

that ranged through the conventional period of the province's occupation. On none of the material from Paleo-Indian to Iroquoian contact sites did I ever see even a hint of this patina. On the other hand, though, red-painted tools do seem to be connected with lower and middle Paleolithic sites all over the world (that would place the age of these tools at an astounding 100,000 years old or better).

The German Early Man scientist, Dr. A. Rust, was so fascinated by this phenomenon that he visited sites all over Europe and Asia to study it. He claimed that only artifacts found "in situ", [or, on site] and not covered by glacial drift showed red varnish. Well known examples include the Westlake and Belbex collections of Pleistocene Man's work from the Oxford area in England (Rust and Stefens 1962).

Until more recently, however, not much was known about desert varnish, but studies into its origin, especially by Professor T. Oberlander from the University of California, Berkeley, showed it to be a film made up mostly of clay coloured by iron and Manganese oxides. Working with graduate student, Ron Dorn, Oberlander in 1982, looked into rock varnishes in non-desert environments. They found that manganese-oxidizing

bacteria were involved in all the diverse situations encountered. From desert environments in their area they worked out a means of dating the varnish by measuring its chemical constituents, which change over time. The results there substantiate the estimates of great age made by people like Carter. Although the method is not yet applicable to the red tool sites in southern Ontario, its implications here are clear.

The red tools are old.

Vast amounts of tools from another Pleistocene cultural phase — this one mixed — cover a sandy ridge opposite the lower area where the red tools are found. These are bifaces and they resemble the tools of the Old World Acheulean hand axe cultures of lower and middle Paleolithic times. Acheulean is divided into lower, middle and upper levels in Europe, and the corresponding categories have been recognized in Ontario material by Drs. Pittoni and Felgenhauer of Vienna University, Austria (Dr. I. Jamnik in a personal communication).

Discussion of Age and Relationship

"You apparently have most of the lithic industries represented," remarked George Carter



In the early 1980s, Dr. Thomas E. Lee, discovered quartzite cutting tools, some of them very large presumed to be for skinning large animals like mammoths and mastodons (iPhone is included for a reference to their size). Although these tools predate the commonly accepted Land Bridge theory by tens of thousands of years, the Canadian and American archaeological brain trust rejected those estimates because they did not fit the previously accepted norm. (Photo by Jim Windle)

after studying the tools. Many cultural traits that would be attributable to a wide range of Old-World Paleolithic stages and indeed found on the site. This being so, it is not surprising that resemblances can be seen between these tools and some in the Sheduiandah's level V (Thomas Lee in personal conversation), in many western Early Man sites and at early sites outside the Americas (Muller-Karpe 1966:343).

In the Old World concept of pre-glacial man has long been established. Hundreds of sites are known, and some of these

have yielded skeletal remains of Homo erectus — the species of man there associated with Acheulean cultures. Richard Leakey (1981) has commented that, "Throughout the million-year span of the Acheulean technology there was no marked refinement to be seen." In America, however, cultural stages comparable to those of the Old World are generally believed to have come much later, falling not just at the tail end of "the million-year span," but lagging behind.

The Path Ahead

Even Carter's foreshortened chronology of around 10,000 years is scarcely acceptable to most Canadian archaeologists, of course, who are far more conservative than their American counterparts. Some authorities simply refuse to change their long-held opinions, and their influence weighs heavily on those who would otherwise be very open-minded towards the evidence of great antiquity.

We need to do more than just free the profession of dogmatic constraints, though. In order to find traces of Early Man, people have to be trained to see more than projectile points and other beautifully worked artifacts.

Pleistocene man's tool kit is "problematical" for conventionally trained archaeologists. Crude tools are hastily discounted as quarry garbage, blanks and preforms — an all-purpose remedy when cornered (Minshall 1979). Why are North American archaeologists not trained to recognize Early Man's tools?

Each new discovery of Early Man in America conveys the obligation to seek out further evidence; the nature of the field is such that each site is, in a way, a new beginning. Resolution of this whole

highly controversial issue will open a new era in archaeology, no less in Canada than in the United States.

Continued opposition to the evidence of Early Man — opposition that crippled the work of Tom Lee and George Carter — will do more harm than that of just holding back the advance of knowledge. Many of the ancient sites are threatened by land development. Some are gone forever. Even Sheguiandah was once destined to destruction by industrial quarrying. It was saved only because Tom Lee recognized its character and then fought for protective legislation.

We cannot save what we don't know. Archaeologists must first understand how to look for Early Man sites, be able to recognize them once found, and refuse to be party to the suppression of the evidence. Most of all, cooperation is needed.

At the end of her report, Kraemer expressed her thanks and special gratitude to Doctors George F. Carter, Prof. Lee and I. Jamnik.

"Their generously given advice and encouragement has contributed greatly to the success of my research," says Kraemer.