Earliest Inhabitants

PRIOR TO CA. 11,050 BP

The glacial maximum in Alberta occurred about 20,000 BP (before present, where present = A.D. 1950). Ice covered most of the province with the exception of areas in and around the Cypress Hills and a few isolated locations along the foothills of the Rocky Mountains. At this time the Cordilleran, or Montane, ice coalesced with the Laurentide ice sheet in the area of the foothills. There is some debate whether deglaciation began shortly after this as a slow process lasting until 12,000 BP or whether coalescence lasted until about 12,000 BP with a rapid deglaciation. Regardless, meltwater played an important role in shaping the Alberta landscape.

People living in such an environment would have experienced a relatively unstable and rapidly changing periglacial world. Archaeological evidence of these people would likely be quickly destroyed or buried in unusual localities and/or deep sediments (Beaudoin and Oetelaar 2003:187).

PRE-CLOVIS SITES (>CA. 11,050 BP)

Most scholars agree that the peopling of the Americas took place via the northern latitudes, across the Bering Land Bridge or along its shores. Despite the numerous lines of evidence that support this perspective, a precise route and arrival time of people to the Americas has yet to be documented. Alberta is intimately intertwined in this debate since one possible entry route would have been an inland penetration along the front range of the
Rocky Mountains; alternatively, a coastal route would have taken people along the shores of British Columbia.

The Coastal entry route would require access to now submerged palaeoshorelines along the west coast of Alaska and British Columbia. These shorelines began to submerge as ice on land melted, returning water to the oceans and causing sea levels to rise. There is evidence arguing against the coastal route. First, the earliest known sites in the coastal region date between ca. 10,500 to 10,000 BP, consisting of lanceolate points and lithic assemblages, and located between Alaska and Vancouver Island (e.g., Carlson and Magne 2008). Second, no obvious predecessor in western Beringia has been found with a marine-based culture of an appropriate age (West 1996). And third, there does not appear to be any cultural descendants of a coastal-adapted culture. The Clovis complex has possible antecedents in the technology and hunting adaptation of the Nenana complex or other large-mammal hunting people of the interior of Beringia or Alaska-Yukon. There does not appear to be any evidence of an early populating entity exhibiting any signs of a remnant coastal background. Still, the debate over the entry route taken by the first people has become progressively interesting with the increased acceptance of the Monte Verde site in south-central Chile. The Monte Verde site, dated to 12,500 BP, may provide evidence for the initial occupation of the Americas. The site consists of huts with log foundations, clay-lined pits for cooking, food remains including organics (e.g., seeds, nuts, fruits, berries, and tubers), and evidence of mastodon. Eleven consistent radiocarbon dates average about 12,500 BP (Adovasio and Pedler 1997:578). More astonishing is an older layer with chipped stone and possible fire pits dated to 33,000 BP. Many authorities accept the authenticity of Monte Verde (e.g., Adovasio and Pedler 1997; Fiedel 2000:85) while others do not (e.g., West 1996:540).

While the acceptance of Monte Verde as the oldest New World human occupation (i.e., pre-Clovis) would have profound implications for archaeology in the Americas, three important points must be acknowledged. First, internally consistent radiocarbon sequences in apparent firm association with actual artifacts can be a product of contamination. Second, regardless of Monte Verde’s status, it has been thirty years since the discovery of the site but few if any comparable sites have come to light. When the first Folsom fluted point recoveries were made in the late 1920s, tens of additional similar finds were recorded within a decade of the original find. Thus, the site of Monte Verde may represent the initial occupation of
the Americas, but it likely does not represent evidence for a peopling event. Thus, the view of Clovis technology spreading between existing groups of people (e.g. Stanford 1978b; Waters and Stafford 2007) seems improbable since there is no evidence to indicate that a substantial pre-Clovis population existed. Third, recently there have been acknowledged differences between the structural form of the radiocarbon calibration curves from the northern and southern hemispheres (McCormac et al. 2004; Landals 2008). Dates in the southern hemisphere, such as those from Monte Verde, have the potential to be incorrect, as the southern hemisphere needs to develop dendrochronologically dated wood and radiocarbon calibration curves independent of the northern hemisphere (McCormac et al. 2004; Landals 2008).

Alternatively, to enter the Americas via the inland route across the Bering Land Bridge would require the Ice-free Corridor to connect the northern land bridge or Beringia to the lands south of the mountain and continental ice sheets. The Ice-free Corridor consisted of deglaciated land along the eastern front range of the Cordilleran mountains in the Yukon, British Columbia, and Alberta. It is expected that the earliest known archaeological sites south of the ice sheets should coincide with the timing of the opening of the Ice-free Corridor, as the Cordilleran and Laurentide ice sheets separated. At present, the route is inferred to have opened by ca. 12,000 BP (e.g., Osborn et al. 2000).

The Clovis complex consists of the oldest sites of undisputed authenticity in the Americas south of the ice sheets. There are, however, sites that are as old as, if not older than, Clovis sites in the Americas of undisputed authenticity. These sites are all located north of the former North American ice sheets, in the Yukon and Alaska. Bluefish Caves is located 54 km southwest of the Old Crow settlement in the northwestern Yukon Territory. Bluefish Cave I is a multicomponent site with cultural material in levels III through V. Late Pleistocene and early Holocene-age fauna such as bison and horse were recovered from these levels. The lowest clear cultural level, level V, produced three flakes and thirty-seven micro-chips in a context expected to date about 13,000 BP (Cinq-Mars 1979:28). A microblade may occur in the overlying level and micro-chips may occur in underlying levels (Cinq-Mars 1979:28). The assemblages contained so few artifacts, however, that it is difficult to compare the material to other assemblages.

Perhaps more informative are the sites of the Nenana complex in the Alaska Range in central Alaska. Within the Nenana Valley is a series of
sites — Dry Creek (11,120 +/- 85 BP), Owl Ridge (11,340 +/- 150 BP), Moose Creek (11,730 +/- 250 BP), and Walker Road (11,010 +/- 230 BP; 11,170 +/- 180 BP; 11,300 +/- 120 BP; and 11,820 +/- 200 BP) — that are coeval with or predate Clovis sites (Hoffecker, Powers, and Bigelow 1996; Hoffecker, Powers, and Phippen 1996; Goebel et al. 1996; Hoffecker 1996). Goebel, Powers, and Bigelow (1991:74) noted that Nenana toolkits are virtually identical to Clovis tools, except the Nenana toolkits lack lanceolate projectile points. They suggest Nenana and Clovis may represent the northern and southern remnants of a peopling event, respectively, but they remain open to whether the peopling event was a late or early entry. A late entry about 13,000–12,000 BP would have occurred as the ice melted and allowed dispersal down the Ice-free Corridor. A much earlier entry could have had people into the Americas about 22,000–25,000 BP, before the Ice-free Corridor closed (Goebel et al. 1991:75). Recent excavations at the Yana RHS site, Siberia, have produced bifacial lithic industries and bone foreshafts that are similar to Clovis materials, dating to 27,000 BP (Pitulko et al. 2004). The recovery of materials dating to such an early time period so far north in Siberia verifies northern-adapted people were positioned for an early or late dispersal into the Americas.

Importantly, there are sites in Alaska that predate the Nenana complex. Materials from the Broken Mammoth, Swan Point, and Mead sites date to 12,000–11,500 BP. The lowest level at Swan Point produced dihedral burins, microblades, and a core tablet, and may be related to the Dyuktai culture of northeast Asia. While the context of the microblades has been questioned, Hoffecker (2001:149) noted that microblades had also been recovered from Bluefish Cave. Hoffecker (2001:149) suggested there was an early Beringian Dyuktai industry in Alaska no earlier than 11,500 BP. It was succeeded by the Nenana complex ca. 11,500–10,800 BP, which would provide a plausible source for Paleoindian complexes entering the remainder of the Americas via the Ice-free Corridor (Hoffecker 2001:150).

The Sites

Because of the potential peopling route through the Ice-free Corridor, Alberta has enjoyed being in the spotlight for peopling studies (Beaudoin et al. 1996; Carlson 1991; Haynes 1987). A number of Alberta sites have become well known as potential early peopling sites (see Plate 1 and Figure 2).
**CHAPTER ONE: Earliest Inhabitants**

*Taber Child (DLPa 4).* The Taber Child site consists of fragments of an immature human skeleton that were found eroded from a steep coulee wall above the Oldman River just north of Taber. The site was discovered during a Geological Survey of Canada study conducted by Dr. A.M. Stalker in 1961. Wormington and Forbis (1965:117) and Wilson, Harvey, and Forbis (1983:180), amongst others, have called it the Stalker site and noted common confusion with the Bayrock site, which has been referred to as the Taber Early Man site (Bayrock is an Alberta phase kill site; see below).

The Taber Child skeleton is mainly represented by skull fragments, two vertebrae, a clavicle and part of a tibia (Moffat and Wainwright 1983:224). The child was estimated to be between nine months and four years of age at the time of death (Moffat and Wainwright 1983:224). Wormington and Forbis (1965:117) were the first to publicly propose great antiquity for the site based on the assessment of its geological position beneath till (Wilson et al. 1983:179).
Figure 2
Pre-Clovis sites within Alberta
In 1977, excavations at the site set out to provide stronger evidence for the age of the skeletal material (Wilson et al. 1983:185). Evidence of Holocene mudflow deposits was observed near the Taber Child. This discovery suggested that the Taber Child bones had been recovered from orange sand deposits that were determined to date as old as 20,000 BP. X-ray diffraction analysis of matrix from the Taber Child specimen did not show evidence of the orange sand. The matrix most resembled the Holocene slope deposits when compared to baseline samples from across the slope (Wilson et al. 1983:199). The authors concluded that the skeletal material likely derived from mudflow deposits inset within the orange sand unit (Wilson et al. 1983:203–204). An infrared spectrophotometry analysis was undertaken to assess the loss of collagen. The protein content suggested that the Taber Child, in comparison with reference specimens, was consistent with those 10,000 BP or less (Moffat and Wainwright 1983:229). Similarly, accelerator 14C dating of the Taber Child produced an age of 3,550 +/- 500 BP (Brown et al. 1983).

Varsity Estates (EgPn 413) and Silver Springs (EgPn 414). The Varsity Estates and Silver Spring sites are located on the north side of the Bow River on a roughly 50-metre-long escarpment of the valley in northwest Calgary. The Varsity Estates site consists of lithic artifacts eroding out of the gravel upper part of a layer of till that immediately underlies Glacial Lake Calgary sediments (Chlachula 1994a:104). The Silver Springs site consists of redeposited lithic artifacts in the upper part of some fluvial gravels of the Bow Valley till (Chlachula 1994a:104). The steep slope prohibited a large excavation but 15 m² was excavated in 1992–1993 at the Varsity Estates site and a series of 0.5-×-1.0-m units were excavated at the Silver Springs site (Chlachula 1996:298–299).

The assemblage from the Varsity Estates sites consisted of an upper and lower series. The lower series, presumably derived from an older cultural context, produced sixteen flakes “removed from the original laterally exposed face of the Bow Valley till (Unit 1) over a distance of 70–100 m in the steepest middle part of the slope” (Chlachula 1996:298). The second, or upper, series consisted of forty artifacts including cores (n = 2), side scrapers (n = 2), an end scraper, choppers (n = 2), a biface, and pieces of debitage (n = 17, with five flakes from the biface tool) recovered in roughly a 15-m² area on the till surface immediately beneath the lake (Chlachula 1994a:105, 1996:298). The Silver Springs site material (n = 31) was recovered from an
eroded context. Eighteen artifacts were recovered from the till (Chlachula 2006:300–301). In short, a simple core and flake industry is said to be represented. A pollen sample from the site suggests sedge and pine were in the area (Chlachula 1994a:125). No datable macro-organic material was recovered from the site. The material was interpreted as a pre-Paleoindian occupation in the foothills of Alberta that dates between roughly 25,000 and 21,000 BP based on chronostratigraphic correlation of the culture-bearing deposits to existing Late Quaternary temporal frameworks (Chlachula 1994a:126, 1994b, 1996:306).

Bryan and Gruhn (2007) argued that only four items recovered from the till at the Varsity Estates site were artifacts, but that the artifacts' stratigraphic position suggest a terminal Pleistocene age rather than the previously hypothesised pre-Late Wisconsinan age. The authors suggested that the artifacts were left on the surface of ice still in the area and later incorporated into the till. They argued that quarrying activity would have taken place at the site, not habitation (Bryan and Gruhn 2007:98).

Grimshaw. The Grimshaw site is located in the Grimshaw Gravel Pit, in the middle Peace River area, in gently rolling terrain about 5 km north of the town of Grimshaw in northwestern Alberta. The site consists of quartzite cobble artifacts recovered from the base of a Laurentide till exposed in a gravel operation (Chlachula and Leslie 2001).

Seventeen cobble artifacts were recovered: two observed in the lab, twelve in situ in the field, and three eroded from an exposed face (Chlachula and Leslie 2001:873). The tools include unifacial choppers (n = 7), bifacial choppers (n = 2), side scrapers (n = 2), an end scraper, a retouched flake, hammerstones (n = 3), and a cobble core (Chlachula and Leslie 2001:876). All materials were recovered from the lower till, immediately above its contact with the underlying gravels, over a distance of 30 m. The material is comparable to the Varsity Estates and Silver Springs sites (Chlachula and Leslie 2001:876). An age prior to the last glaciation is assigned to this material, presumed to be the Middle Wisconsinan (Chlachula and Leslie 2001:883).

Pre-Clovis: Still Searching for the Evidence
Unfortunately, we are not yet able to say when the first people entered the Americas, or Alberta for that matter. Such an “event” continues to be a contentious issue. Many archaeologists advocate an early peopling in order to account for sites such as Monte Verde. Others strongly support a
later dispersal with the Clovis complex as the material representation of the dispersal phenomenon. The route that people traveled or populated is also controversial, with the Ice-free Corridor and a coastal migration most commonly touted.

Research within Alberta has added fuel to this debate. The announcement of the Pleistocene-age human infant skeleton near Taber produced substantial controversy at the time. Finds of exceptional antiquity are usually confronted with caution and scepticism in the archaeological community. The 1983 paper presentations on “Dating the Taber Child” in the Canadian Journal of Archaeology (vol. 7, no. 2) demonstrated a strong consensus that the skeleton was an Indigenous infant of modest antiquity, perhaps a few thousand years old.

The recovery of lithic artifacts in close association with glacial till has been proposed at three sites in Alberta: Varsity Estates, Silver Springs, and Grimshaw. Also, the Varsity Estates and Silver Springs sites have received substantial criticism concerning both the nature of the artifacts and the purported age of the deposits from which they came. The reconstruction of the palaeoenvironment at the Varsity Estates and Silver Springs sites has been strongly questioned. Young, Rains, and Osborn (1998) indicated that the literature suggests that a Late Quaternary ice sheet coalesced in the Calgary area, followed by glacial lake formation rather than an interval for human occupation. This assertion is further supported in subsequent research detailing the NW–SE oriented landforms that could have only been created by coalescing ice, and cosmogenic $^{36}$Cl dates of 12–17 ka on foothills erratics together indicating Late Wisconsinan coalescence (Osborn et al. 2000:209–215). Furthermore, concerning the artifacts themselves, Gillespie, Tupakka, and Cluney (2004) questioned the cultural origin of the stone tools. Sixteen lithic attributes were shown to exhibit significant differences between known archaeological samples and known natural samples from a river bed. When the Varsity Estates and Silver Springs sites were evaluated using these attributes, the results indicated that the sites were most like the geological specimens or geofacts (Gillespie et al. 2004:630–631).

The Grimshaw site has received similar criticism. Driver (2001) focused his criticism on the unequivocal assignment of the lithics at the site as culturally fractured rather than naturally fractured. He felt the criteria used to distinguish humanly flaked stone were never proven to be limited to artifacts. Control specimens were never established from analogous sediments.
to compare to the Grimshaw artifacts. Because of this shortcoming in the analysis, “it is just as likely that the fractured Grimshaw cobbles were produced naturally as by humans, and better evidence is required to support an argument for preglacial humans in western Canada” (Driver 2001:873).

It is fair to state that there are no unequivocal pre-Clovis sites known in Alberta. That is not to say that such sites do not exist, only that they have not yet been recognized or confirmed. The task in front of researchers rests in developing reliable methods of identifying where these sites could be located and being able to distinguish their assemblages from naturally occurring materials. Both the Varsity Estates and Silver Springs sites are buried deep beneath metres of glacial and postglacial sediments. Even early Palaeoindian sites, dating later in time, are likely to be buried under substantial amounts of sediment given the highly active geomorphology at the glacial/postglacial boundary. For example, the Indian Creek Folsom occupation in the front range of the Rocky Mountains in west-central Montana is approximately 7.5 m below the surface. Its discovery was facilitated by cutbank erosion (Davis and Greiser 1992).