of refuse. In them new tools appear, arrowheads with toothed margins, neat gorges made of fox-canines, even wampum. Already in the fourteenth-century shellheaps, fur-bearing animals of the weasel tribe had increased conspicuously. Perhaps the pre-European trade of fur for wampum and tobacco had begun, and this may have stimulated a rapid change of culture and probably the expectable accompaniment of war. Then in fishing-sites the toothed arrowheads become accompanied by iron arrowheads. The Europeans have come.

Many writers have speculated upon the influence of the Norse upon the Micmacs. Culturally we have found none. In two sites on St. Margaret's Bay, dated to 1300, there were European periwinkles, a snail now common but otherwise unrecorded in Nova Scotia before 1840. Norse archaeologists have suggested that these may have been brought accidentally by the Norse visitors, and this would fit our scanty present knowledge. Leland thought that Norse mythology had influenced the Micmacs by way of the Eskimo.⁶ Certainly by the eleventh century the Micmacs on the South and North Shores were using the Eskimo toggle-harpoon, but this would have been before Norse influence could have reached the Eskimo.

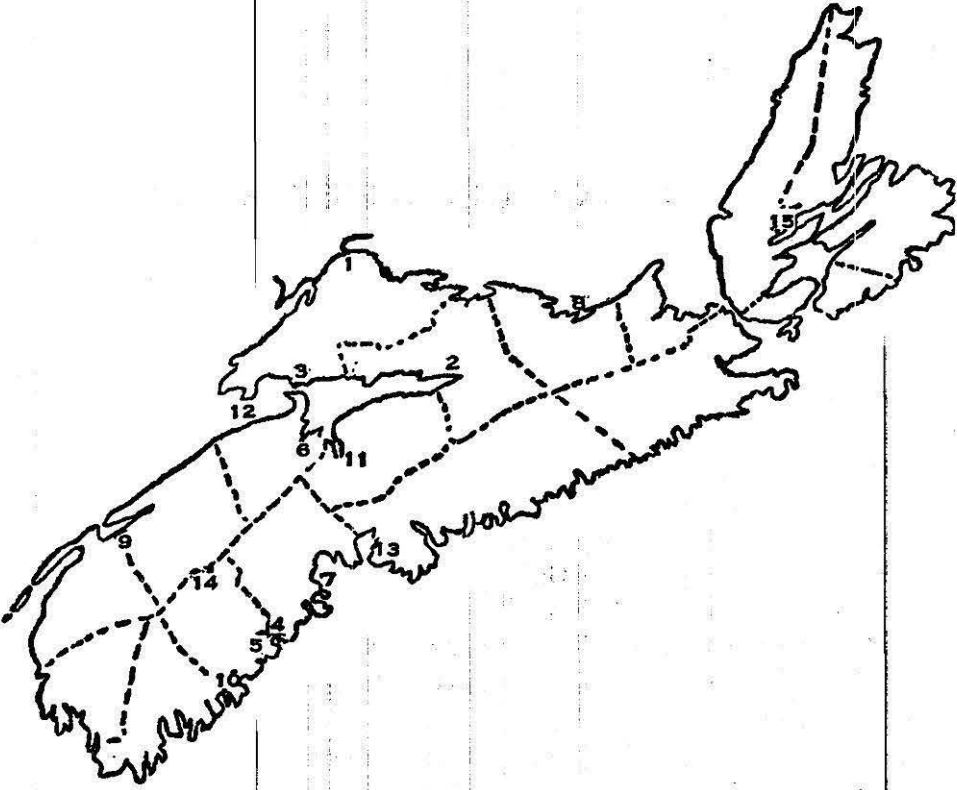
The pictographs, chiefly at Lake Kejimkujik, have been exalted and derided, but the earliest are definitely Micmac though of very uncertain date. Pictures of lodges may include a pot suspended over a fire, but we can only say that such squat pots were common at all times between 1000 B.C. and A.D. 1550. Other pictures are of scenes from mythology, drawings of regalia, handprints and footprints. Then

come flourished French initials, porpoise-shooting with guns, full-rigged ships, and the scratchings of our own times. No representative art has been found in shell-heaps, so one cannot date these pictographs.

The first European fishermen found the Micmacs a dangerous and treacherous people who painted their faces red above and blue below. That merely means that they were on the defensive against more powerful neighbours. The European traders, once they were accepted, changed all that. Iron tools speeded labour and could be used in war, copper kettles were easier to transport than pots, dried peas made unnecessary the preserving of food for winter, and all this in exchange for cast-off greasy beaver-skin cloaks. Within half a century the arts of flint-chipping and potting had been forgotten, and the Micmacs had become fur-trappers in the French economy. But this is history.

NOTES

1. H. I. Smith and W. J. Wintemberg, *Some Shell-heaps in Nova Scotia* (Ottawa, 1929).
2. Diamond Jenness, ed., *Indians of Canada* (1960).
3. B. G. Hoffman, *Cabot to Cartier* (Toronto, 1961).
4. *Purchas His Pilgrimes*. (Champlain quoting Prevert.)
5. Collection of Dr. John Maloney.
6. Charles G. Leland, *The Algonquin Legends of New England* (Boston and New York, 1884).



INDIAN SITES IN NOVA SCOTIA

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| 1. Tidnish, Cumberland County | 9. Bear River, Annapolis County |
| 2. Debert, Colchester County | 10. Port Joli, Queens County |
| 3. Parrsboro, Cumberland County | 11. St. Croix, Hants County |
| 4. Medway River, Queens County | 12. Cape D'Or, Cumberland County |
| 5. Mersey River, Queens County | 13. St. Margaret's Bay, Halifax County |
| 6. Gaspereau River, Kings County | 14. Lake Kejimkujik, Queens County |
| 7. Mahone Bay, Lunenburg County | 15. Little Narrows, Cape Breton |
| 8. Merigomish, Pictou County | |