

Contact Era Hide Working and Traditional Tool Use on the Northwest Plains

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Abstract

In 1967 and 1969 the remains of three burned cabins were excavated in a late 19th century winter settlement at Head-of-the-Mountain (known as the Kajewski Site), southwest of Elkwater Lake in the Cypress Hills in Alberta, Canada. Flaked stone, antler and bone artifacts were found mixed with colonial trade artifacts inside and outside the cabins. The cabin occupants were identified as nomadic hibernant Métis buffalo hunters. Other investigators subsequently identified and excavated additional 19th century Métis settlement sites in Alberta and Saskatchewan, Canada. They also found stone artifacts, trade artifacts and broken bone within or near late 19th century Métis cabin remains. This leads to a question: what then was the purpose for the Aboriginal stone and bone tools found in these late 19th century Métis sites? This essay will explore the persistence and implications of contact era Aboriginal traditional tool use for hide working, particularly among the Métis. Five interviews with Métis people having experience in commercial trapping form part of the study, and various observations and conclusions are presented.

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Introduction

In 1967 and 1969 three burned hibernant Métis cabins were excavated in a 19th century seasonal settlement, first identified in a N.W.M.P. surgeon's report as the Head-of-the-Mountain “halfbreed hamlet” (later known as the Kajewski Site), southwest of Elkwater Lake in the Cypress Hills in Alberta, Canada. Chronologically ordered refuse deposits in pits indicated the log cabins were occupied during three winter seasons dated between 1865 -1882 (Bonnichsen 1967, Elliott 1971). Subsequent information adjusted the date of settlement abandonment to 1879 (Indian Claims Commission 2000).

Unfortunately, the final report manuscript about the 1967 excavation of one of the three cabins (A), and its artifacts, went missing sometime after the primary investigator Rob Bonnicksen passed away in 2004.

Flaked stone, antler and bone artifacts mixed with colonial trade artifacts were recovered from inside and outside the cabins excavated at Head-of-the-Mountain (Figures 1-5, cabins B & E, 1969 excavations). Associated bell-shaped, conical and ovoid cache and refuse pits were situated in and near the cabins. Quantities of fire-broken rock and numerous bone fragments were also recovered from activity areas inside and outside the cabins, indicating that bones had been broken apart and boiled to obtain marrow and grease for pemmican production. Recovered faunal remains included: bison, elk, deer, antelope, domestic sheep, wolves, dogs/coyotes, red and kit foxes, cougar, lynx, badgers, skunks, porcupines, beaver, rodents, rabbits, grouse, Canada geese and northern pike.

The writer originally considered hunting and butchering buffalo for food or trade, and bone breakage for marrow extraction and pemmican production, as the purposes for the traditional indigenous stone tools found at Head-of-the-Mountain, evidenced by the context of some of the artifacts in and around the two cabins excavated in 1969. However, a closer examination of cut marks on the bones indicated those tasks were primarily done using steel axes (e.g. Elliott 1971:242, 270). A later study by Kooyman (2004: 201-205) also confirmed steel axes were used for bone breaking and marrow extraction at Head-of-the-Mountain, and that the Métis inhabitants “... may have employed a unique marrow extraction technique, wedging or splitting with axes to lengthen spiral fractures.”

Additionally, there was evidence for the on-site manufacture of stone tobacco pipes from local sandstone at one cabin, copying both Aboriginal and colonial pipe styles (Figure 6, cabin B).

Thus, in the opinion of both original investigators, the assemblages of flaked stone, antler and bone artifacts mixed with colonial trade artifacts inside and outside the cabins, supported by artifact identification and ethnohistoric research, identified the occupants as nomadic hibernant Métis buffalo hunters (Figure 7). At the time, this writer/investigator also suggested the mixed assemblages could conceivably reflect Métis ethnicity.

Another investigation recovered and interpreted similar mixed artifact assemblages in three cabins at the 1872-78 Buffalo Lake Métis trading settlement in central Alberta (Doll *et al* 1988). Flaked stone artifacts were also recovered from two other cabins at Buffalo Lake, but it was concluded those artifacts were not part of the latter two cabin assemblages. In its time, Buffalo Lake was occupied year-round and served as an adjunct settlement to the HBC post at Ft. Edmonton and the Catholic mission at St. Albert, peopled by traders (Figure 8), priests, travellers and hunters. By comparison, Head-of-the-Mountain was a seasonal winter settlement for one or more roving bands or brigades of commercial buffalo hunters.

Test excavations of various 19th century Saskatchewan Métis site locations were also done as part of a broader comparative archaeological and architectural study (Burley *et al* 1992), and a large cabin was later fully excavated in the 19th century Métis settlement of Petite Ville, on the South Saskatchewan River in Saskatchewan (Weinbender 2003). Both investigations recovered

Aboriginal stone artifacts, broken bone and colonial trade artifacts in or near cabin remains in their respective sites, and both concluded the stone artifacts were not part of the cabin artifact assemblages, nor reflective of Métis occupations or ethnicity.

Ethnohistoric research confirmed that all the sites noted were late 19th century Métis settlements. Also, bone, stone and trade artifacts were recovered in and/or near cabin remains at all the sites. Therefore, a question becomes: what then was the purpose of the Aboriginal stone and bone tools found in these late 19th century Métis sites?

By the late 1840s, Métis hunters and traders on the Northwest Plains were unhappy with the low prices and autocratic attitude of the Hudson's Bay Co., and turned their hunting and trading activities from providing pemmican to the Hudson's Bay, to providing increasingly large quantities of furs, hides and robes to the American trading companies at St. Paul and various posts along the Missouri River (Elliott 1971: 110-116). Therefore, the writer's attention has turned to the possible implications for Head-of-the-Mountain Métis antler, bone and stone tools being used primarily for hide working.

This essay will explore the persistence of post-contact Aboriginal traditional tool use for hide working, particularly by the Métis. Five interviews with Métis people having experience in commercial trapping are part of the study (see Appendix).

Contact Era Hide Working Descriptions

With the onset of the commercial fur trade in colonial North America, the focus for indigenous Aboriginal hide working soon turned to producing top quality hides and furs for top company prices in European markets.

Archaeological references used for this study are wide ranging in time and space, describing the persistence and retention of bone and stone hide working tools within mixed artifact assemblages among several Aboriginal peoples from the colonial period into latter day North America.

Odell (2003) excavated a 16th-18th century village inhabited by Wichita people, on the Arkansas River near Tulsa, Oklahoma, which he described as a substantial semi-permanent, late prehistoric or protohistoric village. Lithic artifacts recovered at the site were analysed for use-wear patterns and showed evidence of intensive use and reworking. These tools comprised a great many flaked stone end scrapers, small flaked stone projectile points and retouched flakes; ground stone manos, metates, hammer stones and grooved abraders; flaked stone adzes, choppers, unifaces, bifaces, burins, drills, graters and wedges; and gun flints. Other indigenous artifacts included ceramic storage containers, and abundant deer and other animal bone waste from food production. French trade goods were also mixed within the assemblage: glass beads, iron axe heads, iron and brass gun parts, brass tinkler cones, knife blades, iron pot rims and spoon handles. Use-wear analysis and interpretation of several clustered activity areas indicated a very high frequency of “hide scraping” in the village, and lesser frequencies of tool maintenance and

weapons repair, domestic activity, wood working and light industry. Trade with French colonial partners is implied by the discussion, although there was no specific discussion about what indigenous goods were offered for trade.

Blaine (2006) reported the excavation of a mid-18th century, warm-season Wichita campsite in east Texas, in the Texas Archaeological Society web site, which is described as a commercial hunting and trading depot for harvesting and processing white tail deer hides, and exporting them via French traders to Europe. The mixed site assemblage featured a great many flaked stone end scrapers, small flaked stone projectile points and gun flints, local indigenous grit, shell and bone tempered pottery, and a wide range of French trade goods: gun parts (often broken and reworked into other objects), lead balls and shot, metal ornaments, glass beads, hawk bells, copper wire, knives, hatchets, axes, brass kettles, brass and iron projectile points, European ceramics and horse gear.

Scheiber and Finley (2010) recovered mixed 18th and 19th century artifact assemblages of flaked stone and metal projectile points (manufactured on-site), a metal awl, glass trade beads, steatite groundstone artifacts, intermontane pottery, glass and metal trade vessels, gun parts, butchered bighorn sheep bones and *teshoa* stone hide working tools from high altitude sheep traps and campsites in northwestern Wyoming, possibly used as late as 1900 by the Mountain Shoshone people, as the inhabitants attempted to adopt new technology strategies, maintain their traditional hunting lifestyle and avoid colonial intrusions.

Eyman (1968: 9-11, 17) studied many *teshoa* cobble stone tools from Wyoming, and from southwestern Alberta and southwestern Saskatchewan. She notes that:

“The teshoa was first seen and noted as a tool used by Indian women. Joseph Leidy ... observed its manufacture and use among the Shoshone of Wyoming in the 1870’s. When a woman needed a knife for butchering and skin dressing, she selected two quartzite cobbles from the nearest stream; she then used one as an anvil to knock a large spall from the other. When the edge of the teshoa had done its job, it could be discarded, and a new one could be quickly made.... Proper material was always near at hand.... Leidy ... labelled it with a Shoshone name....

There are certain functional details that distinguish the teshoa from other flake tools. It was frequently made from quartzite, but other granular tools were used. It is a split or spall struck from a cobblestone. Its edge is thin and acute. The cutting edge is formed by the intersection of a split surface with the rind of a cobble.

... the rind is dense, homogeneous, and tough, even though the core may be porous, fissured, and brittle. The edge of the teshoa, formed in the rind, is flint-hard and file-tough, even though the body of the teshoa may be weak and not be hard.

The teshoa is a lens-shaped knife, its more curved face formed by a portion of the surface of its parent cobble, its flatter face formed by a split or a flaked surface.... Some examples are chipped to a remade edge. Retouch is usually upon the split face of the tool, removing flakes from the unaltered stone within the cobble, conserving the rind, and forming a new edge in the rind.

Some teshoa were made by such massive blows that the cobble was shattered, producing some eccentric forms ... In other cases, teshoa were struck one after another from the same platform, producing tools with more than one primary flake scar....

Tools of exactly this same kind were probably in normal use among other peoples of the Interior Basin and northwestern Plains within the nineteenth century, but no observer noted them or preserved examples.

.... I have come to feel the ethnographic teshoa was an impoverished survival, that it represents only the most central and fundamental part of the chopper complex that persisted after 1870. In earlier times, the teshoa was but one unit in a far more complicated industry of choppers, flake tools, and cortex flakes.

As far as I know, every American chopper complex includes teshoa. They are conspicuous in samples from western Canada. Many of them were discarded after their first use, without any resharpening and generally without any sign of wear. Others were resharpened once or several times”

Cassell (2003) excavated John Kelly's 1891-94 Point Belcher commercial whaling station on the north Alaska coast. This shore based summer whaling by local Inupiat Eskimo employees was dependent on Kelly replacing their seasonal food supplies, normally derived from indigenous hunting and gathering, with supplies from the south. Belcher station was established when Kelly's annual Barrow-bound supply ship became stuck in the ice off Point Belcher in 1891. While Belcher station was a failure as a commercial whaling operation, Kelly did engage in a brisk fox fur trade while there. Cassell suggests any labour not engaged in whaling at the station was likely devoted to acquiring fox furs.

The Belcher station main building where Kelly and his workers lived was close to four large middens and the artifact assemblage recovered from the middens included: burned and intact

faunal remains, coal ash, shotgun cartridges, burlap bag pieces, lamp and window glass, misc. iron fragments, an ivory harpoon finger rest, an ivory sealing harpoon head with copper blade, an iron ulu and 14 flaked chert end scrapers. Cassell specifically noted:

“The body of the end scraper usually rested inside a wooden or ivory handle that was custom-carved to fit the user’s hand.... The working edges of chert end scrapers are a studied balance of not-too-sharp yet not-to-dull. Fox hides are extremely delicate — the working edges of the end scrapers had to scrape fat and tissue from the hides without cutting into and damaging the hides.... Discoid, T-shaped, and triangulate forms of end scrapers were present, all of which could be fitted into a handle. Most of the end scrapers showed substantial use-wear, and a few were broken opposite the working edge.” (Cassell 2003: 158).

Cassel refers to other sites previously excavated near Kelly’s station which also yielded considerable numbers of similar end scrapers within the houses at the sites. One of the other sites, Siraagruk site, was apparently contemporaneous with Kelly’s station. The Siraagruk investigator (Slaughter in Cassell 2003: 160) suggests the presence of so many end scrapers indicates that the inhabitants were heavily engaged in fur trading with Kelly at Belcher station.

Thus, traditional Eskimo skills and technology became crucial to Kelly’s success in the fur trade. Kelly wouldn’t have benefited from the fox fur trade without the skin preparation know-how of the Eskimo employees and the technology of their chert end scrapers. *“No other technology satisfied the needs of fox hide working as well as the traditional Eskimo end scraper.”* (Cassel 2003: 162-163) The Inupiat Eskimos clearly preferred chert end scrapers for fox fur preparation

despite the abundance of iron and steel tools at the whaling station, which might have been quickly adapted for the task.

Albright (1984: 15, 47-59) provides a late 20th century detailed description and photographs, as part of an ethnoarchaeology study, of Tahltan First Nations women using traditional bone tools for hide fleshing and scraping; tanning hides with brains; and making and using hafted flaked stone tools for hide dressing; despite having access to metal trade tools since 1799. Specific information is offered about stone selection, average manufacturing time, method of manufacture, method of use, resharpening, and curating and transferring these traditional flaked stone hide dressing tools between generations of Tahltan women:

"... Tahltan women are still manufacturing their own skin dressing tools. These tools are made of a coarse grained basalt which is abundant in the Stikine area. Relatively thin pebbles, oval or elongated in shape, are collected by women during the course of the procurement activities.... The manufacture of new tools and resharpening of old ones are carried out at the beginning of the hide dressing stage, so that several tools are hafted and ready for use. Dressing stones are manufactured using a bipolar technique.... The basalt pebble is held edgewise on a large anvil stone and is struck with a hand held hammer stone. If the pebble is well struck each half can be used as a tool. Using direct percussion, flakes are removed from the edges by means of a hammer stone or by striking the split pebble directly against the anvil stone.... Flaking thus creates a dulled working edge. A sharp edge is considered undesirable for softening hides since it would tear the skin. All tools have cortex remaining on their dorsal surfaces. The manufacture of a new tool takes about ten minutes.

Dressing tools seem to have a long life span. Two or three hides can be dressed with a tool before it requires resharpening. Although the stone material is abundant and the method of manufacture fairly simple, many stone dressing tools appear to be highly curated. Several tools observed in 1979 and 1980 are reputed to be over 100 years old. When first starting to work on hides, a woman is given her first tools by an aunt or her mother. These are kept and handed down again as heirlooms. With continued use and resharpening, tools become smaller in size and may differ in shape from newly manufactured tools....

All of the split pebble tools observed being manufactured and hafted into pole handles are used in [the] dressing or softening of hides within every woman's workbag or collection of tools there are one or two smaller stone dressing tools which are best described as cortex spall or flake tools. These are hand held and used for dressing smaller skins which require little work to soften them.... After continued use, tools generally develop highly polished edges."

Other references for the persistent use of traditional Aboriginal tools for hide working in the contact era on the Northwest Plains are scarce.

Wissler (1910: 66-67, fig. 32) offered a firsthand ethnographic description of stone tools being used early in the 20th century by Blackfoot women for hide working. *"In 1906, the writer observed a [Blackfoot] woman removing the hair from a rawhide with a rounded waterworn pebble the action was about the same as rubbing At another time a stone scraper was obtained from an old woman about to dress a deer skin.... It is a slab struck from the surface of a waterworn pebble, the edge being formed by the fracture and the curved surface. [writer's emphasis] The owner claimed to have made many such implements but that suitable pebbles*

were found with great difficulty. In use, this tool was held and handled in the same manner as the unshaped pebble noted above. The owner stated that she preferred such a tool for work on a deer skin because metal tools cut too many holes."

Mandelbaum (1979: 59-60) offered an ethnography framed in the preceding buffalo hunting days, describing Plains Cree women fleshing hides with: "*a straight, chisel-like ... serrated ... scraper.... made of a ten-inch length of gun barrel, one end of which is pounded flat. Formerly the canon bones of buffalo or moose were utilized....*" Hair removal (graining) and thinning hides were done with an "*... adze-like tool of elk antler or wood [with] a metal or flint blade ... bound on the inside of the short arm.*" Deer and antelope hides "*... were thrown over a log and a beaming tool, resembling a spoke-shave, was used to remove the hair.*" Robes were thinned on the flesh side, all other hides were thinned on both sides. After warming a hide and treating it with fat, and a brain and liver paste, then soaking it in water, and wringing and stretching it vigorously, "*a smooth stone was briskly rubbed over it to ensure a thorough drying.*" Hides were then repeatedly pulled to and fro over a braided rope until soft and pliable; those intended for moccasins were smoked.

The Mandelbaum description is pertinent because many hibernant Métis people living and working year round on the Northwest Plains in the 19th century claimed a tribal Cree/French Canadian ancestry and ethnogenesis. Mandelbaum's description is also reasonably congruent with a detailed description of Northern Cree hide working offered by Young *et al* (1991: 116-122).

Métis people and their distinctive culture evolved directly from the fur trade. Fur trapping, hunting, hide working and fur trading were skills as ubiquitous within indigenous Métis culture as was their ethnogenesis in the contact era. Neither trapping, nor hunting, nor trading for commercial gain would have been successful without hide working skills of a high enough order to produce the quality of furs, robes and hides needed to sustain the trade. In the writer's opinion, Métis people were the primary workers employing that skill for the commercial benefit of the fur trade companies, more so than indigenous tribal people. Métis were directly the companies' progeny as well as often their in-house labour force. As such, ethnohistoric sources repeatedly indicate Métis families displayed considerable entrepreneurial energy across a wide range of contact era occupations in the British Northwest: voyageurs, boat men, trappers, hunters, guides, fishermen, interpreters, clerks, labourers, carpenters, hide workers, traders, freighters, livestock producers and handlers, gardeners, etc.

Company-Métis working relationships have been well documented by Brenda Macdougall's (2010) description on the practice and context of the social concept of Wahkootowin among Métis engagé and freeman families in the English River district of northwestern Saskatchewan in the 19th century. Macdougall (2010: 3) describes the community "*... as one of the oldest, most culturally homogenous Métis communities in western Canada*", living matrilocally on the traditional lands of their Cree and Dene progenitors.

Wahkootowin among the English River district Métis meant that: "*... who they were could only be understood in relation to others in their family and community, as well as in relation to the environment, the sacred world, and outsiders.... wahkootowin socialized an individual to the*

proper way of behaving toward all people (oneself included), the land itself, and all realms of existence. Family relationships were the social institution and cultural essence that regulated both internal and external community relations.” (Macdougall 2010: 53)

As Cree, Dene, and eventually Métis women married outsider adult male fur traders, they brought to their marriages attitudes and beliefs — a worldview — about family and social life that influenced the creation and shape of this particular Métis socio-cultural identity... an indigenous worldview that shaped the expression of Métis wahkootowin.” (Macdougall 2010: 243)

Wahkootowin thus regulated working relationships such as hide working, within and without these Métis families. In effect, *“although the relationship of the Metis to their homeland was shaped by their maternal heritage, it was also strengthened by travelling and working on the land in occupations that supported the trade economy, which was an important aspect of their paternal heritage.” (Macdougall 2010: 88)*

More recently, Macdougall and St-Onge (2013) provide a look into the nomadic lifestyle and social organization of 19th century western Métis buffalo hunting brigades on the Northwest Plains. Wahkootowin wasn't referenced in this interesting article about what was largely a population of freeman hivernant Métis, yet these extended family brigades or bands of nomadic hunters lived, roamed and worked in prairie spaces that had evolved into their perceived hunting territories, for which Macdougall and St-Onge (2013: 30) suggest examples: Qu'Appelle Valley, Wood Mountain Plateau, Cypress Hills — to which the writer will add the Milk River Basin straddling the international border, and the Judith River Basin in central Montana. As such, this

analysis of the social organization of these nomadic western plains hibernant families and hunting brigades appears to this writer's eye to at least partially reflect the practice and context of Wahkootowin.

In fact, hibernant hunting brigades moved regularly in the fall season into selected highland plains locales where they were assured the wood, water, game and protection from blizzards needed to successfully establish winter settlements. These seasonal settlements were crucial to their year-round survival on the plains. For example, Norbert Welsh and the Trottier brigade (in Weekes 1994: 85, 88, 96) established their winter settlement at Four-Mile Coulee in the Cypress Hills in 1874, one of many "wintering houses" Norbert Welsh established on the plains during his long commercial hunting and trading career. In the writer's opinion, the spatial arrangement of hibernant cabins in such winter settlements was organized around the extended family kinship arrangements within their respective brigades, although more ethnohistoric and archaeological research is needed to define which winter settlements were established by which hibernant hunting brigades, and when. As Macdougall and St-Onge (2013: 31) note:

"These were a people who lived in family-based economic units and spent their lives in a continuous cycle of movement that is alien to [many of] us today. Indeed, their sense of home was clearly far broader than fixed points on the map and far more extensive than the existing scholarship [has been] able to capture."

Whether working as 19th century company engagés in places such as the English River district, or as nomadic freeman hunters and traders on the Northwest Plains, hide working would have been a skill essential to the economic well-being of contact era Métis families. Throughout the

British Northwest furs, robes and hides were continually being obtained by hunting, trapping and trading, (e.g. Brown 1968, Welsh in Weekes 1994), yet detailed ethnohistoric references of Métis hide working are scant and only a few briefly describe the use of tools. Belcourt (1944: 16) saw Métis women in 1845 producing parchment buffalo hides “... *by drying them on stretchers and scraping the inner sides with a sharpened bone.... the hair is removed with a small sharp tool*”; Brown (1968: 34) saw Métis in the 1870s fleshing buffalo hides with “... *a ‘Mick-a-quaw’ (or macking iron) which was an arrangement with teeth that scraped off the meat or ‘mick’ next to the hide.*” The lack of detailed historic description likely reflects the ubiquitous, unnoticed task of hide working in the colonial fur trade economy, where such work was usually done by Métis women e.g. (Belcourt 1944: 16, Hourie and Carrière-Acco 2006: 57), while written historic accounts mainly recorded matters of interest to White male observers.

Morgan Baillargeon (2006) is a contemporary Métis hide worker who gained much of his hide working knowledge and skills from indigenous tribal women. According to Baillargeon, Aboriginal hide work was and is “sacred” rather than secular, and is primarily carried out by women. Animal skins are “tanned” (i.e. fleshed, grained, thinned, brained, softened) with muscle power and tools made of stone, bone, antler and steel, while being treated with water, frost, wind, sun, smoke, and a cooked brain and liver or fat paste, to transform or “quicken” the spirit of the animal that had borne the skin. This transformation “... *centres around the belief that the soul or power (energy) of the animal resides in the brain... the tanning process is the act of [re] placing the soul, or the power of the animal, into the hide. In this way, the tanner is reviving or giving life to the animal again....*” (Baillargeon 2006: 88-89)

Various terms are interchangeably used in the preceding references to label the complex skill of hide working. In this regard, Ruth (2013: Ch. 7) offers an excellent technical description of the hide working process and terms. Albright (1984:47-59), and Young et al (1991: 117-121) also offer excellent technical descriptions.

In sum, good hide working requires good **skinning** to produce good leather. Speaking from experience, good skinning is more about pulling than about cutting. Too much cutting, particularly with a steel knife, risks putting holes in hides. However, steel knives have usually been assumed to be the choice of contact era Métis hide workers for skinning. Other than steel knives, Susan Albright describes traditional Tahltan skinning and butchering with rib bone knives, while Frances Eyman describes Shoshone women using quartzite cobble flake *teshoa*. Skinning usually leaves residual soft tissue (flesh and fat) adhering to the inside of fresh hides. **Fleshing** with leg bone fleshers is clearly preferred for removing soft tissue from the inside of hides and preparing fur pelts, according to the interviews. Flaked stone end scrapers (e.g. Cassell 2003), steel scrapers or knives, and moose antler scrapers (e.g. John Bilow and Jean Johnson-Millie Picotte interviews), have all been used for fleshing thinner, more delicate fur pelts. **Drying** raw hides after fleshing is done to store hides for later processing. Hides must then be soaked, stretched and re-staked on the ground, or re-laced to a stretcher frame for further work. Hair is not soft tissue, and it is removed by **graining** (wet or dry scraping) with either bone fleshers or beamers, or composite tools fitted with stone end scrapers or steel scrapers. Thick hides are usually **thinned** to an even thickness with a graining tool to remove the outer epidermal layer containing the hair roots, and to remove the inner hypodermal layer composed of membraneous adipose, connective tissue. This allows for the sufficient penetration of warm oil and a brain and

liver paste into the remaining dermal layer during **tanning**. Hides are then sometimes soaked in water to aid tanning, later washed in water and wrung out, and stretched. Tanning recipes vary, as noted by Susan Ruth and David Young *et al.* James Ritchie, while pursuing a long journalism career in northern Manitoba, discovered hide preparation recipes were often closely guarded secrets, handed down generationally from master tanner to student. Master tanners didn't share their secret recipes equally, and didn't use exactly the same ingredients, tools or methods (personal communications, February 12/18, 2014). **Dressing** (softening) robes, furs and hides is the most laborious task, utilizing various techniques, including simple flaked stone tools. **Smoking** is an optional, final step to make hides water resistant.

The Métis Interviews

When asked by the writer during the past five years, prairie Métis people often say they have no personal or family memory of using Aboriginal stone or bone tools for hide working or other tasks, but they can't think of any reason why such tools wouldn't have been used. Prairie Métis people have offered the same two comments repeatedly: "*we were really poor for a long time, particularly since the Riel Resistance in 1885*" and "*we're the bridge between First Nations and White people so there's no reason we wouldn't have used them if we needed to.*" In the writer's experience there has never been any cultural aversion to discussing the topic among Métis.

Many northern forest Métis families continue productive lives as commercial full-time fur trappers, a long-standing occupation as old as their ethnogenesis as a people. In 2012 and 2013, the writer was invited to give public slide presentations about the Head-of-the-Mountain

site in Killarney, Manitoba; Saskatoon, Saskatchewan; and Elkwater, Alberta. These occasions offered opportunities and contacts for the writer to interview northern forest Métis people about using traditional hide working tools as part of their family trapping and hunting activities. 5 interviews (see Appendix) were done with 6 adults: 3 women and 3 men, 4 middle-aged and 2 seniors. The original home locations for the informants are in northwestern Manitoba, northeastern Saskatchewan and northwestern Alberta. The conversations were informal, in person and by phone.

The interviews describe using traditional stone and bone hide working tools for family purposes in the 20th and 21st centuries. All the informants are members of extended families who made a living in the northern forest by trapping and hunting, and all refer to the transfer of traditional knowledge between generations within their extended families as an aspect of their hide working skills. Traditional knowledge was, and is, important in these families.

Observations

The use of traditional indigenous tools for hide working and fur pelt preparation has clearly been persistent and widely distributed through time and space during the contact era in North America. Several observations in this regard can be derived from the preceding references and the interviews which are relevant to Métis hide working.

1. Métis and First Nations Aboriginal hide working quickly moved to becoming a skill meeting fur trade standards in the contact era, and producing high quality hides and furs that would

consistently command top prices in colonial fur markets. For example, Les Carrière's interview indicates that "*some of the knowledge about commercial hide working in the fur trade actually came from the early Scots traders, who brought their knowledge from northern Scotland, which is a very cold place world famous for high quality wool and sheep skins.*" Further, the article by George Odell is one of the few providing use-wear studies of hide working (and other) fur trade artifacts from the contact era. The investigations of the two Wichita sites by George Odell and Jay Blaine also offer an archaeological example of the beginnings of French colonial mercantilism in North America and its material effects on a regional indigenous tribal society.

2. Hide working and manufacturing traditional hide working tools was mainly women's work. Métis women; an integral part of fur trade and frontier society in the British Northwest; connected with indigenous kin and benefiting from tribal knowledge; connected to fur traders and companies and pushed by their own entrepreneurial inclinations; and organized for work in brigades through observance of a world view like Wahkootowin; took their hide working skills to the higher level required by the trade. Their pride and skill can be seen in the porcupine quill work and other decorative arts so ably portrayed and described by Gary Johnson (2006) and Cheryl Troupe and Lawrence Barkwell (2006).

3. Nomadic hibernant Métis hunting brigades flourished during the contact era on the Northwest Plains by being firmly grounded in the indigenous tribal side of their newly evolved Métis culture. Activities such as travelling, wintering, hunting, butchering, pemmican making and hide working were not conducted in isolation, but organized socially around their families and their world view, the daily movements of buffalo, the disposition of competing tribal groups, the

weather, and their ability to acquire and create enough top quality products to participate fully in the colonial trade economy. Confirmation of this can be found in Les Carrière's interview description that "*Métis people don't just move around [aimlessly] when they go out on the land, they move to places where the animals are and where they can get support from their [extended] family members in these places. The family members we most often rely on are our First Nations family members.*"

4. Persistence and preference in using traditional indigenous hide working tools (e.g. stone or bone v.s. steel) throughout the time period discussed appears to depend on the type, thickness and delicacy of the furs or hides worked, to prevent cutting and damaging the skins and reducing the prices paid by the traders. For example, Mark Cassell's description of chert end scrapers as "*... a studied balance of not-too-sharp yet not-to-dull...*" for working on delicate fox hides," and Anne Acco's interview description that "*... bone tools were the choice for scraping hides because the bone tools were flexible, the hides were soft and flexible, and this relationship prevented the hides from becoming nicked. While a steel knife could make hide work go faster, the hides were usually no good in the end*" — together offer specific reasons for the preference and persistence by Métis and First Nations people for using traditional stone and bone tools for hide work in the contact era, consistent with the firsthand observations of Clark Wissler, Sylvia Albright and David Young *et al.* Skins such as fox, coyote, wolf, badger, muskrat, mink, ermine, rabbit, antelope, elk, deer, lynx and bobcat would have been considered delicate and thin by hide workers, who for best results likely preferred the use of traditional hide working tools due to their inherent qualities for such work. In contrast, skins such as buffalo, moose and beaver would have been considered thick, suitable for using steel and/or traditional hide working tools. While

robes, hides and meat were the primary trade focus of the Métis buffalo hunting brigades, a well documented secondary trade in the more delicate furs and hides was also carried on in the 19th century on the Northwest Plains.

5. The indigenous methodology of “brain tanning” described in the data was common during the contact era, and in the writer’s opinion was universally utilized for dressed robes and hides throughout the North American fur trade — although Scott Taylor (2011: 10) notes that a market developed for hairless “flint” [dried] buffalo hides, which were taken by American hide hunters who briefly dominated the northern buffalo hide trade in the final post-1880 years of the hunt. Whisky traders were also common on the Northwest Plains, and were closely entwined with the infamous “wolfers” who traded in poisoned plains wolf, coyote and fox furs, as described by Hugh Dempsey (2002: 109-114). Hivernant Métis hunters, traders and hide workers were involved in all aspects of these activities on the Northwest Plains.

6. The data offers other, intangible reasons for traditionalism in hide working and persistence in using traditional hide working tools. Morgan Baillargeon ascribed sacred aspects to traditional hide working, perhaps better characterized by James Ritchie as secretive, rather than sacred. The five Métis interviews attributed the persistent use of bone and/or stone hide working tools variously to practical need, such as replacing steel tools lost in the bush, lack of cash money, extant traditional knowledge, and a sense of self reliance and personal pride in using traditional knowledge.

7. The interviews by John Bilow and Anne Acco indicate that convenience, necessity, the cash cost of steel tools, traditional knowledge, and cultural pride all played a role in their parents' generation choosing to make and use stone hide working tools in the 20th century. Stone tools are no longer made and used by these families, the knowledge is no longer used, and only the memories remain.

8. Frances Eyman summed up *teshoa* use in her conclusions (1968: 44): “*The teshoa knife was used mainly for butchering, for cutting hides and other materials, paring flesh from the inside of hides, and perhaps as a planing tool on wood.*” In considering the technical aspects of using *teshoa* for hide work, it's apparent to the writer that a wider range of intended uses for these multi-functional stone tools was likely, and would have been enabled by management of the tool edges by the users. Cutting and scraping tasks (suggested by Eyman), would have benefited from using an original, relatively fresh flaked edge. Such an edge, particularly on a quartzite cobble *teshoa*, is both tough and sharp. Conversely, hide dressing (softening) would have benefited from using a *teshoa* with a dull or abraded edge. Such an edge could have been dulled from scraping to remove hair from hides, or by purposefully grinding the edge with another cobble stone. In the writer's opinion, the granular, irregular, flake scar surface of some *teshoa* may also have been useful for hide dressing. Resharpener *teshoa* by removing flakes by percussion with a hammer stone, or against an anvil stone, would have quickly repurposed the tools as needed, but also likely removed microscopic evidence of use wear from tool edges. What remains unknown is whether the *teshoa* were hand held, or hafted (as demonstrated by Tahltan hide workers). The same edge management considerations would also apply to smaller flaked stone hide working tools: end scrapers, bifaces and retouched flakes — but probably by resharpener with pressure

flaking rather than percussion. Finally, the missing Cabin A artifacts, particularly those described as “*cobble flake scrapers*” by Bonnicksen (1967: 5), unfortunately are not available to provide a larger sample of stone tools to better evaluate these hypotheses.

9. All informants interviewed indicated they had observed bone tools being used within their families for hide working. Except for Bryan G., most also mentioned the use of steel tools. Anne Acco and Bryan G. referred to their families’ preference for using bone tools to limit damage to hides during processing. John Bilow also described using using a moose antler tool for working on the thinner, more delicate portions of fur pelts. The technical aspects of manufacturing leg bone fleshing tools is still well known among Métis hide workers, and very specific information from Millie Picotte, Les Carrière, Anne Acco and Bryan G. about selecting bone, and making and using bone fleshers can be found in the interviews. Bone fleshers are used by the informants and their families for hide working because they are durable, effective and useful — in addition to the issues of traditional knowledge and cultural pride.

10. The interviews confirm that knowledge about traditional hide working is passed on from older to younger members within their extended families. Hide working tools are also passed on between generations. The Jean Johnson - Millie Picotte interview offers a two-generation example of a First Nations mother transferring her traditional hide working skills to Millie, her descendant Métis child. Millie’s maternal uncle Wilfred Gouchey made the hide working tools used by the ladies. The Les Carrière interview offers a three-generation example of his family transferring hide working knowledge: Les’ late mother Nora “Agnes” Carrière (*née* McKenzie) was his primary hide working instructor at Cumberland House, Manitoba; Agnes learned her

hide working, beading and hide clothing skills from her stepmother Christina Custer at Amisk Lake, Saskatchewan; and Les' father Pierre Carrière taught him how to properly sharpen hide working tools. His uncle Roger Carrière taught him how to properly make leg bone fleshers and prepare wolf fur pelts for sale. Les' interview also offers an example of hide working tools being curated by his extended family: his maternal grandfather Dougal McKenzie, borne in 1878 at Oxford House, Manitoba passed on his metal hide scraping (graining) tools within the Carrière family.

Conclusions

The issues of contact era traditional indigenous tool use addressed by this study can be best framed by Charles Cobb (2003: 2):

“Lithic technologies witnessed a diverse — and often protracted — history in the Americas following Columbus’ landing.... In some cases, even with wide access to metal objects, certain stone tool types still seemed to be the best implements for carrying out traditional tasks. In others, reliance on lithic technology represented a commitment to maintaining traditional practices amidst a rising tide of imported commodities. Simply put, there is no single answer or predictable nature to either the decline or persistence of stone tools in the Contact era.”

Seen in this light, interpreting mixed site assemblages with trade goods and indigenous bone and stone artifacts in association with cabin remains (writer's emphasis) on the Northwest plains as nomadic hivernant Métis is reasonable, particularly when the excavated sites are identified as late 19th century Métis winter settlements in the ethnohistoric record.

According to the interviews, memories about manufacturing and using flaked stone hide working tools in the 20th century remain within some northern forest Métis trapping families. Interpreting the presence and use of flaked stone tools in 19th century hivernant Métis winter hunting and trading settlements is also reasonable, whether manufactured on-site, or picked up from pre-contact site exposures and/or cabin caulking mud pits, or historically obtained from indigenous tribal relatives and curated within families. In this regard, an extensive, thick, readily accessible sedimentary layer of Late Tertiary quartzite cobble stone conglomerate caps the historically buffalo-rich Cypress Hills. Coupled with Frances Eyman's description of the basic simplicity of the quartzite *teshoa* anvil-strike percussion manufacturing technique, it becomes easier to account for the knowledge and persistent use of *teshoa*, and possibly other stone hide working tools, by hivernant Métis women at Head-of-the-Mountain in the Cypress Hills during the 19th century.

Two recorded ethnohistoric accounts briefly described Métis women working on buffalo hides using: a sharpened bone, a small sharp tool, or a toothed macking iron. Such individual tool choices were probably based on opportunistic selections from either founding side of the hivernant Métis world, as circumstances permitted. According to the interviews, very specific information about making and using leg bone fleshing tools was passed down as traditional knowledge within Métis extended families, and remains widely known and in use today among northern forest Métis hide workers. Leg bone fleshing tools are easy to make, low cost, effective and durable. Either macking irons or leg bone fleshers would have been essential to hivernant

Métis women for hide work at Head-of-the-Mountain, and were likely curated by the extended families who wintered there, as none were recovered from the excavated cabins.

What was recovered from the Head-of-the-Mountain cabins in limited numbers were discarded steel scraper blades, small flaked stone scrapers, and *teshoa*. Both types of stone hide working tools were probably used by hivernant women wintering with their families in the cabins: small stone scrapers for graining or dry-scraping hair from buffalo hides and/or preparing wild canine fur pelts, and cobble stone *teshoa* for dressing or softening buffalo hides and robes. As such, more investigations are needed to determine whether similar stone hide working tools can be recovered from other identified Métis wintering sites on the Northwest Plains to provide a larger sample size and further verify these interpretations.

In the writer's opinion, it may be impossible to distinguish solely from the archaeological record whether the persistence and presence of 19th century bone and flaked stone hide working tools at Head-of-the-Mountain reflected Métis ethnicity, or whether they simply reflected the practical needs, opportunities and/or convenience of the wintering hivernant Métis women hide workers. Hide working was (and is) a complex skill for Métis women — just as hunting, trapping and trading strategies, selecting hunting and camp destinations, livestock management, field butchering and skinning animals, and weapons use and maintenance were (and are) complex skills for Métis men. Women would have had to make daily decisions based on the opportunities for obtaining suitable tool materials from locally available resources, the type of tools needed for the type and thickness of hides to be worked, the organization and expenditure of energy for tool making and hide working, their family relations and responsibilities, their traditional family

knowledge and their acquired experience — *versus* decisions such as travelling to a company trading post to buy tools, or waiting for an independent trader, the cash cost of the items needed, or whether or not travelling through a sometimes hostile landscape could be justified. Such decisions would have also been limited by the season of the year and the prevailing weather.

Leg bone fleshers and *teshoa* would have provided hivernant Métis women wintering at Head-of-the-Mountain with locally-sourced hide working tools that were technologically simple but elegant in concept: low cost, easily obtainable, easy to make, easy to use, and effective at the tasks for which they were designed. Persistent use of these tools would have been based on the needs, experiences and traditional knowledge within those extended Métis families. However, the existing data from previously excavated Métis sites is arguably a small sample in the broader Northwest Plains archaeological record. Also, firsthand ethnohistoric accounts by 19th century hivernant Métis, such as Norbert Welsh, are rare. More interviews within the Métis trapping community, and more brigade social analyses like those done by Brenda Macdougall and Nicole St-Onge, would therefore be helpful. More hivernant Métis sites need to be identified using ethnohistoric records and more sites need to be excavated. And finally, microscopic use-wear analysis of hivernant Métis artifact assemblages could also be helpful.

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Figures



Figure 1.

Antler, bone, stone and steel tools from Head-of-the-Mountain cabins (Elliott 1971). Left to right: broken quartzite cobble *teshoa* fragment with an abraded edge (e.g. Eyman 1968: Figs. 2-4,7), probable *teshoa* resharpening flake, unifacially retouched jasper flake, broken and intact chert split-pebble end scrapers, elk antler tool handle, toothed scapula bone fragment, and probable steel scraper and beamer blades. The scapula and *teshoa* were probably used to dress/soften hides (e.g. Albright 1984: 55-59, Ruth 2013: 218). The 3 smaller stone tools, 2 steel blades and antler handle were probably elements of composite scraper tools used to grain and thin hides (e.g. Ruth 2013: 206-211).



Figure 2.

Stone and steel bifacial tools from Head-of-the-Mountain cabins (Elliott 1971). Left to right: Hudson's Bay Co. pattern axe head, folding pocket knife, broken *teshoa* with abraded edges, and 3 broken smaller biface stone tool fragments. To the writer's eye, the granular material in this particular *teshoa* doesn't appear to be quartzite. Also, the lower right biface may instead be a discarded gun flint. In addition to cutting or scraping, the *teshoa* was probably used to dress/soften hides; the smaller bifaces may have been used to work on delicate fur pelts and hides.



Figure 3.

Quartzite cobble tools from Head-of-the-Mountain cabins (Elliott 1971). To the writer's eye, the tools are consistent with various *teshoa* described and pictured by Francis Eyman (1968: Figs. 2-4,7). In addition to cutting and scraping, the tools were probably used to dress (soften/smooth/abrade) heavy robes and hides (e.g. Ruth 2013: 220-221).



Figure 4

Quartzite hammer stone, and chert and quartzite resharpening flakes, from Head-of-the-Mountain cabins (Elliott 1971). Quartzites such as these are common throughout the Cypress Hills and were often used for local Aboriginal stone tool manufacture.



Image Made Available by Boissevain Community Archives (BCA MG1 B3 114)

Figure 7.

Métis hunters photographed by the British North American Boundary Commission and documented by George Dawson (in Haag and Barkwell 2009: 29-30) on July 18th, 1874, while camped near the Milk River. These hunters probably also wintered with their families in “*such places*” as the Cypress Hills (and Head-of-the-Mountain), e.g.: “*They spend the summer hunting on the plains. Making pemmican during the summer and collecting robes when they are prime in the autumn. They are mostly well-armed with repeating and breach loading rifles. In the winter they resort to Woody Mt. and such places [writer’s emphasis] where there is timber and they have shanties built. Most of them winter on the White Mud R. S. of Ft. N.J. Turney and consequently well into U.S. territory, and take goods out via the Missouri.... They have just held a council and decided to go N. to the Cypress Hills, scouts having reported plenty buffalo in that direction. They have not come from the hills more than a week or two and were then engaged in an Indian*

fight.... During the mornings march passed where the Half-Breeds had been running buffalo a few days before. The hillsides and valleys strewn with carcasses. Those in best condition had been completely stripped, while the poorer ones and old bulls had only the tit [sic] bits removed.”



*Half-breed Traders (1872-75). Saskatchewan Archives Board (R-B9745)
and at Library & Archives of Canada (C-004164)*

Figure 8.

Many extended hivernant Métis families worked as independent traders on the Northwest Plains, wintering with hunting brigades or travelling on their own as shown, trading and resupplying nomadic hivernant families and First Nations tribal people. The photo shows 16 family members, including 9 males who appear old enough to use firearms and defend the family and its trade goods (if necessary) while travelling on the plains during the 19th century.

Appendix: Métis Interviews

1. JOHN BILOW ORAL ACCOUNT OF MODERN DAY ABORIGINAL TOOL USE IN WESTERN CANADA.

Length of discussion approximately 35 minutes, beginning at 11:45 AM, July 28, 2012, following a slide presentation by the recorder at the Killarney, MB MétisFest cultural event. Organized and typewritten the following day from handwritten notes and from memory by Jack Elliott.

The informant says he is a Métis. His name is John Bilow (Jnr.), living in Barrows, MB. The town is located in northwestern Manitoba between Red Deer Lake and Swan River, on the north side of the Porcupine Hills and west of Homestead Creek. The informant is a professional trapper who currently operates a registered trap line in the Porcupine Hills.

On February 24, 2014 John Bilow offered further information about his own hide working tools in a phone discussion about his trapping activities.

On March 3, 2014 John Bilow provided written permission to be identified for education publishing purposes, and offered a photo showing his father at his trapping camp south of Powell, Manitoba approx. 1933.

July 28, 2012 NARRATIVE

John (Jnr.) began by volunteering information to me that his father (John Snr.) *“had been a full-time trapper and hunter who regularly used bone and stone tools in the 1940s and 1950s to dress the hides of deer, moose and bear, during the summer, because we trapped and hunted during the winter.”* John said the hides were dressed for the home manufacture of *“snowshoes, moccasins and mitts, [and] we got extra income from selling the snowshoes, moccasins and mitts locally.”* He also noted *“bear skin was the best material for lacing the webbing on the snowshoes.”*

John said his father *“was born in 1912, spent his entire life in the bush until his death in 1995 except for service overseas in WW2, serving with a Winnipeg military unit.”*

As recorder, I asked John how his father had learned to use bone and stone tools for hide dressing?

John replied that his father had *“always worked with native people as a young person around Swan River in the 1920s, where he picked up the skills from the local native people.”*

I asked John why his father had preferred to use bone and stone tools for hide dressing -- and noted while I understood the bones had been obtained from the animals hunted by John Snr. -- I also asked where his father got the stones to make the hide working tools he used?

John replied that his father used bone and stone tools for hide dressing *“because he could make them himself.”* His father *“got the stones he needed to make the [stone] tools from Homestead Creek while [periodically] panning for gold [never found any] in the sand in the creek.”*

John said his father *“married a Sioux woman from the Cree-Sioux settlement at Red Deer Lake. Her maiden name was Delaronde [e.g. John Jnr’s. Mother] and they moved onto the family farm in the Porcupine Hills area in the 1930s. We didn’t do much farming, rented out the land, grew a garden every year and lived off the bush by hunting and trapping. We had very little money but we lived well and got everything we needed in the bush.”*

John noted that his mother was also an accomplished and knowledgeable hide worker [who] *“was taught her skills by her mother, and [who] sewed the moccasins and mitts during the summer months. She is still alive and is still [mentally] very sharp.”*

I asked John if he still had any of his father’s bone and stone hide working tools?

John said his family quit dressing hides and manufacturing moccasins, mitts and snowshoes *“in 1957 after we moved off the farm and into the town of Barrows, and left the tools behind when we moved.”* He said *“the house in Barrows wasn’t suitable for dressing hides.”* No other, more specific reason was offered. John also said he *“still had a photo of his father all dressed in hide clothing.”*

John’s immediate family members then arrived and they left for lunch, ending the discussion.

February 24, 2014 NARRATIVE

During a phone conversation about his trapping activities, John indicated he *“still used bone tools but only for deer hides”*. John also said he used *“a steel scraper and a moose antler tool for working on fur pelts. The moose antler tool was used for the more delicate parts of the pelts, such as the belly area where the skin is thinner.”*

RECORDER’S SUMMARY COMMENTS

John Bilow was spontaneous in his conversation and he initiated the conversation. He presented as a pragmatic, factual individual. He is a full-time trapper. The interview indicates that his father and mother learned their hide working skills in the twentieth century within First Nations tribal communities, and continued to use the skills primarily as a full-time trapping family interested in producing quality hides in the most effective way for both personal use and commercial resale. The manufacture and use of traditional tools by the Bilow family appears to be a function of practical need, lack of cash money for alternatives, traditional knowledge, and personal pride in their culture & self-reliance as a family.

2. ANNE ACCO ORAL ACCOUNT OF MODERN DAY ABORIGINAL TOOL USE IN WESTERN CANADA.

Length of discussion approximately 1 hour, beginning at 8:00 AM MST, August 15, 2012, with a phone call to Montreal. Organized and typewritten the same day from handwritten notes and from memory by Jack Elliott.

The contact with the informant was first suggested by Lawrie Barkwell at the Louis Riel Institute in Winnipeg, MB, who is acquainted with her.

The informant is a Métis. Her name is Anne Acco (née Carrière), living in Montreal, PQ. The informant says she is diabetic, blind, 73 yrs. of age and was borne into a large extended family of trappers at Cumberland House, SK.

Anne's uncle from Cumberland House, Roger Carrière, was crowned "King Trapper" 17 times at the annual Trapper's Festival held nearby at The Pas, MB. An aunt (unnamed) still does traditional hide work and bead work full-time and lives at Cumberland House, Saskatchewan. Anne's brother, Franklin Carrière, is a professional trapper living at Lac La Ronge, SK. Another brother, Les Carrière, is a construction carpenter who still does traditional hide work and lives at Cumberland House, SK. Due to her eyesight, Anne asked that I also communicate with Les concerning matters discussed in this interview.

On September 25th, 2012, during a conversation with Darren Préfontaine at the Gabriel Dumont Institute in Saskatoon, SK, Darren indicated *to me* that "*Cumberland House is well known as a community with strong Aboriginal traditions and cultural perspective.*"

On February 19th, 2014, Les Carrière added more Carrière family history details in an update (see Les Carrière interview).

On March 10th, 2014, Anne Acco provided written permission to be identified for education publishing purposes and offered further details on her family history. Anne noted that Theodore Carrière (Anne's paternal great grandfather) was raised in the Red River district, then spent his entire adult life working on various rivers as a voyageur in the British North West Territories, which was unceded land until the Treaty 5 adhesion was signed. Theodore died soon after the birth of his younger son Lionel Louis Carrière (Anne's paternal grandfather). Lionel was baptised by Father Gasté at Grand Rapids, NWT. An older brother, Solomon, was baptised at Batoche, NWT. The two sons were raised by their mother Angelique Dorion, who never lived in Red River district — Angelique and the boys lived their entire lives in northern Saskatchewan, NWT. Angelique was the daughter of Theresé Constant and Jean Baptiste Dorion. Jean Baptiste Dorion was borne in St. Louis, Missouri, and was also a voyageur who worked in the NWT.

NARRATIVE

I began the interview by introducing myself to Anne and explaining the reason for my call.

Anne said *“I was borne into a trapping family and raised by my family in the bush in trapping camps until I was 12 years of age. My memories as a child are of my mother using bone and stone tools to dress hides in the camps during the 1940s and 1950s.”* Anne said *“my father also did hide work when he was working alone out in the bush.”*

As recorder, I asked Anne to describe her memories of her family’s use of bone and stone tools to dress hides.

Anne said that *“because we used a brain tanning method to process our hides, the hides were very soft. Using steel tools to work on the hides wasn’t practical because the steel tools quickly nicked and scarred the hides.”* Anne went on to say that *“bone tools were the choice for scraping hides because the bone tools were flexible, the hides were soft and flexible, and this relationship prevented the hides from becoming nicked. While a steel knife could make hide work go faster, the hides were usually no good in the end.”* Anne also said that *“beaver hides could be worked with steel tools because the skin was thicker, but no steel knife was ever really any good for working hides.”*

As recorder, I asked Anne how she remembered her family using stone tools for hide working?

Anne said that *“my family used stone tools when they needed to. We mainly used stone tools to mash berries and hammer in pegs to stretch hides. The stone tools we used were mainly for heavy pounding or chopping. We always used the best tools we could get to do the job. We usually used steel tools for pounding and chopping when we had the money to buy them. However, if we lacked the money, or if we lost any steel tools in the bush, then we would make stone tools to do the work that was needed.”*

As recorder, I asked Anne if she saw her family members making stone tools?

Anne said she *“never saw any stone tools being chipped, because as children we were kept away from it so our eyes wouldn’t be injured by flying chips [of stone]. I did see the finished tools after they were made. My parents and my brothers and myself still have the knowledge of how to make stone tools. Even today my family members are still trapping and still using [these] traditional hide tools.”*

As recorder, I offered to send Anne photographs of the stone & bone tools excavated from the winter cabins at the Kajewski Site during my thesis research work in 1969, so she could see if she recognized anything as similar to those her family used. She agreed, but asked that I also send the photos to her brother Les, and they would discuss the images then get back to me.

The call was terminated soon after this.

RECORDER'S SUMMARY COMMENTS

Anne Acco seemed surprised by my phone call but quickly became interested in the topic. Despite her acknowledged senior age and health issues, she was an articulate and forthright informant in discussing aspects of her cultural heritage and family life. Her family were full-time trappers. Some family members still trap commercially and some still dress hides using traditional methods. Anne has knowledge about hide working, about the advantages and disadvantages of bone v.s. steel tools for hide work, and about using bone tools and making stone tools. Knowledge about chipping (flaking) & shaping stone tools for various purposes apparently existed within the Carrière family, more for simple practicality and expediency when steel tools are lost while in the bush, or when money isn't available to buy them. The manufacture and use of traditional tools by the Carrière family appears to be a function of practical need, lack of cash money, traditional knowledge, pride in their culture & self-reliance as a family.

3. LES CARRIÈRE ORAL ACCOUNT OF MODERN DAY ABORIGINAL TOOL USE IN WESTERN CANADA.

Length of discussion approximately 45 minutes, beginning at 11:18 AM MST, September 3, 2012, with the informant's phone call from Cumberland House. Organized and typewritten the same day from handwritten notes and from memory by Jack Elliott.

The informant is a Métis. His name is Les Carrière, living in Cumberland House, SK. Les contacted me following a letter which I wrote to his sister, Anne Acco, whom I had previously interviewed.

See September 25th, 2012, interview comments about Carrière family history in his sister Annie Acco's interview.

On February 19th, 2014, Les Carrière emailed me more family history details in an update to this interview, and provided written permission to be identified for education publishing purposes.

On March 10th, 2014, Anne Acco added more Carrière family history details in an update (see Anne Acco interview).

SEPTEMBER 3, 2012 NARRATIVE

I began the interview by explaining the reason for writing the letter and my interest about recent Métis traditional tool use for hide working.

Les indicated that his knowledge of hide working was passed down within his family. *"I still do traditional hide working. I learned how to work with hides from my uncle Roger [Carrière], who knew all the skills needed to live in the bush."*

Les said *“people around Cumberland House were still making pemmican and using sinew for sewing in the 1960s. They used to make two kinds of pemmican, with either red meat or fish.”*

Les said *“Cumberland House is a mixed community of Sioux, Ojibwa, [Swampy or Woods] Cree, some Plains Cree, Métis, and possibly even some Dené who intermarried into Cree families. Aboriginal people were drawn to the Saskatchewan River area from all over the country by the fur trade and the quality of the animals being trapped in the area. The community has more of a full-blood, First Nations tribal perspective than how Métis down south think about themselves. Agriculture is practiced in the area, but the area is regularly subject to serious flooding which makes agriculture difficult, so local people still make much of their living in the bush.”*

Les said *“Métis people don't just move around [aimlessly] when they go out on the land, they move to places where the animals are and where they can get support from their [extended] family members in these places. The family members we most often rely on are our first nations family members. These family groups used to get together in particular places at least once every year to exchange knowledge, marriage prospects, medicine, tools and food products with one another, but this [custom] came to end in the 1960s.”*

Les said *“There are probably some changes in traditional tool styles moving from north to south and onto the plains. Buffalo hides were a lot heavier and may have required somewhat different tools.”*

Les described making and using bone scrapers for his hide working. *“To make a scraper you take the hide off the lower leg bone of a moose, cut the end about a 60 degree angle and cook the bone for about 3 minutes at about 300 degrees [F.] so the fat shrinks and falls out -- you degrease the bone. Then you sharpen the edge. You must use the tool regularly for hide working or it becomes too brittle to work properly.”*

Les said that *“I don't use stone tools for my hide working. I don't remember how to use them because that knowledge was before my time.”* He also said that *“stone tools were used to shatter bones for marrow, and we used all the parts of an animal's carcass, even the head. I think people used to put handles on their stone tools so they were more efficient.”*

Les explained some of the factors for grading the quality of furs and hides. He also claimed that *“some of the knowledge about commercial hide working in the fur trade actually came from the early Scots traders, who brought their knowledge from northern Scotland, which is a very cold place world famous for high quality wool and sheep skins.”*

Les indicated that he would discuss the topic further with his brother and then follow up with me at a future time. The interview ended soon after.

FEBRUARY 19, 2014 NARRATIVE

“My parents Pierre Carrière and Nora “Agnes” Carrière (née Mckenzie). When I was child growing up into my teens during the summer months [we] would work together on moose hides.

My father would sharpen the bone scrapers used to remove the inner part of the hide, where flesh [was] removed by my mother's work with bone scrapers.

Everything they did was in steps till [the] final stages."

My mother was the only daughter from him [Dougal Mckenzie], who consistently did moose and deer hides summer after summer over 70 years. She acknowledged her stepmother Christiana Custer from Amisk Lake as teaching the very basics of hide making and bead work, and making all the moose hide into foot wear, pants, and jackets or coats plus fur hats.

Next was the metal scrapers passed on by grandfather Dougal Mckenzie. He was my mother's father. He was born in Oxford House, Manitoba in 1878. The metal scrapers were used to remove the hair side of the moose or deer till a certain thin appearance [grained]. All scraping was done carefully [so not to] puncture the dry raw moose hides. One thing here is sharp tools [are] very important, to sharpen them is also a lesson to watch and learn over time.

My mother would also ask other women from Cumberland House to make moose hides in our back yard, then pay them after for their work. To watch this over time of several decades it does appear repetitive, so it allowed me to see how to do it by myself, but I also used the bone scrapers in pelt preparation a tremendous amount of time over 40 years and [learned how to] sharpen the bone edge to be able to do it over and over again.

My late uncle Roger Carrière instructed us on the actual making of bone scrapers from moose [leg] bones. He was [a] trapper first, he actually did not prepare moose hides, just pelt preparation!

Uncle Roger Carrière came to Cumberland House to teach how to trap timberwolf and do the actual pelt preparation in the 1990's. This is where he instructed trappers how select the [leg] bone and cut the bone for using in bone scraping!

My late mother Agnes Carrière was my primary instructor in hide making. However I myself changed my methods where it needed too."

RECORDER'S SUMMARY COMMENTS

Les Carrière was animated and interested discussing the topic. He is an articulate informant who is comfortable and forthright about discussing various aspects of his cultural heritage and family history. His knowledge about hide working, and sharpening and using bone hide working tools, was taught to him as a child by his parents. He uses steel graining tools passed on by his maternal grandfather. Les prepares hides using traditional methods; he does not make (flake) or use stone tools for hide working. Les also has knowledge about grading and preparing fur pelts, and making leg bone hide fleshing tools, which his uncle taught him. The manufacture and use of hide working tools thus appears to be a function of traditional family knowledge and pride in his culture and family heritage. For family respect, Les has asked that these various extended family members be acknowledged by name.

4. BRYAN G. ORAL ACCOUNT OF MODERN DAY ABORIGINAL TOOL USE IN WESTERN CANADA.

Length of discussion approximately 15 minutes, beginning at 1:30 PM MST, September 25, 2012. Organized and typewritten September 27, 2012, from handwritten notes and from memory by Jack Elliott.

The informant is a Métis, living in Saskatoon, SK. Bryan never responded to subsequent requests to be identified publically in this transcript or any following publication.

Bryan was borne into a family [residing] on Lake Winnipegosis in the Interlakes region of Manitoba. Bryan said his family fished commercially, hunted, trapped, cut pulp wood and picked berries, medicinal plants & “Gentian” to make a living and “get by” in the area.

The discussion occurred with the informant after he watched a slideshow presentation by the recorder to his adult upgrading class ... in Saskatoon, SK.

NARRATIVE

I began the interview by explaining the reason for my interest about recent Métis traditional tool use for hide working.

Bryan said *“my family and neighbors at ... still use traditional aboriginal tools for hide working, even today. My family doesn’t use any stone tools for hide working, only bone scrapers which are made from moose leg bones.”*

Bryan said *“When I was young I used to help my grandmother stretch the hides on frames for processing. Dressing hides was very hard work. The hide working rack was usually next to the racks used for drying meat and fish. My job was to gather up the little balls of fat my grandmother scraped off the hides, and put them on the fire to keep flies from being attracted to the work area.*

My grandmother and the other local women would hang the bone scrapers by a thong loop from their wrist and use a bent-arm, up-and-down motion to scrape the hides. The scrapers were made with a toothed working edge. They would regularly rotate the scraper on the thong as they worked in order to make use of both faces on the [angled] scraper edge.”

Bryan said *“my family and other people at ... have never liked to use metal tools on hides, because metal is too hard on hides -- always nicking and cutting the hides.”*

Bryan indicated he was going back to ... the next day to attend a funeral, and would discuss the topic further with his family members, try to take some photos of his family’s traditional hide working tools and then follow up with me by email when he returned. I offered to mail

photocopies of the aboriginal tools seen in the slide show, and a list of questions he might ask, to assist Bryan in his discussions with his family about the topic. The interview ended soon after.

RECORDER'S SUMMARY COMMENTS

Bryan is working as an educator. He appeared forthright and interested when discussing the topic. He was an articulate informant, comfortable about discussing aspects of his traditional home lifestyle and hide working.

According to this informant, his family and others at ... make their living in the bush and from the lake. While they do not make (flake) or use stone tools, bone hide working tools are still commonly used in his northern Métis community as this is written. The manufacture and use of such tools by the informant's family and others at ... appears to be a function of their traditional family knowledge and continuing practical need.

5. JEAN JOHNSON - MILLE PICOTTE ORAL ACCOUNT OF MODERN DAY ABORIGINAL TOOL USE IN WESTERN CANADA.

Length of interview approximately 30 minutes, beginning at 12:45 PM MST, June 8, 2013, at "The Hills Are Alive" festival in Cypress Hills Interprovincial Park, Alberta. Organized and typewritten the next day from handwritten notes and from memory by Jack Elliott.

The informants are northern Alberta First Nations Cree and Métis, mother and daughter. The mother, Jean Johnson, a widow once married to a Norwegian-Canadian fur trapper, now lives with her brother in Valleyview, AB. Her daughter, Millie-Ann Picotte, lives in Oyen, AB. Millie and her cousin Maryanne operate a web site: www.MandMhuntingadventures.com showcasing information and instruction in various skills about hunting, dressing wild game, hide working, game cooking and family history.

Millie Picotte followed up February 22, 2014 by email to provide photos of family bone fleshing tools and a composite graining tool, and details about graining tool steel blades handmade by her uncle, and to provide written permission for her and her mother to be identified for education publishing purposes. The photos can be accessed via the Pinterest account in the above web site.

JUNE 8, 2013 NARRATIVE

I began the interview by explaining the reason for the discussion and my interest about recent Métis traditional tool use for hide working.

Jean noted that she *"did most of the meat cutting and preparation for her family members whenever any of them shot a moose."* She is 70 years of age and a widow, and estimates she *"has dressed several thousand moose hides in her lifetime."* Recently she has been trying to teach these skills to her younger family members.

Millie learned many of these skills from Jean. She and her mother estimate that *“depending on weather conditions it takes from 5 to 15 days to properly tan and dress a moose hide.”* Often they would work on several hides in a sequential fashion within the same work period.

“Moose hides were tanned using the brain tanning method and then smoked to keep them supple and to help waterproof them.” The ladies used *“a moose leg bone toothed flesher for fleshing, and a steel scraper blade hafted onto a long, curved wooden handle for removing hair when processing the hides.”*

Millie noted that *“only lower leg bones from older bull moose were used for fleshers because the bones were harder, more dense, and held an edge better.”* Millie also noted that *“more delicate furs and skins, such as foxes, etc. were fleshed using a knife blade.”*

Millie also referred me to her web site for further information on moose hide dressing.

Both ladies then returned to their festival classes and the interview ended.

FEBRUARY 22, 2014 NARRATIVE

“The tools were made by my uncle Wilfred (Jean’s brother) the [metal] blade is handmade and was cut from the metal band of a old whiskey barrel; he has used metal cut from a disc of a old plow also.”

RECORDER’S SUMMARY COMMENTS

Both ladies were animated and interested when discussing the topic. They were articulate informants who were knowledgeable and forthright about discussing various aspects of their hide working. The ladies come from a family with a full-time professional trapper as the father, and have spent their lives butchering game and dressing hides using traditional methods. What was very apparent was their knowledge about hide working, and making and using bone tools, for their extended family’s needs. They do not make (flake) or use stone tools for hide working.