distribution of material cutural traits with those elsewhere on the Canadian Plateau (particularly between ca. 3300 and 700 BP), and like the North Okanagan, this region is characterized by an admixture of Canadian Plateau and Columbia Plateau cultural traits and patterns.

Archaeological investigations conducted at late prehistoric sites in the Lower Fraser River canyon region between Boston Bar and the Hope area clearly indicate that this region is very strongly aligned with the Fraser Delta and Southern Northwest Coast regions, although some similarities with the Plateau do exist (e.g., use of winter semi-subterranean dwellings, a roughly similar projectile point sequence and chipped stone technology) (Borden 1961, 1968; Mitchell 1963; Hanson 1973; Von Krogh 1976, 1980; Archer 1980; Eldridge 1982). The occupants of the Lower Fraser in the 19th century were the Upper Stalo or Tait, who were linguistically and culturally affiliated with the Coast Salish groups to the west (Boas 1890:321; Duff 1952:11; Hill-Tout 1903:355). Because of these archaeological and linguistic differences, we do not regard the Lower Fraser River region as participating in the Plateau Pithouse tradition. We consider it as being transitional to, and more strongly aligned with, the distinctively different South Coast region (see also Von Krogh 1980:18).

LATE PREHISTORIC CANADIAN PLATEAU CULTURAL HORIZONS

Consideration of the currently available research data leads us to propose that three cultural horizons existed on the Canadian Plateau between ca. 4000/3500 and 200 BP. Together they comprise the *Plateau Pithouse tradition*, a cultural tradition characterized by semi-sedentary, pithouse dwelling, hunter-gatherer, logistically organized (Binford 1980), band-level societies that relied heavily on anadromous fish for subsistence. The Plateau Pithouse tradition and its constituent cultural horizons were conceived by adopting an empirical approach, utilizing data from virtually every excavated component on the Canadian Plateau. Our many years of excavation and survey experience throughout the Canadian Plateau were also heavily drawn upon. This approach allowed us to recognize broad cultural similarities shared between regions which have not been previously recognized. Caution was exercised when considering components which appeared to be badly mixed, and we occasionally drew conclusions on content and chronology that are somewhat divergent from those of the original investigators.

Our consideration of the currently available regional syntheses and personal experience suggest that several distinctive archaeological regions can be provisionally defined for the Canadian Plateau (Figure 4). They include: the Chilcotin region; Mid-Fraser River region; Thompson River region; South Thompson River-Western Shuswap Lakes region; Nicola region; North Okanagan region; and Arrow Lakes

region (Figures 4 to 13). Although these regions share an overall general level of environmental similarity, they are regarded as being separable on a combined consideration of: (1) minor to moderate regional environmental differences with regard to climate, natural resource abundance and distribution (see Palmer 1975: 204–213,228); (2) observed differences in settlement and subsistence strategies/patterns expressed in the archaeological record; (3) geographic isolation imposed by mountain ranges or major rivers; and (4) ethnographically documented linguistic/ ethnic group boundaries.

Formidable geographic obstacles such as major mountain ranges most certainly affected ease of human movement between some regions, consequently hindering inter–regional interaction to some degree. This may have been particularly true of the juxtaposed North Okanagan, South Thompson–Shuswap, and Arrow Lakes regions. Despite natural barriers, the general level of similarity expressed in material culture from excavated sites from these latter regions suggest that some cultural interaction was certainly taking place during the last 3500/4000 years, but the level and intensity of this contact remains poorly understood.

The horizon definitions presented below are intended as guidelines which will be of value in formulating future local and regional phase sequences, and for framing and testing models relating to culture process and adaptation. Once all regional phase sequences have been defined, it is very probable that the horizon definitions presented here will undergo some revision. The horizons will then assume greater value as integrative devices that can be used to assess the level of inter–regional cultural interaction, group mobility, and diffusion of cultural traits and patterns.

SHUSWAP HORIZON

The earliest cultural horizon belonging to the Plateau Pithouse tradition is the *Shuswap horizon*, estimated to have commenced sometime between ca. 4000 and 3500 BP, and ended around 2400 BP (Figures 3 and 14). There are fewer excavated components for this horizon than for the following two horizons (Table 1), nevertheless, they are represented in all regions (Figure 15). Present data indicate that the beginning of this horizon marks the initial use of semi–subterranean pithouses as winter habitations on the Canadian Plateau.

The Shuswap horizon appears to have begun shortly after the onset of cooler and moister climatic conditions around 4500 to 4000 BP (Figure 14) following the warm and dry Altithermal that lasted from about 8000 to 4500 BP (Hansen 1955; Alley 1976; Clague 1981; Hebda 1982; King 1980; Mack, Rutter, and Valastro 1978; Mathewes 1984; Campbell 1985a). Perhaps this cooling trend is

responsible for the development of adaptive strategies which differed from those adopted during the Altithermal period (see Lawhead and Stryd 1985; Lawhead, Stryd, and Curtin 1986). Sometime between 3000 and 2000 BP, warmer and drier climatic conditions were established that approximated those experienced today. It is clear that by 3000 BP the Plateau Pithouse tradition adaptive cultural pattern had been established throughout the Canadian Plateau. The majority (68%) of excavated Shuswap horizon components are from housepit sites (Table 1), and therefore, the following descriptions of this horizon's characteristics are biased towards data recovered from this site type.

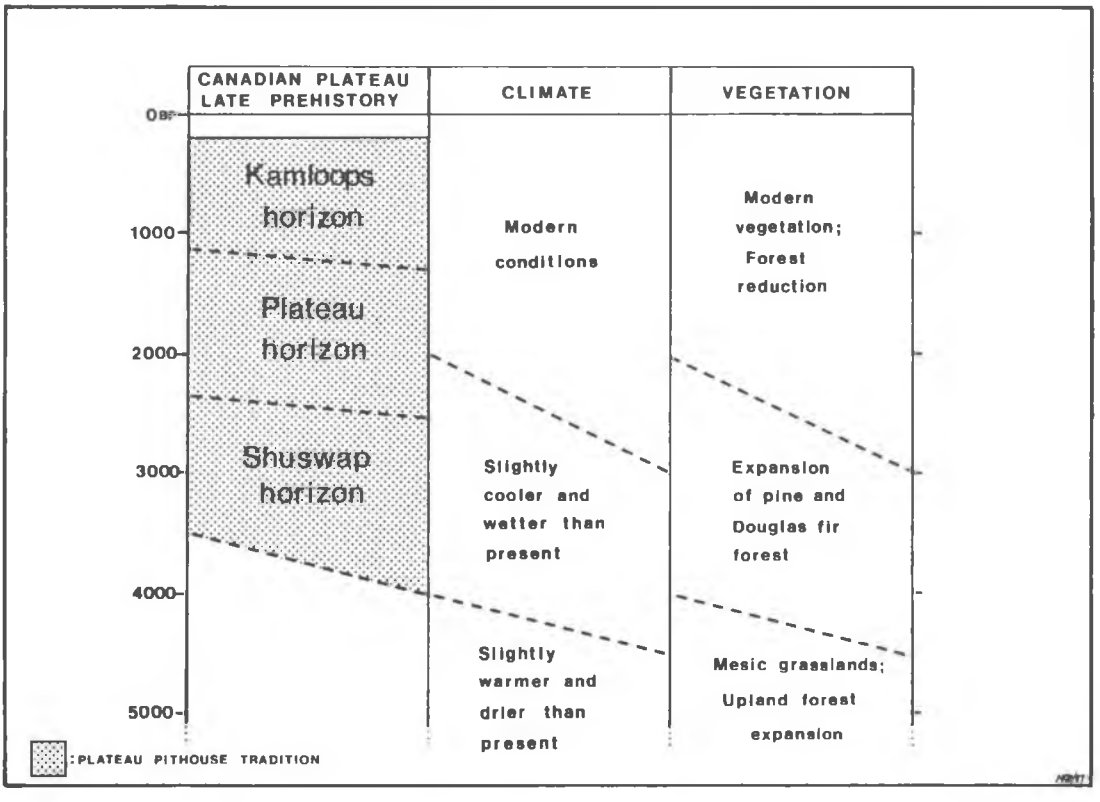

Figure 14. Cultural and paleoenvironmental sequences for the late prehistoric period on the Canadian Plateau.

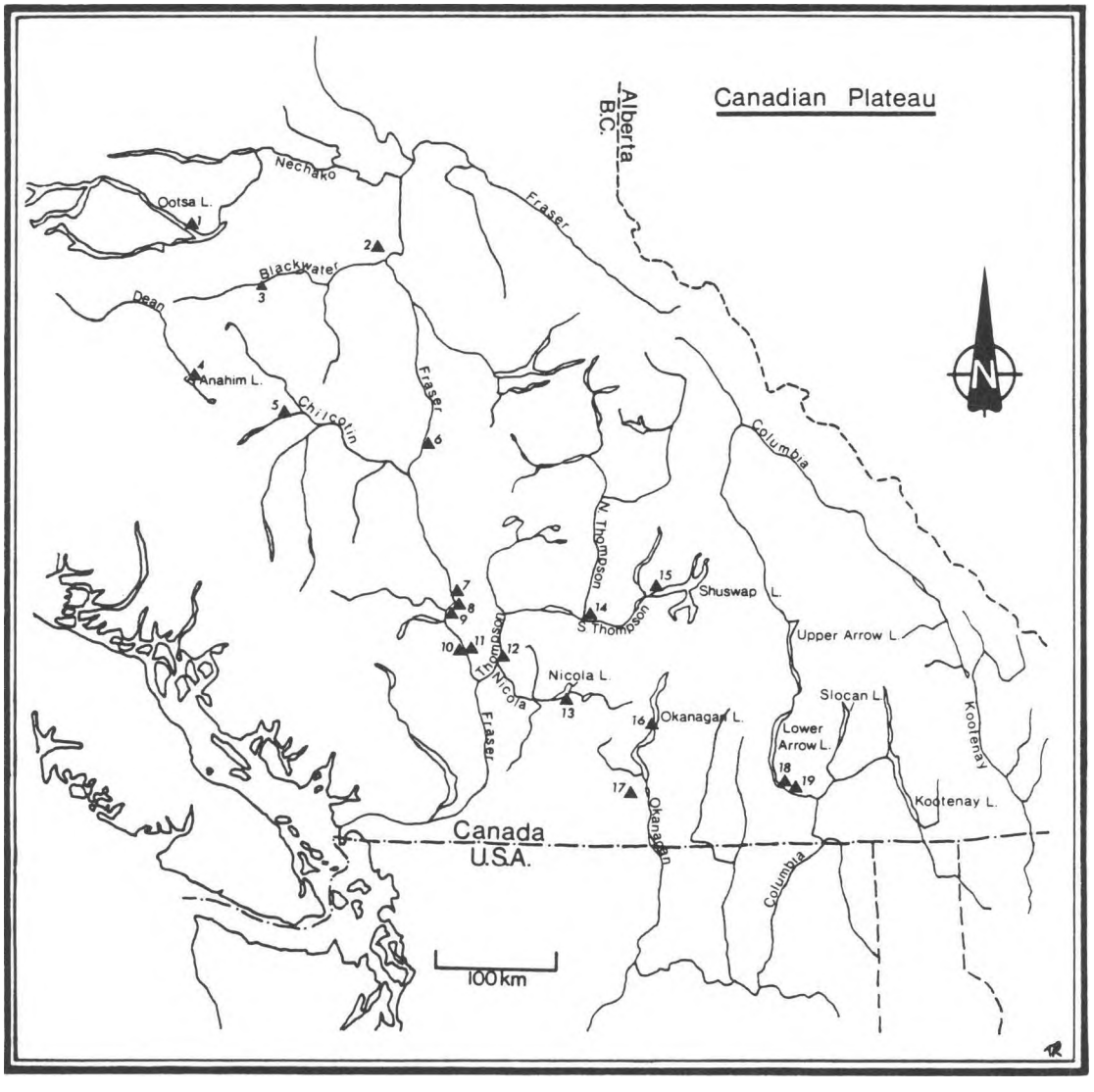

Figure 15. Location of excavated components attributed to the Shuswap horizon. Borden site designations and references are listed in Table 1.

Horizon Characteristics

Surficially, Shuswap horizon housepit depressions are large, averaging 10.7 m in diameter (s.d. = 2.19 m; range = 7.6 to 16.0 m) (see Table 4). They lack raised earth rims, and are circular to oval in plan. Excavations reveal that they are usually flat-bottomed with steep walls, and the floors tend to be rectangular in plan.

Hearth features are common, as are internal storage and cooking pits (earth ovens). Earth roof insulation layers and post-holes have been found, implying substantial wooden superstructures as described by Boas (1890), Dawson (1891:7), and Teit (1900:192-194) for the ethnographic period. Some houses may have had less massive superstructures without earth roof insulation. The sample of excavated houses contain one or two major occupational episodes.

Evidence for a ground level side-entrance is present at site EeRb 10 (Richards and Rousseau 1982:75). Side entrances may have been common, especially on houses lacking substantial roof structures. External storage or cooking pits are rare, and date to the last 500 years of the horizon (see Sendey 1972:11; Mohs 1980a:53; Turnbull 1977:105, Figure 41).

Projectile points display a relatively high degree of stylistic variability (Figure 16). They have a mean length of 4.00 cm, width of 1.80 cm, and an average neck width of 1.10 cm (Table 6), suggesting that they were used to tip spears or atlatl darts rather than arrows (see Corliss 1972; Stryd 1973a:49-50; Thomas 1978; Wilson 1980:44-45). Most of the points are lanceolate or triangular in form. Commonly recurring formal "types" include: (1) a form with shallow corner-removals or side-notches, markedly concave basal margin, and pronounced basal or basal-lateral "ears" (Figure 16a-f); (2) a lanceolate form with a markedly concave basal margin (Figure 16g-i); (3) a form having side or corner removals or shallow notches, pronounced shoulders (some have slight lateral barbs), expanding base, and concave basal margin (Figure 16j-l); (4) a form with a parallel to slightly contracting or slightly expanding stem with well-defined, narrow, rounded shoulders and concave basal margin (Figure 16m-o); (5) a lanceolate form with well-defined, slightly rounded shoulders, slightly expanding stems, and slightly concave basal margins (Figure 16p-r); (6) a form having narrow, rounded shoulders, parallel stem, and straight to slightly convex basal margin (Figure 16s-u); (7) a form with a contracting stem, broad, slightly rounded shoulders, and straight to slightly convex basal margin (Figure 16v-y); and (8) a form with markedly rounded shoulders, slightly expanding stem, and slightly to markedly concave basal margin (Figure 16z-d'). Pronounced lateral barbs are uncommon on Shuswap horizon points, however, towards the end of the horizon small barbs, often only unilateral, are sometimes present.

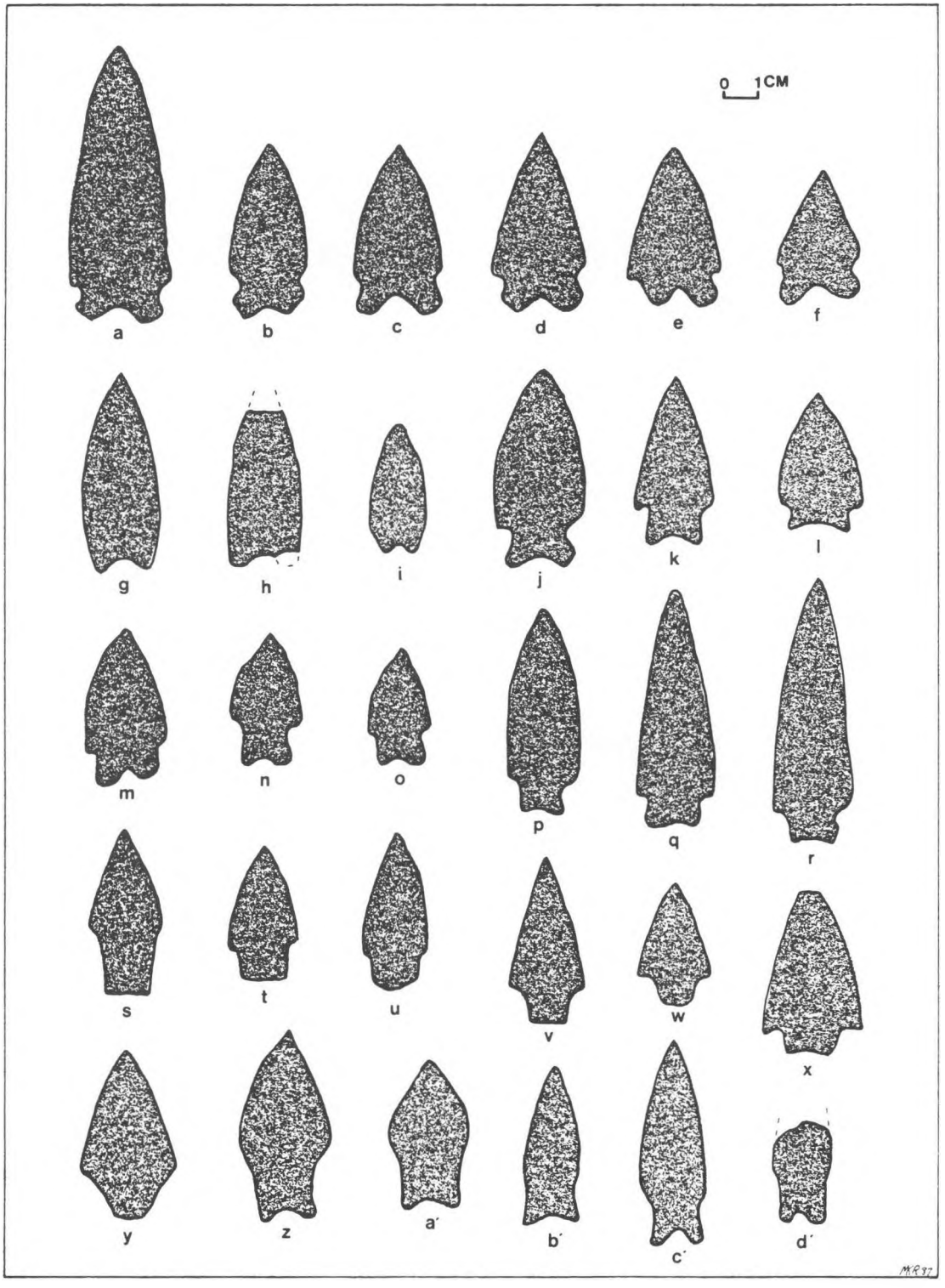

Figure 16. Selected examples of Shuswap horizon projectile point forms. **Type 1**: a–f; **Type 2**: g–i; **Type 3**: j–l; **Type 4**: m–o; **Type 5**: p–r; **Type 6**: s–u; **Type 7**: v–y; **Type 8**: z–d'. Lillooet locality: a,b,j (Stryd 1973a); Lochnore–Nesikep locality: d' (Sanger 1970); Lower Nicola–Spences Bridge locality: z,a',c' (Von Krogh 1978); Nicola Lake locality: b,c,i,s,v (Wyatt 1972); Kamloops locality: e–h,k,m–q,u,x,y (Wilson 1980; Richards and Rousseau 1982); Shuswap Lake: r,t (Sendey 1972); Westside locality: w (Rousseau 1984a); FiSi 19: l (Borden 1952); FgSd 1: b' (Donahue 1975, 1978).

There appears to be a difference in the temporal distribution of the various point types during the Shuswap horizon. Types 1 and 2 do not appear to occur later than about 2800 BP, while types 3, 4, 5 and 8 are found up to ca. 2500 BP. Types 6 and 7 are relatively rare prior to ca. 3000 BP, but after ca. 2800 BP they dominate the assemblages. Future research should clarify and refine the precise temporal ordering of these point types.

Key-shaped formed unifaces/bifaces (Figure 17q,r) are present in Shuswap horizon assemblages and persist until the end of the succeeding Plateau horizon. Fladmark (1978) notes that they appear in Canadian Plateau assemblages after ca. 3300 BP and are absent after ca. 1200 BP. These distinctive items are not present in large numbers, nor are other formed chipped stone tools with the exception of projectile points (Table 7). Formed scrapers are relatively rare, and are usually the small thumbnail endscraper type. Formed scrapers may have been functionally substituted by split cobble tools (Richards and Rousseau 1982:48) and/or by unformed unifacial flakes. The most common chipped stone implements are simple unformed unifacial and bifacial flake tools. Microblades and cores are occasionally found (Sanger 1970:32; Borden 1952:35,36). Ground stone items are rare (Table 8).

Lithic assemblages associated with Shuswap horizon sites display a relative simplicity in composition, workmanship, and technological sophistication compared to later horizons. Locally obtained low to medium quality lithic raw materials such as chert, quartzite, argillite, rhyolite, and especially fine to coarse grained basalts were commonly used. The flaking qualities of these materials may be partly responsible for the stylistically and technologically "crude" appearance of many tools, rather than being indicative of poor lithic technological knowledge or inferior knapping ability. High quality raw materials such as vitreous basalt, chert, chalcedony, and obsidian were also used where locally available.

At the few sites where good preservation prevails, a well-developed bone and antler technology is represented (see Richards and Rousseau 1982:20-75; Wyatt 1972:80-81) (Tables 9 and 10; Figure 17). Notable items include: small, flat, discoidal beads with single circular perforations; bone bracelets(?); bilaterally barbed bone points; harpoon valves; and awls. Bone or antler artifacts with incised decorations are absent.

Artwork, consisting of sculptures and decorated artifacts, is very rare in the Shuswap horizon. A ground and polished zoomorphic pestle with the head of a bear(?) carved on its proximal end was found at EeRb 10, Housepit 9 at Kamloops (Figure 17p), and dates to ca. 3000 BP (Richards and Rousseau 1982:49-51). This is presently the oldest dated example of carved stone artwork found on the Canadian Plateau. An abrader with incised decorations was recovered at EbRc 6 on Nicola Lake and may belong to the Shuswap horizon (Wyatt 1972).

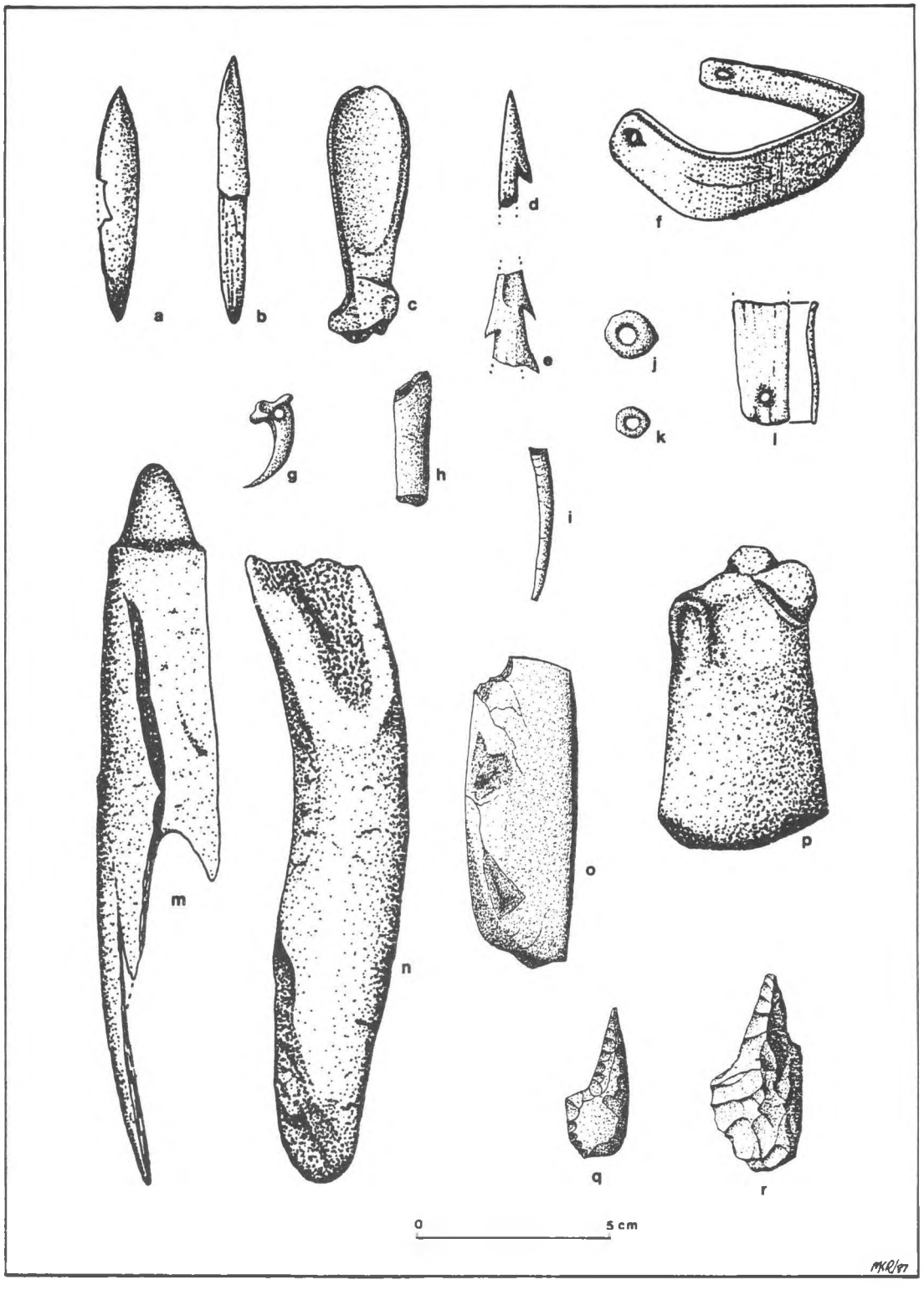

Figure 17. Selected artifacts from Shuswap horizon components. Items **(a,b)**: bone bipoints; **(c)**: bone spoon(?); **(d)**: bone point tip; **(e)**: bilaterally barbed antler point; **(f)**: bone bracelet; **(g)**: perforated eagle claw; **(h)**: sectioned and polished bone bead(?); **(i)**: unmodified Dentalium shell; **(j,k)**: bone disc beads; **(l)**: section of bone bracelet or pendant(?); **(m)**: harpoon valve(?); **(n)**: antler wedge; **(o)**: nephrite celt; **(p)**: top of zoomorphic pestle; **(q,r)**: key-shaped formed unifaces. Artifacts **o** and **r** are from DlQv 39 Rousseau 1984a,b); the rest are from EeRb 10 (Wilson 1980; Richards and Rousseau 1982).

If so, it is the only known item, and these incised decorations are similar to those found on bone and antler implements of the Kamloops horizon.

While excavated burials are rare from this cultural horizon (Table 1), the interment pattern is remarkably similar, considering that the burials are located in widely separated parts of the Canadian Plateau (see Fladmark 1976:28; Mohs 1980a:119; Sanger 1967:28; Sendey 1972:14). The four sites containing burials consist of interments within habitations. Three sites (EdRk 9, EfQu 3, FiRs 1) had flexed burials in pits below the house floor (see Fladmark 1976:28; Sanger 1970:35; Sendey 1972:14). One housepit at EfQu 3 in Shuswap Lake Park contained at least eight individuals (Sendey 1972:14). Burials from all four sites lacked grave inclusions, but red ochre was associated with the interments at Shuswap Lake Park. The burial at EdRk 9 in the Lochnore–Nesikep locality was covered with large boulders (Sanger 1970:35).

Few data are available regarding subsistence, and analysis of faunal remains has not proceeded beyond identification of species (Table 11), skeletal elements, and calculation of minimum number of individuals. Most of the data are from sites EbRc 6 at Nicola Lake and EeRb 10 in Kamloops; both yielded very similar faunal assemblages. Species identified from EbRc 6 include: elk, deer, mountain sheep, black bear, beaver, muskrat, red fox, snowshoe hare, trumpeter swan, fresh water mussels, and unidentified fish (Wyatt 1972:63–66). At EeRb 10, only mammal bones from the 1971 excavations (Wilson 1980) have been identified, and deer, domestic dog, wolf, red fox, striped skunk, porcupine, snowshoe hare and beaver are represented (Galdikas–Brindamour 1972:204). Excavations at this site in 1980 and 1981 secured considerable quantities of faunal remains which have yet to be analyzed in detail, but a preliminary assessment indicates that fresh water mussels, fish (salmon, trout, and other species), birds, and mammals are present (Richards and Rousseau 1982:133). Numerous unidentified fish bones were found in a storage pit within Housepit 13 at site EfQu 3 on the western shores of Shuswap Lake (Sendey 1972:14). In addition, faunal remains from DlQv 39 in the Westside locality of the North Okanagan Valley include elk, yellow-bellied marmot, muskrat, a diving duck, squawfish, trout, and an abundance of freshwater mussel (Rousseau 1984a:115–116; Richards 1983; Kusmer 1984).

These limited data suggest that subsistence during the Shuswap horizon appears to have focused on hunting large and small land mammals and birds, collecting fresh water mussels, and fishing salmon, trout, and other fresh water species. The relative importance of various species is not known, although salmon was undoubtedly an important dietary component. There is presently no evidence for the utilization of plant resources, although it most assuredly took place.

Also important is that Shuswap horizon components have not been recognized in mid-altitude or upland areas. They may exist in these contexts, but the current data suggest that they are probably relatively rare (Pokotylo and Froese 1983; Stryd and Lawhead 1983; Lawhead, Stryd, and Curtin 1986). It is offered that subsistence systems *may* have focused primarily on exploiting resources in valley bottom contexts in close proximity to residential base camps.

Present evidence for inter-regional exchange/interaction is restricted to nephrite artifacts, presumably originating in the Mid-Fraser River region (Fladmark 1982:131). Nephrite artifacts have been found at EbRc 6 on Nicola Lake (Wyatt 1972:80), EeRb 10 in Kamloops (Richards and Rousseau 1982:49), EfQu 3 on Shuswap Lake (Sendey 1972:13), and DlQv 39 on Okanagan Lake (Rousseau 1984b:26). Trade in Northwest Coast shells does not appear to have been significant. An unmodified *Dentalium* shell and a coastal shell of unidentified species with an intentionally serrated edge were recovered from EeRb 10 (Wilson 1980:68; Richards and Rousseau 1982:69).

Extra-Areal Comparisons and Relationships

There are a number of traits shared between the Canadian and Columbia Plateau sub-areas during the period from ca. 4000 to 2400 BP. These include: use of pithouse habitations; exploitation of a wide variety of ungulates (especially deer, elk, and mountain sheep), salmon and other freshwater fish, and fresh water mussels; a subsistence and settlement system which was logistically organized (Binford 1980; Campbell 1985c); well-developed bone and antler industries; and predominant use of the spear and/or atlatl for hunting (Ames and Marshall 1980; Campbell 1985d; Chance and Chance 1977, 1979, 1982; Chatters 1984; Grabert 1968, 1970; Greengo 1986; Jermann 1985; Leonhardy and Rice 1970; Nelson 1969; Schalk and Cleveland 1983; Swanson 1962; Warren 1968). Columbia Plateau pithouse dwellings appear initially around 5000 BP (Ames, Green, and Pfoertner 1981; Sammons-Lohse 1985), which is 1000-1500 years earlier than they are presently known to exist on the Canadian Plateau.

Several Shuswap horizon shouldered and stemmed point forms (i.e., Types 6 and 7 [Figure 16s-y]) have analogues dominating assemblages dated between ca. 4500 and 2500 BP on the Columbia Plateau (Grabert 1968, 1970; Holmes 1966; Jermann 1985; Leonhardy and Rice 1970; Lohse 1985; Nelson 1969; Swanson 1962; Warren 1968). Recognized and defined forms include the "Mahkin Shouldered Lanceolate", "Nespelem Bar", and "Rabbit Island Stemmed" types (see Lohse 1985:346-349).

Shuswap horizon concave-based and eared forms are almost never found on the Columbia Plateau, but they are remarkably similar to Oxbow and

McKean–Hanna–Duncan types found on the Northern Plains. Type 1 has a striking resemblance to the "Oxbow" type, Type 2 with "McKean", and Types 3 and 4 with the "Duncan–Hanna" continuum of forms belonging to the Middle Prehistoric Period on the Northern Plains (Reeves 1969, 1983; Dyck 1983; Wormington and Forbis 1965). Oxbow forms appear at ca. 5000 BP, McKean forms at ca. 4500, and Hanna–Duncan at ca. 3500. Other researchers have also pointed out the similarity between Canadian Plateau and Northern Plains projectile point types (see Sanger 1967:192; 1970:121,122; Wilmeth 1980:2; Donahue 1975:49,53,54); Jermann 1985:25). These types also occur in the southern Canadian Rocky Mountains (Reeves 1974a), and the east Kootenay area of southeastern B.C. (Bussey 1977; Choquette 1984). This amalgam of point styles is roughly contemporaneous over a broad area of northwestern North America and they are classic "horizon markers" (Willey and Phillips 1962:33) indicating some form of interaction between the participant cultures in this style horizon. These styles appear to have diffused westward from the Northern Plains, across the Rocky Mountains and East Kootenays to the Canadian Plateau.

Interaction between the Canadian Plateau and southern Northwest Coast groups is indicated by the presence of coastal trade goods and similarity in some artifact forms. Nephrite was exchanged from the Mid–Fraser River region to the southern coast, and coastal shells such as *Dentalium* were traded inland. Perishable items such as dried salmon or animal skins may have also been a component of coastal–interior exchange.

Several Shuswap horizon point forms are similar to contemporaneous point forms on the southern Northwest Coast. Common in the *Locarno Beach phase* (ca. 3000–2100 BP) are lanceolate chipped stone and ground slate points with parallel stems and narrow shoulders; others have rounded shoulders, concave bases and basal–lateral ears (Borden 1970:Figure 30). In the *Mayne phase* of the Gulf Islands (ca. 5000–3000 BP) chipped stone and ground slate points include contracting stemmed, shouldered and shoulderless forms (Carlson 1970:115–117, Figure 34).

There are also similarities in bone and antler artifact forms, especially presumed fishing implements. A bilaterally barbed antler point or harpoon medial fragment from site EeRb 10 at Kamloops (Wilson 1980:Figure 51d) is similar to harpoons found on the southern coast between ca. 4100 and 3300 BP (McMurdo 1972:112). A harpoon valve, also from EeRb 10 (Richards and Rousseau 1982:55,56, Figure 15d), is similar to those of the Locarno Beach phase (ca. 3000–2100 BP) of the Fraser Delta, in which harpoons are the most common type of fishing implement (Borden 1968:17).

PLATEAU HORIZON

Following the Shuswap horizon is the *Plateau horizon*, estimated to date between ca. 2400 and 1200 BP. The Plateau horizon is represented by numerous excavated components throughout the Canadian Plateau (Table 2; Figure 18). Most components (73%) are from housepit sites, therefore, our conception of Plateau horizon cultural traits and patterns are biased to those represented at this site type.

The commencement of the Plateau horizon at ca. 2400 BP possibly correlates with a significant climatic change that occurred sometime between ca. 3000 to 2000 BP from cool and moist to warmer and drier conditions which were similar to those of today (Figure 14) (Campbell 1985a; Hebda 1982; King 1980; Mack, Rutter, and Valastro 1978; Mathewes 1984). It may be that climatic and environmental changes are at least partially responsible for the shift from the Shuswap horizon to the Plateau horizon.

Horizon Characteristics

Throughout most of the Canadian Plateau, Plateau horizon housepit depressions are generally smaller than those of the preceeding Shuswap horizon and succeeding Kamloops horizon. They average 6.14 m in diameter (s.d. = 1.30), and range between 4.00 and 8.25 m. A notable exception to this pattern is the Mid-Fraser River region where housepits are markedly larger, averaging 9.9 m in diameter (s.d. = 1.72), and range from 8.0 to 11.6 m (see Tables 4 and 5).

Surficially, most Plateau horizon housepit depressions are circular to oval in plan, and lack raised earth rims. In excavated houses, a central hearth feature is usually present, and a few small (.5 - 2.0 m) cooking or storage pits are often found near floor/wall junctures. Housepit walls are usually steep and floors flat, resulting in basin-shaped profiles. Post holes and earth roof insulation zones indicate substantial wooden superstructures covered with earth, similar to the well-known ethnographic model (Boas 1890; Dawson 1891:7; Teit 1900:192-194, 1906:212-215; Laforet and York 1981:118).

Central hearths argue for the presence of a smoke hole at the apex of the roof which may have also functioned as the main house entrance, as there is no present excavated evidence to suggest side entrances. However, a possible interconnecting trench has recently been found between two Plateau horizon housepits at EeRb 70 in the Kamloops locality (Eldridge and Stryd 1983:64). Present along the periphery of many housepit floors are benches which are usually less than one meter wide.

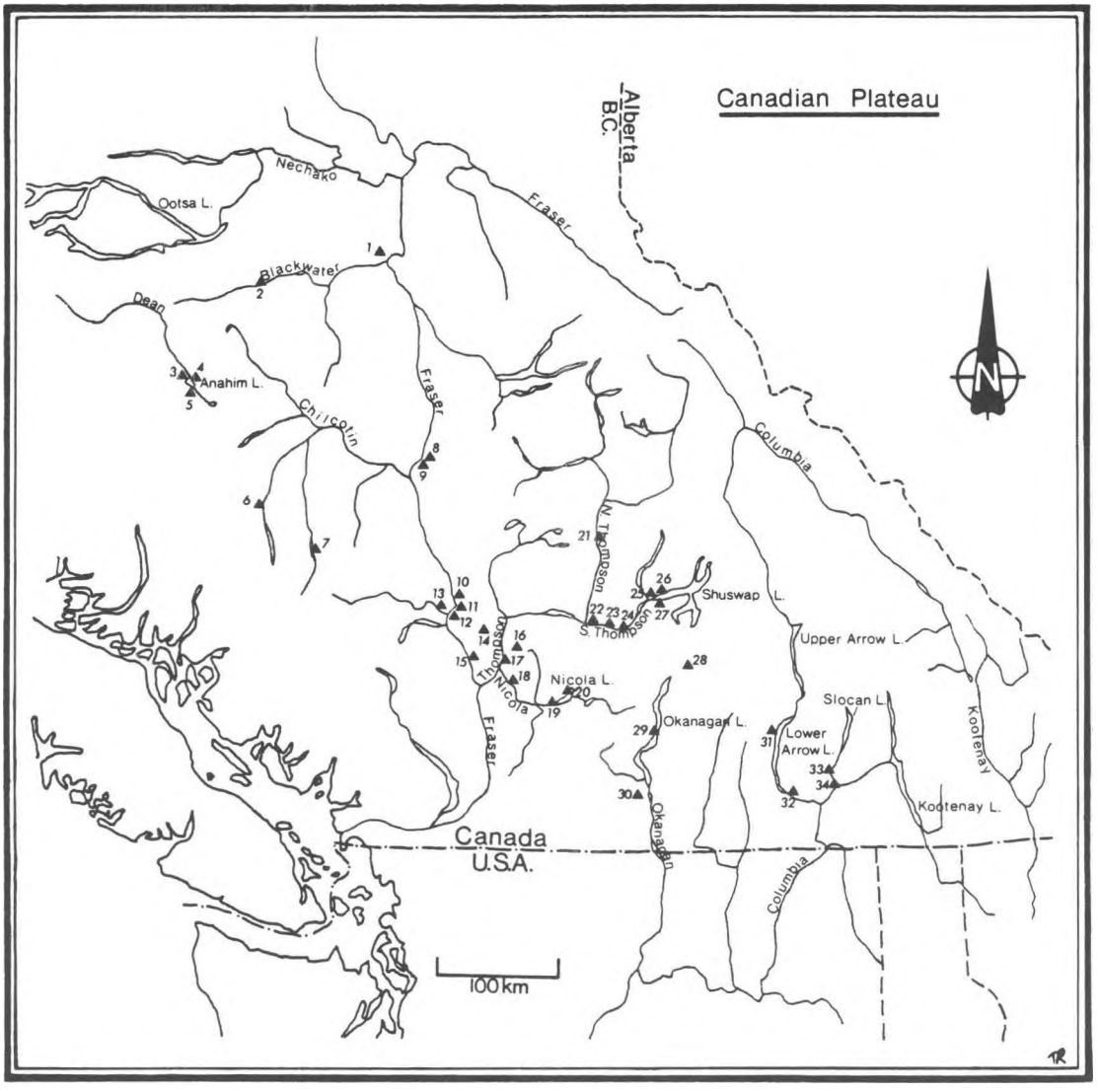

Figure 18. Location of excavated components attributed to the Plateau horizon. Borden site designations and references are listed in Table 2.

Excavations within small circular and oval depressions (2.0 to 4.0 m in diameter) have recovered stone, bone, and antler tools, birch bark sheets and rolls, fire-broken rock, charcoal, fish bones and mammal bones, suggesting these features were used as earth ovens, storage pits, and refuse receptacles (see Carlson 1980:95-96; Wilson 1980:20-21; Richards and Rousseau 1982:96-97,104-107; Von Krogh 1978). Some served single functions, while others were reused for one or more different functions. These features are commonly found in close association with housepits, and sometimes singly or in clusters without housepits.

Projectile points in the Plateau horizon are most always bilaterally barbed with either corner- or basal-notches, and fall into two size groups, one appropriate for tipping spear or atlatl darts, and the other for tipping arrows (Figure 19). The larger points average 4.10 cm in length, 2.60 cm in width, and have a mean neck width of 1.5 cm. The arrow-sized points have a mean length of 2.48 cm, width of 1.73 cm, and neck width of .73 cm (Table 6). The large points are present throughout the Plateau horizon, and the arrow points appear by 1500 BP or possibly as early as 1700 BP. Between ca. 1500 and 1200 BP some assemblages have both sizes, while others have one or the other. Leaf-shaped, lanceolate, corner-notched barbless, and a variety of stemmed point forms also occur, but these usually constitute less than 10% of the points in an assemblage.

Chipped stone endscrapers are much more common than in the preceeding Shuswap horizon, but the most frequent chipped stone tools represented in assemblages continue to be unformed unifacial and bifacial flake implements. Increased use of key-shaped formed uniface/bifaces is apparent compared to the Shuswap horizon. Microblades and cores have been found in several components (Sanger 1970:35,54-69; Wilmeth 1978b:153-157). Ground stone artifacts continue to be rare (Table 8), but may have become somewhat more common after ca. 1900 BP in the Mid-Fraser River region (see below).

There is an observed increase in the quality of chipped stone workmanship during the Plateau horizon compared to the Shuswap horizon. Bifaces and projectile points are often quite large, thin, and symmetrical, and demonstrate well-controlled pressure flaking. The increase in quality of workmanship over the Shuswap horizon may be partly due to an almost exclusive reliance on high quality lithic materials, notably vitreous basalt, as well as cryptocrystalline sillicates and obsidian. Good quality basalts are available from the Baezaeko River area in the north-central interior, as well as from the well-known Arrowstone Hills source near Cache Creek, both of which may originate from the same geological formation (Richards 1987). A variety of good quality cryptocrystalline silicates are obtainable from several sources on the Canadian Plateau, especially from upland Tertiary geological formations in the South Thompson and Thompson River regions (Leaming 1971). Important obsidian sources which were exploited are located near

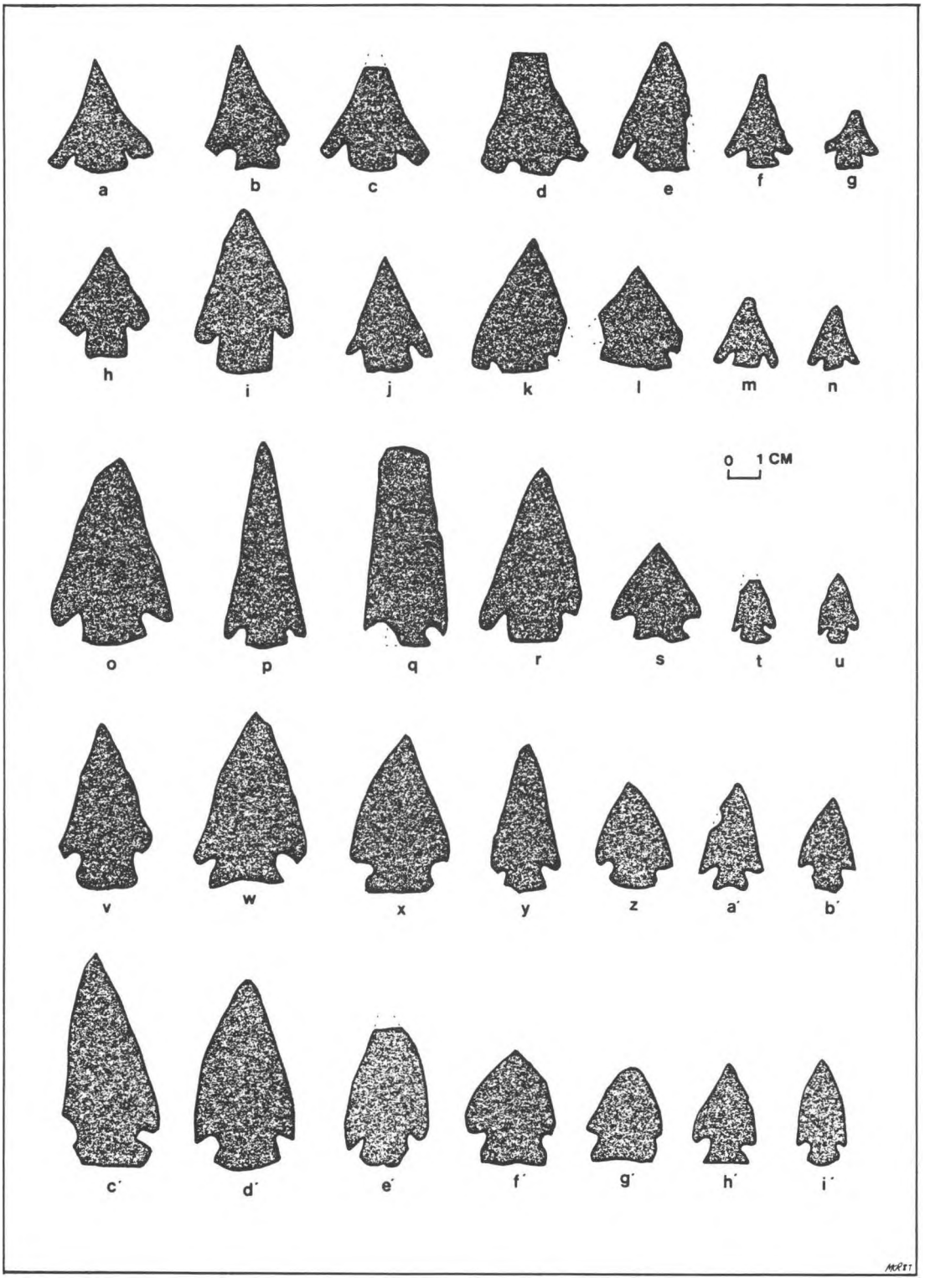

Figure 19. Selected examples of Plateau horizon corner- and basally-notched barbed projectile points. Lillooet locality: a,b,d,f,g,l-n,t,u,a'-d',f'-i' (Stryd 1973a; Richards 1977); Nicola region: c,i (Wyatt 1972); Kamloops locality: j,k,p,r,y (Carlson 1980; Wilson 1980); Arrow Lakes region: e,h,e',q,x (Turnbull 1977; Eldridge 1984).

Anahim Peak in the Chilcotin Region (Nelson and Will 1976), and Mount Edziza near Telegraph Creek in northwestern B.C. (Fladmark 1984, 1985; Godfrey-Smith 1985).

A few components have native copper artifacts, including a rolled cylindrical bead, a pendant, and a triangular knife with a proximal perforation (Von Krogh 1978; Stryd 1973a). Only one component from a housepit site (EeRk 4) is dated, and it belongs to the very end of the horizon (Stryd 1973a:405; Stapp 1984:70). A possible occurrence is suggested by "copper stained" clay in a burial context (Smith 1900:436).

There is an increase in bone, antler, and tooth artifact types over the preceeding Shuswap horizon (Tables 9 and 10), however, we caution that this apparent "elaboration" of perishable industries through time may be illusory and could be related to artifact preservation or sampling. Multiple-barbed unilateral and bilateral bone and antler fixed points or harpoons have been recovered (Figure 20d,e). Tubular beads or gaming pieces made from sections of small mammal or bird longbones have also been found. Composite harpoon valves made of bone appear in the Plateau horizon, and continue to be used during the Kamloops horizon. Perforated mammal tooth pendants or beads appear, as do ground animal incisor tools. There is an increase in both the frequency and variety of coastal shells relative to the Shuswap horizon.

There is some evidence for the use of bark and other organic material for containers. A birch bark container and a partially coiled, imbricated basket have been found (Von Krogh 1978; Richards and Rousseau 1982:96-97). Birch bark may also have been used for lining storage pits and for wrapping stored food. Widespread and common use of birch bark and/or basketry containers probably predates the Plateau horizon, although there is no direct evidence.

It is not yet clear whether portable artwork (i.e., incised objects or sculpture) was common throughout the Canadian Plateau during the Plateau horizon. In the Mid-Fraser River region, bone, antler, and steatite artifacts with incised decorations have been recovered at EeRk 4 from Housepit 21 (ca. 1500 BP) and Housepit 22, Component 2 (ca. 1900 BP) (Stryd 1973a). Additional components containing similar decorated items that *may* belong to the Plateau horizon include: Housepits 6, 8, 11, 19 and 23 at EeRk 4; Housepit 1 at EeRl 22; Housepit 1 at EeRk 7; and *Zone 1* at EdRk 7 (see Stryd 1972, 1973a, 1980, 1983b; Sanger 1970). We are somewhat reticent about accepting the latter components because of possible mixing with later Kamloops horizon components which are also present in each housepit. In the Kamloops locality, a digging stick handle (Figure 20a) and a bone object (Figure 20c) attributable to the initial half of the Plateau horizon are decorated with incised parallel lines (Carlson 1980:114;

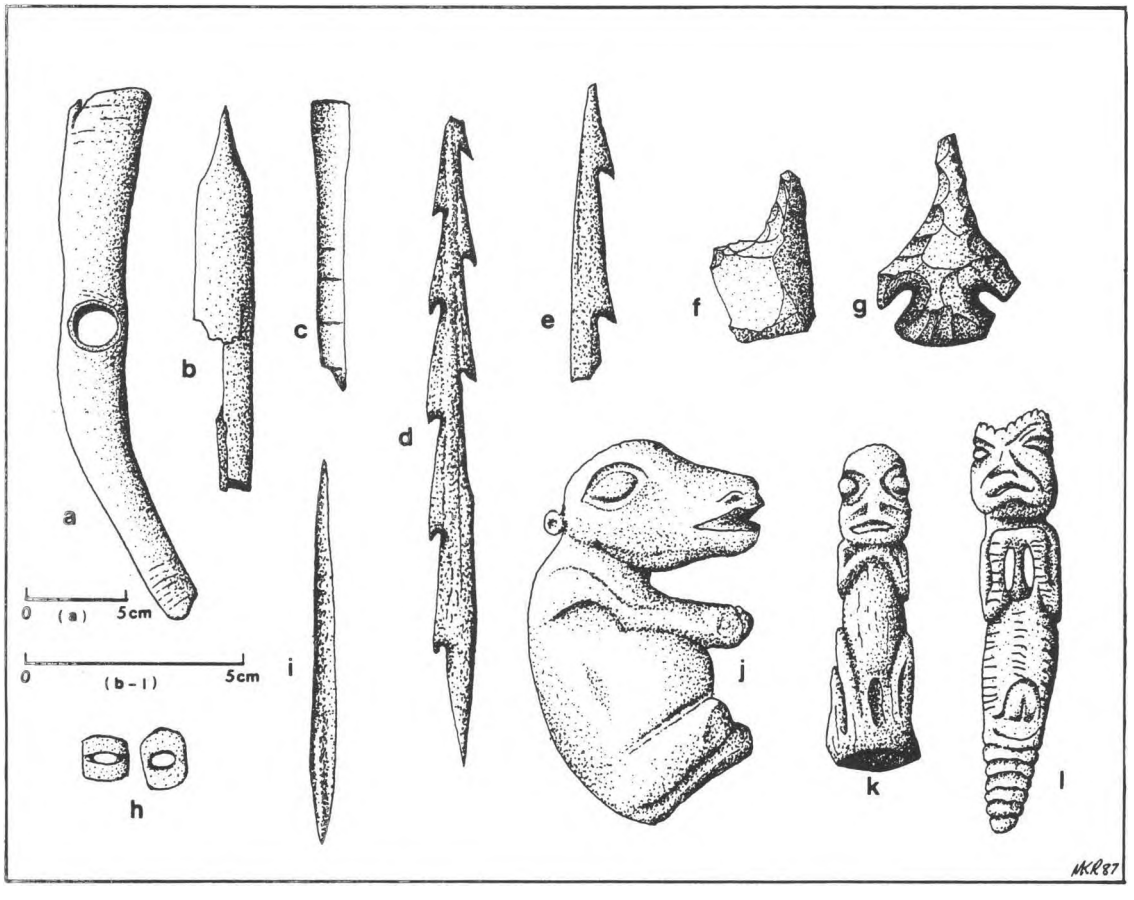

Figure 20. Selected artifacts from Plateau horizon components. Item **(a)**: decorated digging stick handle [EeRc 44] Eldridge and Stryd 1983); **(b)**: bone awl [EdRa 22]; **(c)**: incised bone tube [EeRa 4] (Carlson 1980); **(d)**: bilaterally barbed point; **(e)**: unilaterally barbed point [EeRb 70] (Eldridge and Stryd 1983); **(f)**: key-shaped formed uniface; **(g)**: drill recycled from projectile point [EeRb 3] (Wilson 1980); **(h)**: oblong beads [EdRa 22] (Carlson 1980); **(i)**: bone bipoint [EeRb 70] (Eldridge and Stryd 1983); **(j)**: zoomorphic (bear?) stone sculpture; **(k,l)**: antler figurines [EeRk 4] (Stryd 1973a, 1981b). Figures **j–l** may belong to the early Kamloops horizon.

Eldridge and Stryd 1983:180). In summary, it appears that incised objects, sculptures, and ground stone tools such as nephrite celts, hand mauls, steatite and slate artifacts were rare throughout most of the Canadian Plateau during the Plateau horizon, however, they may have become more common by ca. 1900 BP, especially in the Mid-Fraser River region.

Few burials are attributable to the Plateau horizon, and a great deal remains to be learned about burial modes during this period. In two instances a few scattered, charred human bones have been found in non-housepit hearths or concentrations of charcoal (Mohs 1982:109; Fladmark 1976:28). These may not be primary interments, but rather cremation loci. Four partially cremated child interments were found near Kamloops (Smith 1900:436), each burial was associated with a large number of grave goods, including artifacts not commonly found in other types of sites (e.g., nephrite celts, digging stick handles, net sinkers, and *Dentalium* beads). At the Fountain site (EeRl 19) in the Lillooet locality, an adult female interred in a semi-flexed position within a shallow, oval, birch bark-lined pit was dated to ca. 1400 BP, placing the burial near the very end of the Plateau horizon (McLeod and Skinner 1987). At EeRh 1 near Cache Creek in the Thompson River region, a wooden cist burial marked by a boulder cairn containing the remains of an infant (Burial 8a) excavated by Borden in the mid-1950s recently provided a radiocarbon age determination of 1960±400 BP (SFU 292) on bone collagen. However, there is doubt expressed about the validity of this date due to the small amount of carbon assayed (Pokotylo, Binkley, and Curtin 1987:8). It is likely that this burial actually dates to the initial half of the Kamloops horizon, as other associated and similarly disposed burials from the site produced dates between 1300 and 700 BP.

An infant burial recovered from a pit extending below the floor of Housepit 19 at site EeRk 4 in the Lillooet locality was associated with an unusual assortment of grave goods. These included a zoomorphic ornamental comb, a rattlesnake-woman figurine (Figure 20l), a siltstone bear(?) figurine (Figure 20j), an anthropomorphic face pendant, and 246 *Dentalium* beads (Stryd 1973a:425-427, 1981b). Stryd (1973a, 1981b) initially attributed the burial to the "early Kamloops phase" (ca. 1400-1000 BP), however, he has recently suggested that it should be reassigned to the Shuswap horizon (Lawhead, Stryd, and Curtin 1986:29). Housepit 19 was completely excavated and the floor yielded Plateau and Kamloops horizon projectile points and radiocarbon dates which range between ca. 1500 and 1250 BP (Stryd 1973a, 1980:14). Two anthropomorphic figurines (Figure 20k) and a figurine preform were also found on the house floor. Some of the burial inclusions have incised decorations (Stryd 1981a:9, 10). Incised decorations are known to be limited to Plateau and Kamloops horizon bone and antler artifacts, and are absent during the Shuswap horizon. Similar anthropomorphic carvings were found in Housepits 5 and 23 at EeRk 4 which have yielded dates of ca. 1400-1550 BP (Stryd 1980:14).

In summary, we suggest that the Housepit 19 burial and associated artwork may be attributable to the late Plateau horizon, or possibly the early Kamloops horizon. A radiocarbon assay of the burial would help to resolve this problem.

There is a paucity of available data on subsistence for the Plateau horizon (Table 11). The most significant observed change over the preceeding Shuswap horizon is the commencement of intensive exploitation of mid-altitude root resources (see Pokotylo and Froese 1983), although how widespead a phenomenon this practice was is difficult to assess with the present limited data. The earliest known antler digging stick handle (Figure 20a) was recovered from site EeRc 44 near Kamloops which dates to ca. 2400 BP (Eldridge and Stryd 1983:59). In the 19th Century, similar antler handles were part of a composite root digging tool (Teit 1900:231; 1909:514).

Stable-carbon isotope ($\delta^{13}C$) analysis of human skeletons dated radiometrically between ca. 1600 and 1200 BP in the Lillooet locality suggest that on average, approximately 60% of the dietary protein had a marine origin (salmon and steelhead trout); a lesser value of around 40% was determined from a single individual from the Kamloops locality; and about 40% is also suggested for two individuals at the confluence of the Columbia and Kootenay Rivers (Chisholm 1986). These are similar to the values obtained for the ensuing Kamloops horizon.

Trade among Canadian Plateau groups was intensified relative to the Shuswap horizon. Exchange of nephrite coastal shells, and possibly high quality lithic raw materials increased. Coastal shells were obtained from Northwest Coast groups, probably via the Mid-Fraser River region.

Extra-Areal Comparisons and Relationships

Nephrite trade with southern Northwest Coast groups was greatly intensified during the Plateau horizon. Nephrite celts are common in Marpole phase (ca. 2350-1500 BP) components, but rare in the preceding Locarno Beach phase (ca. 3000-2100 BP) (Borden 1970; Burley 1980). Increased exchange, and thus interaction, with Northwest Coast cultures after the onset of the Marpole phase may partly explain why the Mid-Fraser River region deviates somewhat from the rest of the Canadian Plateau during the Plateau horizon (see Hayden *et al* 1985).

During the period between ca. 3300 and 1500 BP there is evidence for a trans-Rocky Mountain exchange network involving Plateau, East Kootenay, Rocky Mountain, and Northern Plains cultures. Northwest Coast *Olivella* and *Dentalium* shells, Canadian Plateau nephrite, Kootenay argillite and Top of the World chert (from the East Kootenays) were exchanged (Choquette 1981:27,33; Forbis 1960; Neuman 1975; Reeves 1974b:23,24,40; 1983:80,81,87,93,94,97,98; Brumley 1980:84,85;

Quigg 1981:64,65; Gryba 1980; Richards 1984). Items of Northern Plains origin have not been found on the Canadian Plateau to indicate what was being traded westward, although perishables such as buffalo robes may have been involved, as recorded for the ethnographic Shuswap and Thompson (Teit 1900:259, 1909:536).

There are many similarities between the Columbia and Canadian Plateaus during the period from ca. 2400 to 1200 BP. These include: use of winter pithouses; heavy reliance on salmon; exploitation of deer, root resources, and fresh water mussels; a logistically organized subsistence and settlement system (Binford 1980; Campbell 1985c); use of storage pits; and predominant use of the spear and/or atlatl for hunting (Campbell 1985d; Chance and Chance 1977, 1979, 1982; Chatters 1984; Grabert 1968, 1970; Greengo 1986; Jermann 1985; Leonhardy and Rice 1970; Schalk and Cleveland 1983; Swanson 1962; Nelson 1969; Warren 1968).

Large basally-notched, barbed points appear in assemblages on the Columbia Plateau by ca. 2700-2500 BP (see Grabert 1968, 1970; Greengo 1982, 1986; Holmes 1966; Leonhardy and Rice 1970; Lohse 1985; Nelson 1969; Warren 1968). Large basally-notched points do not appear until after ca. 2400 BP on the Canadian Plateau, suggesting perhaps, that this point style originated on the Columbia Plateau and was adopted by Canadian Plateau groups at least one or two centuries later. Large corner-notched barbed point forms first appear around ca. 3000 BP on the Columbia Plateau (Greengo 1982; Lohse 1985; Nelson 1969; Rice 1972) which is at least 600 years earlier than they are known to appear on the Canadian Plateau.

Medium to large corner-notched points with convex bases and small barbs found in Plateau horizon components are very similar in style to Pelican Lake corner-notched points found on the Northern Plains (Dyck 1983; Wormington and Forbis 1965; Reeves 1983) (Figures 16, 18). The *Pelican Lake phase* began as early as approximately 3300 BP on the Northern Plains, and terminated between ca. 1850 and 1750 BP (Dyck 1983:105; Reeves 1983:5). Reeves observes that it terminates earliest in the middle Missouri area and at progressively later dates to the west. It appears, then, that this point style originated far to the east and spread westward across the Plains, the Rocky Mountains (Reeves 1974a) and East Kootenays (Bussey 1977; Choquette 1984), to the Columbia Plateau, Canadian Plateau, and southern Northwest Coast. The approximate coeval distribution of this barbed corner-notched projectile point type over such a large area of Northwestern North America may have been facilitated by extensive culture group interaction brought about by a high degree of mobility, trade ties, or perhaps by diffusion of an innovation relating to a more efficient hunting weapon system.

There are many instances of material culture similarities between Plateau horizon assemblages and contemporaneous southern coastal asssemblages. The *Skamel*

phase (ca. 2300–1750 BP) of the Yale locality includes barbed, corner-notched chipped stone points, a variety of small specialized formed tools, and cryptocrystalline lithic materials not used in previous phases (Borden 1968:16; Archer 1980:38). Present in the Marpole phase of the Fraser Delta locality and the Marpole culture type of the Gulf of Georgia region are corner and basally-notched, barbed, chipped stone points (Borden 1968, 1970; Mitchell 1971; Burley 1980). Corner and basally-notched, barbed points similar to those of Marpole, but smaller in size are found in the *Whalen II phase* (ca. 1600–1150 BP) of the Fraser Delta (Borden 1968, 1970).

KAMLOOPS HORIZON

The *Kamloops horizon* is the last prehistoric cultural horizon to occur on the Canadian Plateau. The Kamloops horizon is estimated to date between ca. 1200 and 200 BP, and is essentially an expanded integrative unit partially derived and modelled from the "Kamloops phase" as originally defined by Sanger (1968a). There are more excavated components of this horizon than for either of the preceding ones (Table 3; Figure 21), and the majority of these (69%) are from housepit sites. Climate and environmental conditions during the Kamloops horizon appear to have approximated those of today (Figure 14) (Hansen 1955; Mack, Rutter, and Valastro 1978; King 1980; Hebda 1982; Campbell 1985a).

We disagree with previous applications of the term "Kamloops phase" to describe and refer to late prehistoric manifestations represented in distinctively different archaeological regions on the Canadian Plateau which date between ca. 1200 to 200 years BP (e.g., see Sanger 1968a, 1970; Stryd 1973a,b; Pokotylo and Froese 1983; Pokotylo, Binkley, and Curtin 1987; Matson, Ham, and Bunyan 1981; Magne and Matson 1984). We argue that the label "Kamloops *horizon*" is more appropriate because a cultural horizon is essentially an *integrative* construct which recognizes a general level of inter-regional cultural similarity, while at the same time acknowledging that certain regional differences exist. The Kamloops phase is a *descriptive* archaeological unit that should henceforth be recognized as existing *only* within the South Thompson River-Western Shuswap Lakes region where it has been defined by Wilson (1980), and more recently by Rousseau and Richards (1985).

Horizon Characteristics

Excavated Kamloops horizon housepits are highly variable in size. They average 8.66 m in diameter (s.d. = 2.32 m), and range between 5.0 and 12.0 m (see Table 4). Our field observation of unexcavated probable Kamloops horizon housepits suggests that they range up to 20 m in diameter, and therefore the

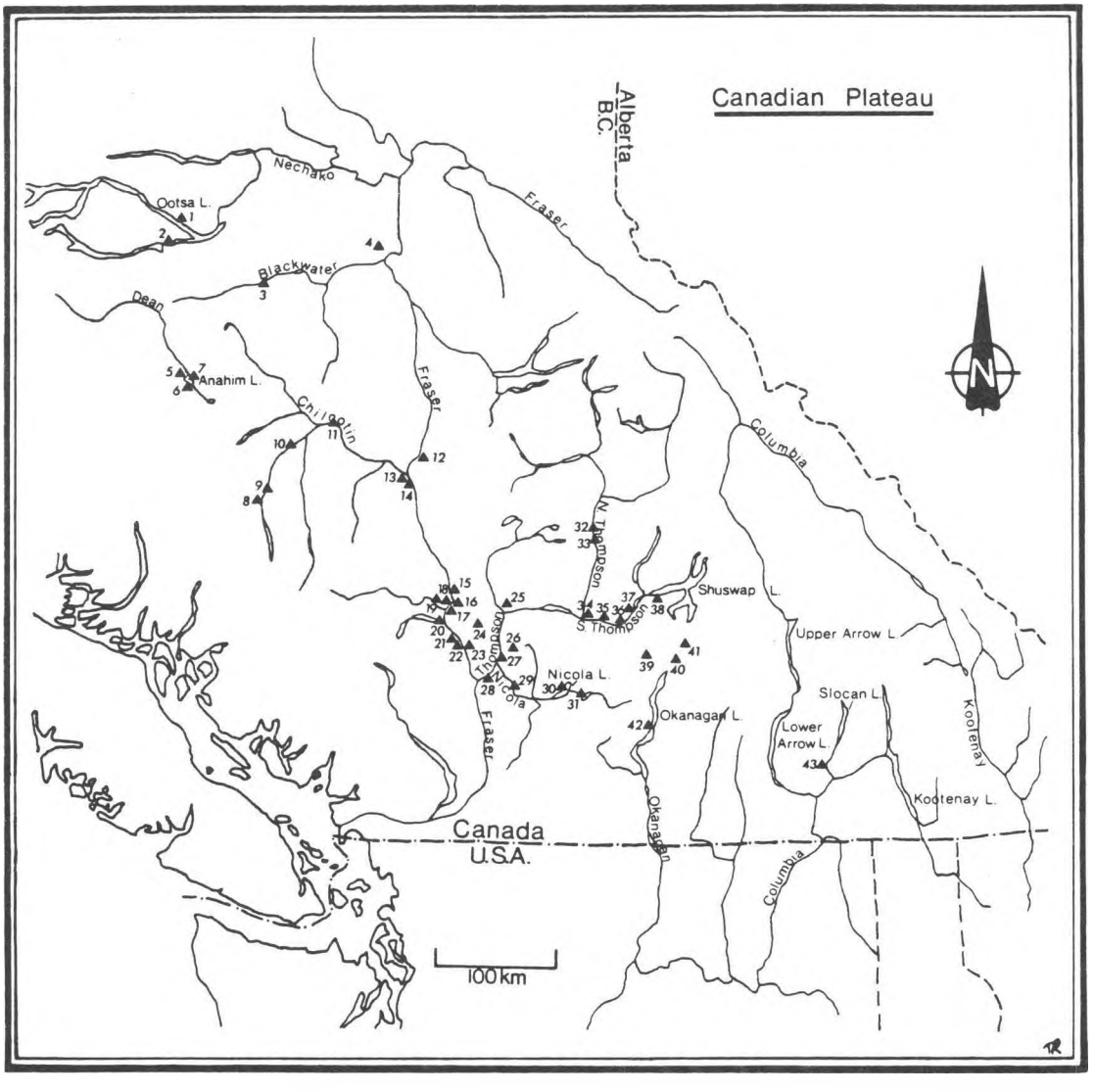

Figure 21. Location of excavated components attributed to the Kamloops horizon. Borden site designations and references are presented in Table 3.

mean diameter derived from the excavated sample may be low. They are oval, circular, rectangular, or square in plan, and usually have prominent raised earth rims. In many instances, side entrances are visible, especially on rectilinear housepits. The remains of passageways between housepits are present at one site in the South Thompson River–Western Shuswap Lakes region (see Mohs 1981:Figure 6.2).

Excavations indicate that roof insulation deposits are usually very thin or absent, especially in rectilinear housepits, suggesting light pole and mat structures as in Boas' (1890:635) ethnographic description of an alternative form of winter habitation to the "classic" pithouse (Dawson 1891:7; Teit 1900:192–194). The paucity of substantial post holes in excavated rectilinear housepits further suggests light roof structures. Circular and oval housepits are more similar to ethnographically described pithouses which have substantial wooden superstructures covered with earth for insulation (Dawson 1891:7; Teit 1900:192–195, 1906:213; Laforet and York 1981:115–121). Central hearths are found in most housepits, and small (.5 – 2.0 m dia.) cooking or storage pits are often found within the houses at or near floor/wall junctures.

Several small, circular or oval external depressions which functioned as food storage pits, or occasionally as earth ovens are often associated with Kamloops horizon housepits. These small depressions average about 2.0 m in diameter, and range from between 1.0 to 3.5 m. Sites containing only storage pits are common near salmon fisheries on rivers and lakes, and these are believed to date to the Kamloops and possibly Plateau horizons.

Ubiquitous in Kamloops horizon assemblages is the *"Kamloops side–notched point"* originally defined by Stryd (1972:20). It is a small triangular arrow point having a mean maximum length of 2.04 cm, width of 1.32 cm, and an average neck width of .72 cm (Table 6). Most have small, narrow, opposing side notches, and straight to slightly convex or concave basal margins (Figure 22). Occasionally, points of identical style, but larger size are found which may have been used to tip spears or atlatl darts (Figure 22 o'–r') (see Sanger 1970:Figure 21s,t; Wilmeth 1978b:Plate XII; Wilson 1980:Figure 39h; Richards 1982:Figure 14; Eldridge and Stryd 1983:Figure 49). These larger side–notched points almost always have straight basal margins, and appear to be temporally restricted to the very end of the horizon.

A more rare variant form is the *"Kamloops multi–notched point"*, believed to date between ca. 400 and 100 BP (see Richards 1977). It differs from the Kamloops side–notched point in that there are additional notches (up to 4) along one lateral blade margin (Figure 22y–b'), and it is slightly larger, having an average maximum length of 2.94 cm, width of 1.68 cm, and mean neck width of

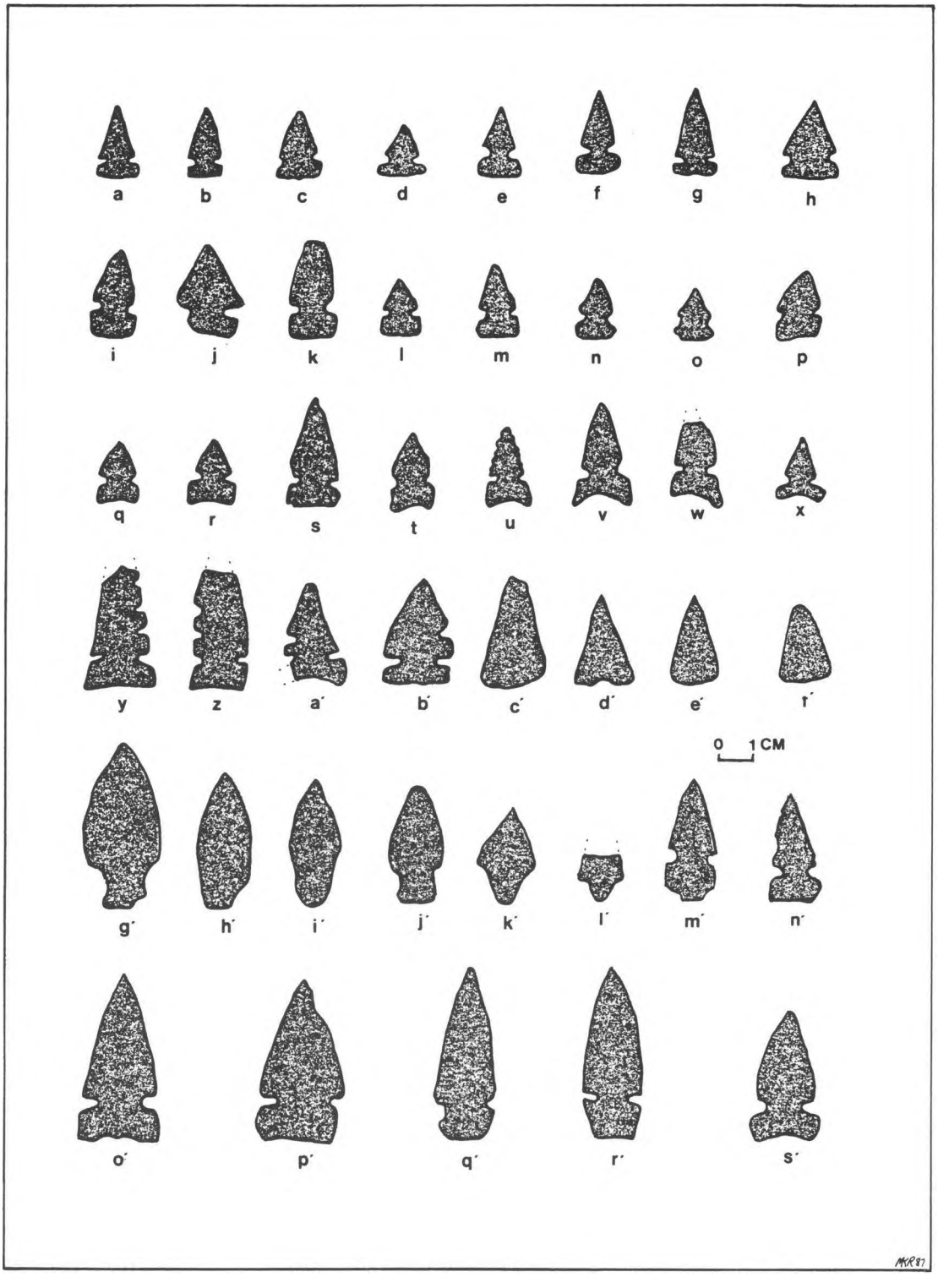

Figure 22. Selected examples of Kamloops horizon projectile points. Lillooet locality: a,b,d,e,x,y,z,a',c',d',e',h',l' (Stryd 1973a; Richards 1977); Tezli Lake: c,p,s (Donahue 1975); Vallican: f,g,h,o,r,t–v (Eldridge 1984); Kamloops locality: i–l,q,w,p',q' (Wilson 1980); Anahim Lake locality: m,n,b',g',i'–k',o' (Wilmeth 1978b); Eagle Lake locality: m',n' Magne and Matson 1984); Lochnore–Nesikep locality: r' (Sanger 1970).

.89 cm (Table 6). Multi-notched Kamloops points have not been observed in any excavated components on the Columbia Plateau, North Okanagan Valley, or Arrow Lakes region, although it can be argued that the sample of excavated assemblages from the latter two regions is too small to ascertain their absence. However, it may be that they are unique to ethnographic Chilcotin, Thompson, and Shuswap territories.

In the Chilcotin region, a point form similar to the "Kavik" and "Klo-kut" types from Alaska and the Yukon (Campbell 1968; Morlan 1973) is found in association with Kamloops side-notched points within territory ethnographically occupied by the Athapaskan Carrier and Chilcotin. These small contracting stem arrow points are considered to indicate Athapaskan cultural affiliation (Wilmeth 1978b), and it has been noted that they are more common in northern Chilcotin region assemblages (Matson *et al* 1980:184).

Biface technology in the Kamloops horizon is similar to that of the Plateau horizon. Fine pressure-finishing of points and knives was common, however, there is variation in the quality of retouch and some rather poorly-made specimens are present. Most formed tools are well made, and a slight reduction in size compared to those of the preceding Plateau horizon is observed. "Pentagonal" formed bifaces are common during this horizon (Figure 23h,i). At present there is no firm evidence to suggest that microblade technology was used during the Kamloops horizon.

An increase in the quality, quantity, and variety of ground stone artifacts made of slate, nephrite, and steatite is evident during the Kamloops horizon (Table 8; Figure 23). Steatite was often carved into zoomorphic or anthropomorphic forms which exhibit a high degree of workmanship and creativity (Sanger 1968a; Stryd 1983b). Use of native copper to fashion decorative artifacts continued.

There is evidence for the continued use of bark artifacts. Birch bark containers are found, including stitched examples (Sanger 1968a:140, 1970:Figures 7, 10; Stryd 1972:22). Birch bark was also used for lining storage pits as it was in the ethnographic period (Dawson 1890:9). A plaited sagebrush bark mat has also been found (Stryd 1972:22). Undoubtedly, woven basketry containers were also used, as they were present in the preceding Plateau horizon, and were very important to historic Interior Salish groups (see Teit 1900:187-191, 1906:205-207; 1909:487-491).

There is an increase in the variety and frequency of bone, antler, and tooth artifacts in relation to the Plateau horizon (Tables 9 and 10). Incised decorations on bone and antler artifacts are common in the Kamloops horizon,

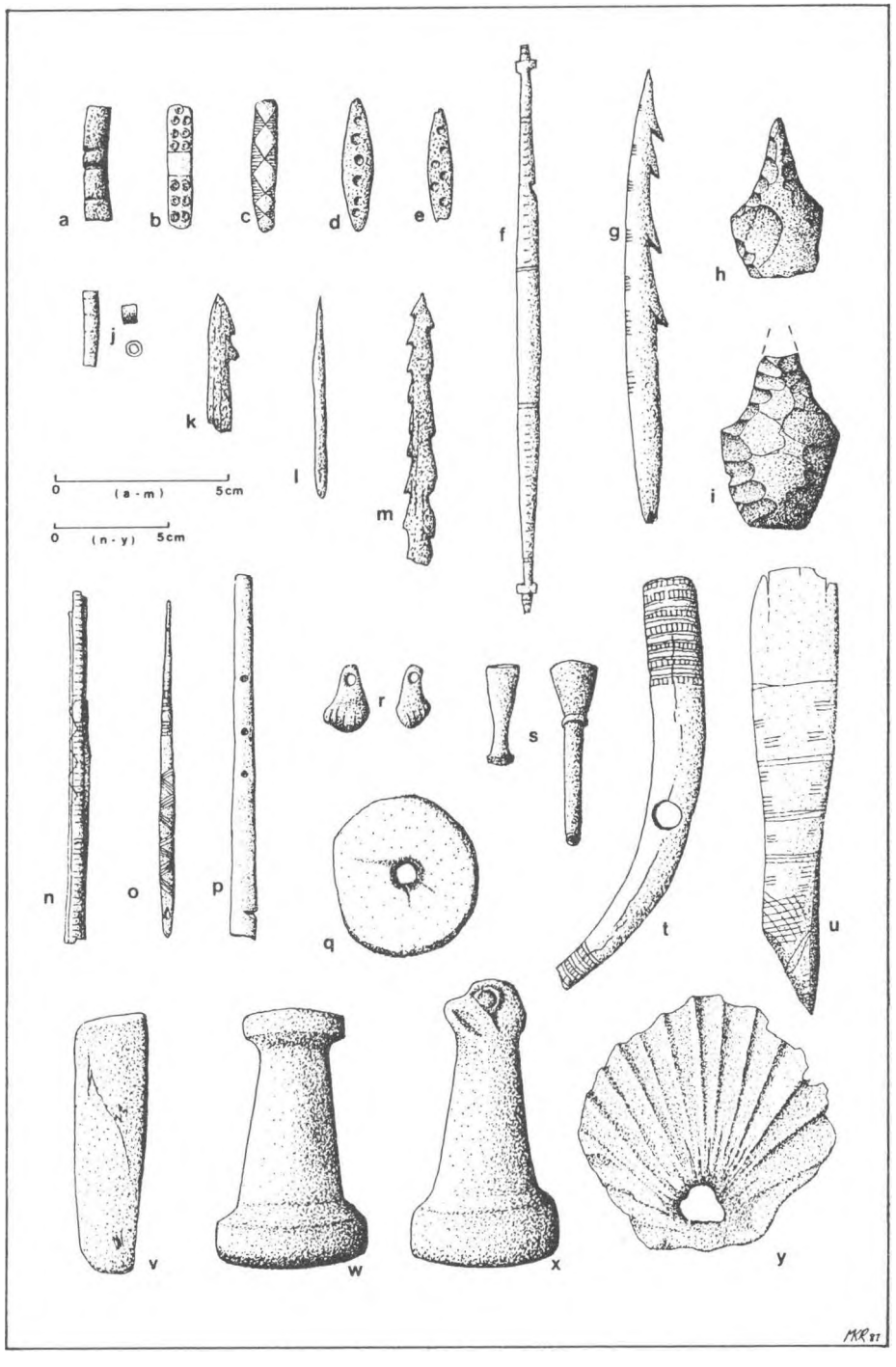

Figure 23. Selected artifacts from Kamloops horizon components. Item **(a)**: polished and incised bone bead or gaming piece [EeRc 44] (Eldridge and Stryd 1983); **(b–e)**: bone gaming pieces (b:EcRh 11 [Von Krogh 1978]; c: EdRk 3 [Sanger 1970]; d,e: EeRc 44 [Eldridge and Stryd 1983]); **(f)**: miniature bone bow; (g): decorated unilaterally barbed antler point/harpoon [EeQw 1] (Sanger 1968a); **(h,i)**: pentagonal bifaces h: EdRk 5 [Sanger 1970]; i: EeRk 4 [Stryd 1973a]); **(j)**: *Dentalium* beads [EeRh 1] (Pokotylo, Binkley, and Curtin 1987); **(k)**: unilaterally barbed point; **(l)**: bone needle; **(m)**: bilaterally barbed point [EeRc 44] (Eldridge and Stryd 1983); **(n)**: decorated bone drinking tube (?) [EeRh 1] (Pokotylo, Binkley, and Curtin 1987); **(o)**: decorated bone needle [EbRi 7] (Skinner and Copp 1986); **(p)**: bone whistle; **(q)**: spindle whorl [EdRk 3] (Sanger 1970); **(r)**: perforated elk teeth [EeRh 1] (Pokotylo, Binkley, and Curtin 1987); **(s)**: steatite trumpet pipes (left: EdRk 3 [Sanger 1970], right: EeQw 1 [Sanger 1968a]); **(t)**: decorated digging stick handle; **(u)**: decorated bone sap scraper; **(v)**: nephrite celt [EeQw 1] (Sanger 1968a); **(w,x)**: hand mauls [EdRk 8]; **(y)**: perforated *Pectin* shell [EdRk 3] (Sanger 1970).

and consist of geometric patterns of parallel lines, ticks, and "circles and dots" (Figure 23) (see also Stryd 1973b:179). They are more commonly found on bone artifacts than antler. *Dentalium* shell beads were also sometimes decorated (Smith 1900:431).

Burial practices in the Kamloops horizon are reasonably well documented. The dominant pattern is the primary flexed interment in an unmarked shallow pit. Other types of burials include wooden cist inhumations marked with rock cairns, multiple tomb burials, and talus slope burials (see Smith 1900:434–440; Sanger 1968a:140–143, 1968c). Excavated burials indicate that body orientation is commonly east–west or west–east, and some had fires built over the graves (see Dawson 1891:13; Skinner and Copp 1986; Pokotylo, Binkley, and Curtin 1987). Some are associated with birch bark sheeting, tule matting and cordage, suggesting that body wrapping and binding may have been a common practice.

In addition to faunal remains and common utilitarian implements (i.e., projectile points, bifaces, flake tools, bark containers), Kamloops horizon burials are also occasionally associated with "primitive valuables" (Dalton 1975), which include nephrite celts, steatite sculptures, copper ornaments, decorated bone and antler artifacts (e.g., digging stick handles, drinking tubes, gaming pieces), perforated elk teeth, shells or shell beads of coastal origin, and red and yellow ochre (Figure 23) (see also Sanger 1968a; Skinner and Copp 1986; Pokotylo, Binkley, and Curtin 1987). Many of these items are made of imported raw materials, for which considerable investments of time and energy were involved in their acquisition or manufacture. Their differential occurrence in Kamloops horizon burials has been interpreted as being indicative of variability in individual wealth and/or social status (see Hayden *et al* 1985:190; Pokotylo, Binkley, and Curtin 1987).

As with the preceding horizons, ew specific details are available regarding subsistence practices (Table 11). Stable–carbon isotope analysis ($\delta^{13}C$) indicates that marine protein (salmon and steelhead trout) constituted between 40 to 60% of the dietary protein of the people living on the Canadian Plateau during the Kamloops horizon (Chisholm and Nelson 1983:85; Lovell 1982:Table 1; Lovell *et al* 1983; Chisholm 1986:115–124). Recent research by Chisholm (1986) has indicated that during the Kamloops horizon, the average percentage of marine protein in the aboriginal diet decreases slightly with increased distance up the Fraser and Thompson drainages. Individuals living in the Lillooet locality consumed an average of 60% marine protein; while the values are 56% for the Thompson River region, 48% for the South Thompson River, and 41% for the Adams River. Data for the North Okanagan Valley indicate a south to north decline in reliance on salmon. One individual from Penticton indicates 57% marine protein, one from Peachland 44%, and three from Kelowna were averaged at only 19%. In the Arrow Lakes region, salmon reliance also decreases with increased distance upstream. A greater

degree of variation is noted near the confluence of the Columbia and Kootenay Rivers, a pattern which is attributed to higher population mobility resulting from long-distance travelling to choice fishing stations (e.g., Kettle Falls) (Chisholm 1986:121).

A sophisticated fishing technology is indicated at many sites by the presence of bone and antler leisters, unilaterally and bilaterally barbed points and harpoons (Figure 23), composite toggling harpoons, possible fish hook barbs, and small bipoints resembling those used by the ethnographic Shuswap and Thompson (Teit 1900:251-253, 1909:525).

There was a continued reliance on wild root resources, evidenced by dated root-roasting ovens (Pokotylo and Froese 1983), and the occurrence of antler digging stick handles (Sanger 1968a). One significant difference in hunting technology apparent in this horizon is the almost complete dependence on the bow and arrow, as reflected by the preponderance of small arrow-sized points.

Inter-regional trade appears to have been significant during this horizon. Important non-perishable commodities include vitreous basalt, nephrite celts, ground slate items, steatite carvings, whalebone, and coastal shells.

Extra-Areal Comparisons and Relationships

Several general similarities are apparent between the Canadian and Columbia Plateaus from ca. 1200 to 200 BP. Both sub-areas are characterized by: use of winter pithouses; a heavy reliance on salmon, deer, and root resources; continued hunting of large ungulates (e.g., mountain sheep and elk), a marked decrease in exploitation of fresh water mussels compared to earlier periods; a logistically organized subsistence and settlement system (Binford 1980); use of food storage pits; well-developed chipped stone, ground stone, bone and antler industries; and predominant use of the bow and arrow for hunting (Campbell 1985d; Chance and Chance 1977, 1979, 1982; Grabert 1968; Greengo 1986; Holmes 1966; Jermann 1985; Leonhardy and Rice 1970; Nelson 1969; Swanson 1962; Warren 1968).

Similarities in projectile point styles are also evident. At the begining of the Kamloops horizon (ca. 1200-1100 BP) small, corner- or basal-notched, barbed points so common on the Columbia Plateau are occasionally present in small numbers in assemblages on the Canadian Plateau. In most regions on the Columbia Plateau, small side-notched points appear to be absent before ca. 1000 BP (Chance and Chance 1977, 1979, 1982; Grabert 1968, 1970; Holmes 1966; Jermann 1985; Leonhardy and Rice 1970; Nelson 1969; Warren 1968). Only on the northern Columbia Plateau, from ca. 1000-600 BP to the contact period, do

small side–notched points predominate in numbers over the corner– or basal–notched, barbed types. In very late prehistoric to early contact sites (ca. 600–150 BP) throughout the southern and central Columbia Plateau, small side–notched points are occasionally found (Holmes 1966; Nelson 1969; Leonhardy and Rice 1970). This probably reflects interaction with Plains rather than Canadian Plateau groups.

On the Northern Plains, small side–notched points referred to as the Avonlea type appear around 1750 BP (Reeves 1983:16; Dyck 1983:122; Vickers 1986:90). Their appearance is thought to mark the initial use of the bow and arrow. Points of this style, with a few exceptions, are absent from the Canadian Plateau. "Plains" and "Prairie side–notched" types predominate after ca. 1400 BP (Wormington and Forbis 1965; Dyck 1983; Reeves 1983; Vickers 1986:95). The data suggest that bow and arrow technology was used earlier on the Plains than it was on the Canadian or Columbia Plateaus.

Material culture similarities between the Northwest Coast and the Canadian Plateau are evident in this cultural horizon, as in preceding horizons. Small side–notched points similar to the Kamloops side–notched points are present in the *Esilao phase* (ca. 750–150 BP) of the Lower Fraser River (Borden 1968:23) and the *Stselax phase* (ca. 700–150 BP) of the Fraser Delta (Borden 1970:110, Figure 33). Small, chipped stone side–notched points and corner–notched, barbed points are found in Component 2 of the Belcarra Park site on the Southern Northwest Coast, dating between ca. 1600 and 1000 BP (Charlton 1980). Small side–notched points are also found in late prehistoric contexts on the Central Northwest Coast (Carlson 1972, 1976).

Exchange with the Northwest Coast continued throughout the Kamloops horizon, with nephrite, vitreous basalt, obsidian and steatite being traded from the Mid–Fraser River region to the southern Coast (see Borden 1968; Charlton 1980; Wilmeth 1973); and slate, whalebone, and shells of coastal origin being traded into the interior (Sanger 1968a).

PLATEAU PITHOUSE TRADITION

The three prehistoric cultural horizons described above have a strong continuity in culture traits and patterns, and constitute the *Plateau Pithouse tradition* (ca. 4000/3500 to 200 BP) (Figures 3 and 14). The general pattern of lifeway during the Plateau Pithouse tradition is similar to that described for the ethnographic Interior Salish (Boas 1890; Dawson 1891; Teit 1900, 1906, 1909, 1930). The Plateau Pithouse tradition is characterized by the use of semi–subterranean pithouses as winter dwellings in semi–permanent villages, a