MANITOBA CODY?

Leo Pettipas
Manitoba Archaeological Society

There is, in the published archaeological record, ample surface-found evidence of the stemmed Plano (Alberta-Scottsbluff, Eden, Cody knife) continuum in the Manitoba countryside both east and west of the western Campbell strandlines of Lake Agassiz (Pettipas 2011:77-90). Be that as it may, in a recent paper Dr David Meyer *et al* (2011:32) pointed out that "*in situ* Cody complex occupations have not been identified in Manitoba."

Well, maybe, maybe not -- it all depends, for starters, on whether or not we trust geological dating. Geological dating is the estimation of an artifact's age by virtue of its direct association with a radiometrically-dated geological feature like a relict beach ridge. For example, if we discover artifacts *in situ* in a fossil beach ridge, and a section of the latter has been dated close-by or even many kilometres away at, say, 9,000 RCYBP, then we can conclude that the found artifacts are also 9,000 radiocarbon years old.

And that is exactly the case at two particular sites, one in western Manitoba, the other in the southeast corner of the province.

In the report of his pioneering 1898-90 geological survey in western Manitoba, Joseph Burr Tyrrell described some intriguing findings that he had made in a "fossil" beach ridge cut by the Valley River at lat. 51° 13' N, long. 100° 20' W. Just at the top of a bed of fine rounded gravel, at a depth of two feet below the ground surface, he observed a number of sharp-angled and apparently chipped fragments of "quartzite" (probably what we would call today Swan River Chert). Two of the pieces were "roughly in the shape of arrowheads" (in Tyrrell's [1892:95] own words), and one was a very thin flake. The others were notably irregular in shape. Associated with them was a broken fragment of one of the phalangeal (toe) bones of a moose or elk.

These stone fragments were all lying with their longer axes horizontal, and were overlaid by a sandy loam that had apparently been deposited as a coarse sand. The latter had since been affected by weathering and by the growth of vegetation over it to about the depth at which these chipped flints were lying. This slightly loamy sand was plainly though not very clearly stratified, and included towards the bottom and above the chipped flints, many thin, water-worn, lenticular, disk-shaped pebbles of shaly or thin-bedded limestone.

Tyrrell was a geologist, not an archaeologist, but it is clear that he knew *bona fide* artifacts (lithic debitage) when he saw them. He went on to say that precisely similar fragments were to be found on the shores of lakes Winnipegosis and Manitoba along with the points. As the gravel had been laid down by water action and was quite undisturbed, they clearly indicated the existence of humans at the time when this lake beach was being thrown up, and it is probable that this location, near the mouth of the ancestral Valley River, was one of their favourite haunts. The summit of the beach in which these chipped flints were found was recorded as being 425 feet above Lake Winnipeg, or 1,135 feet above the sea. It has been assigned the Borden number EhMb-1 (Fig. 1).

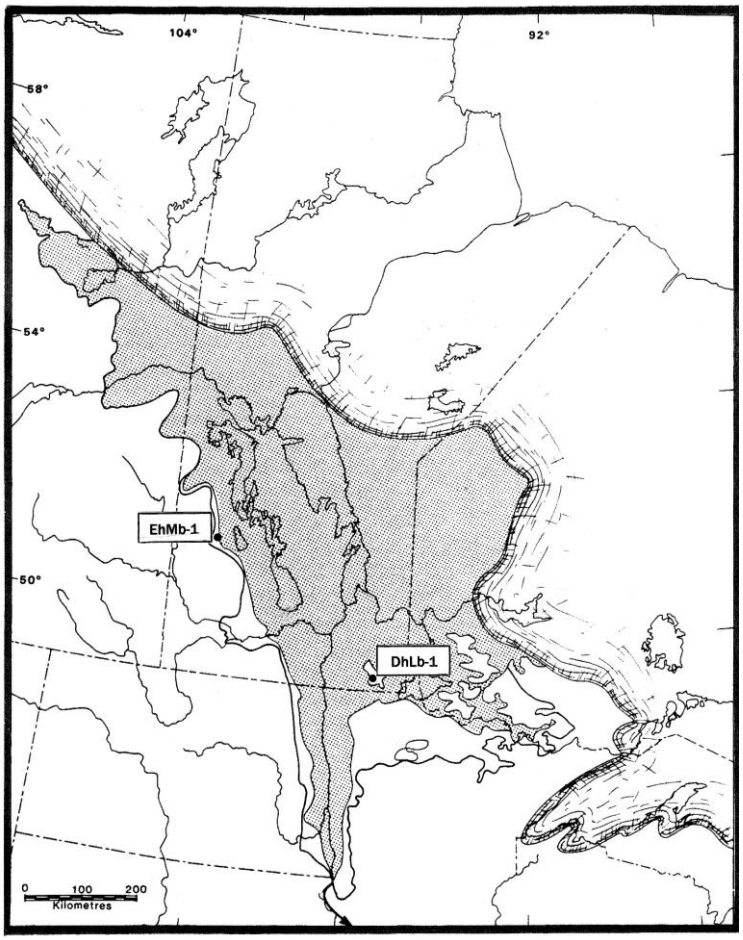

Fig. 1. Locations of sites EhMb-1 and DhLb-1 (black dots) on the Campbell shorelines of Lake Agassiz. Base map from Teller 1985.

Enquiries by myself to Canadian Museum of History personnel disclosed that Tyrrell probably did not collect any of the above-described artefacts, none of which was what we would consider today to qualify as diagnostic of a named complex. However, the latitude, longitude, and elevation of the site disclose that it was

situated on the Upper Campbell beach (Johnston 1946:Fig. 1) just northwest of the present-day city of Dauphin. The formation of the Upper Campbell beach dates to 9,400 RCYBP (Teller and Leverington 2004:732) and is commensurate with the antiquity of the Cody complex on the northern plains.

In 1972, U of M graduate student Stanley G. Saylor (1975) and a field assistant excavated site DhLb-1 in the Sandilands Forest Reserve in southeastern Manitoba. The recoveries from this place comprised three scrapers, a retouched flake, two sections of a biface, and 310 small waste flakes, all of which came from water-deposited shoreline-feature sands and gravels and lying between 35 and 50 cm below the ground surface. These deposits were laid down during one of the sequent Campbell stages (Saylor 1975:250) which together date to 9,400-9,200 RCYBP (Teller and Leverington 2004: Table 1). These dates also fall squarely within the Cody time frame.

What we have, then, are two workshop sites, widely separated geographically (Fig. 1), that together fall within a possible century-long period of time, i.e., between 9,400 and 9,300 BP. Neither site produced diagnostic artefacts, but the geological proveniences of the two hint at their possible cultural affiliation. Vance Holliday (2000:227) places the Cody (Eden-Scottsbluff) complex at 9,400-8,800 RCYBP on the northern plains in general, and the complex has been dated at 9,540±50, 9,220±75, and 9,168±50 RCYBP at the Benz (North Dakota), Bradbury Brook (Minnesota), and Heron Eden (Saskatchewan) sites, respectively (Holliday 2000: Table IXB; Malik and Bakken 1999:168; Meyer *et al* 2011:32). These three dates – from Alberta/Cody sites in places adjacent to southern Manitoba -- can (1) provisionally be taken as applicable to EhMb-1 and DhLb-1 in this province, and (2) allow us to reasonably conclude that perhaps the two sites are Cody.

There is a fly in the ointment, however. Thus far, at least three Plano projectile point "co-traditions" have been detected in southern Manitoba (Pettipas 2011:69-73; Fig. 2 this paper) that straddle the Upper-Lower Campbell time period of 9,400-9,300 BP. These are termed "Broad-base Triangular," "Slender Leaf-shaped Lanceolate," and "Stemmed/Shouldered." To keep things simple, I'll discuss two of them here.

In addition to the numerous Cody artifacts identified in southern Manitoba, I have reported on a water-worn lanceolate point that was surface-collected from a locus (EhMb-2) between two of the higher Agassiz beaches (Lower Campbell, McCauleyville) near Ashville, Manitoba (Pettipas, in press). The geographic provenience of the point and its heavily water-worn condition together give rise to the possibility that it's as old as 10,000, but certainly no younger than, 9,300 years BP. This latter figure falls within the Cody time frame, but the water-worn specimen is by no stretch of the imagination a

stemmed/shouldered Cody specimen; rather, it's an expression of the contemporary but distinctive slender, leaf-shaped lanceolate point tradition (Fig. 2).

This means that there may well have been a minimum of two socio-cultural entities extant within the region at that time, a prospect that was already being entertained as far back as the 1970s (Pettipas 1976:28-29). But without diagnostic artifacts from either EhMb-1 or DhLb-1, we cannot specify as to which tradition or complex these two sites belong.

So Dr Meyer *et al* are surely correct in their observation that indisputable *in situ* Cody complex occupations have not yet been excavated in Manitoba. At the same time, we can rest assured that people were flintknapping hereabouts on the wave-washed shores of Lake Agassiz some 9,400 years ago.

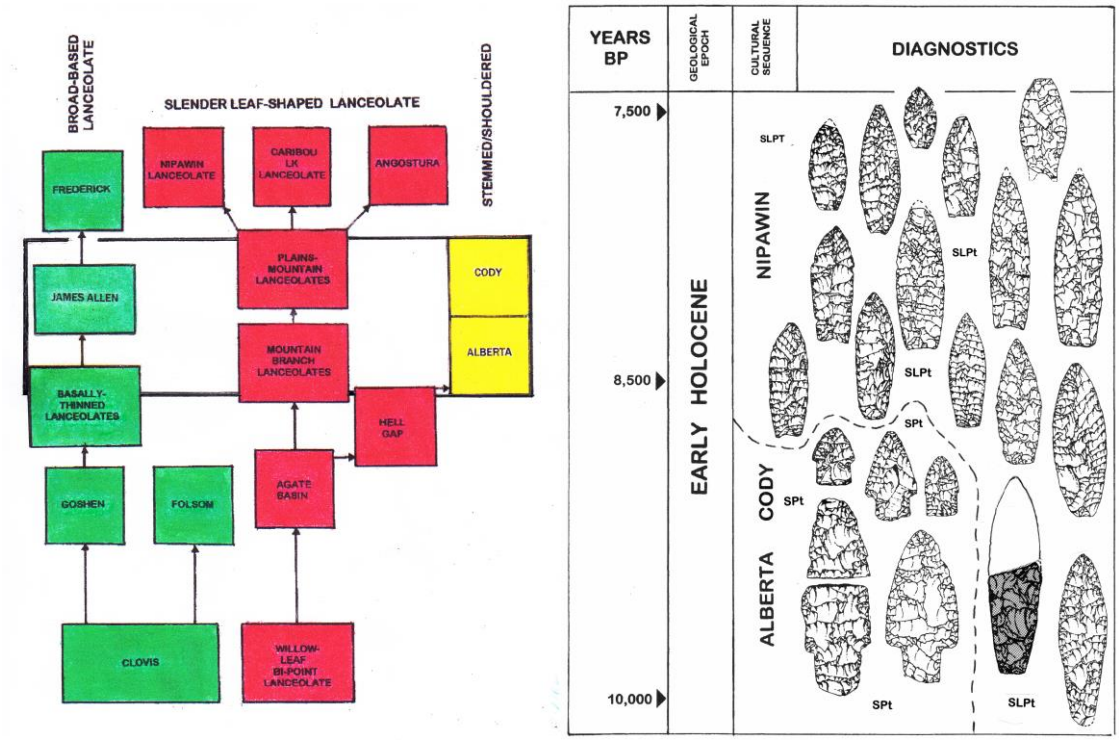

Fig. 2. Diagrams of co-traditions showing contemporaneous segments alluded to in the text. <u>Left</u> – Broad-scope (plains and western peripheries) representation of Palaeo-Indian chronology. The heavy black lines encompass the co-traditions referenced in the text. <u>Right</u> -- Late Palaeo-Indian projectile point sequence for western Manitoba. The lower half of the diagram illustrates the contemporaneity of the Stemmed/Shouldered Point (SPt, within the dashed line) and Slender Leaf-shaped Point (SLPt) co-traditions. The upper half shows the post-Cody terminal Plano SLPt that eventually gave way to the Archaic tradition (not shown here). The shaded drawing represents the EhMb-2 lanceolate point mentioned in the text.

References

Holliday, V., 2000, "The Evolution of Paleoindian Geochronology and Typology on the Great Plains." *Geoarchaeology* 15(3):227-290.

Johnston, W.A., 1946, "Glacial Lake Agassiz, with Special Reference to the Mode of Deformation of the Beaches." *Geological Survey of Canada Bulletin* 7. Ottawa.

Malik, R. and K. Bakken, 1999, "Bradbury Brook (21ML42): A Late Paleoindian Lithic Workshop in East-Central Minnesota." *The Minnesota Archaeologist* 55:167-170.

Meyer, D., A. Beaudoin, and L. Amundson, 2011, Human Ecology of the Canadian Prairie Ecozone ca. 9000 BP: "The Paleo-Indian Period." In *Human Ecology of the Canadian Prairie Ecozone 11,000 to 300 BP*, ed. By B.A. Nicholson, pp. 5-53. Canadian Plains Research Center Press. Regina.

Pettipas, L., in press, An Unusual Spear Point from the West Lake District of Manitoba.

-----, 1976, "Environmental Change and Cultural Dynamics During the Paleo-Indian Period with Special Reference to Manitoba." Manitoba Department of Tourism, Recreation and Cultural Affairs, Historic Resources Branch, *Papers in Manitoba Archaeology Miscellaneous Papers* 1:19-40.

-----, 2011, "An Environmental and Cultural History of the Central Lake Agassiz Region, with Special Reference to Southwestern Manitoba." *Manitoba Archaeological Journal* 21(1 and 2):i-152.

Saylor, S., 1975, "DhLb-1: Early Period Occupation near Glacial Lake Agassiz, Southeast Manitoba." *Plains Anthropologist* 20(70): 241-252.

Teller, J.T., 1985, "Glacial Lake Agassiz and Its Influence on the Great Lakes." In *Quaternary Evolution of the Great Lakes*. St. John's: Geological Association of Canada Special Paper 30.

Teller, J. and D. Leverington, 2004, "Glacial Lake Agassiz: A 5000 Yr History of Change and Its Relationship to the δ160 Record of Greenland." *Geological Society of America Bulletin* 116(5/6):729-742.

Tyrrell, J.B., 1890, "Post-Tertiary Deposits of Manitoba and the Adjoining Territories of Northwestern Canada." *Geological Society of American Bulletin* 1:395-410.

Tyrrell, J.B., 1892, "Report on North-Western Manitoba with Portions of the Adjacent Districts of Assiniboia and Saskatchewan." *Geological Survey of Canada Annual Report*, Volume 5, Part 1, Section E, 1890-91.

***