

CHAPTER I

Projectile Points Past and Present

Roy L. Carlson[†] and Martin P. R. Magne[‡]

[†] *Simon Fraser University, Department of Archaeology, Burnaby, B.C. V5A 1S6 • royc@sfu.ca*

[‡] *Parks Canada #1500-635 8 Ave. SW, Calgary, AB T2P 3M3 • marty.magne@pc.gc.ca*

Introduction

This volume is mostly about recognition of the various types and styles of chipped stone projectile points characteristic of particular regions and time periods in northwestern North America. It is intended as a source book bringing together as much information as possible with particular attention paid to points that have reliable chronological provenance. Projectile points are subject to the same rules of growth and change as other objects made by humans, and variations in these points in time and space are one of the tools used by archaeologists to predict the past. Such points are of particular value because they are of stone and survive in the archaeological record whereas artifacts of other materials frequently do not. This introductory chapter will point out the various emphases in the succeeding chapters and relate earlier studies of chipped points in the Northwest to the data presented here. Archaeology employs cultural theory and the comparative method in its attempt to work out the changes in cultures and societies that took place in the past. These attempts begin with the description and classification of those things found in archaeological sites, projectile points in this case, and end with a cultural-historical model of what happened in prehistory (Ch. 20), and this model is also what this volume is all about.

Dates

The majority of Northwest archaeologists still think in terms of uncalibrated radiocarbon dates BP

(before 1950 AD) and these dates are used in all chapters, although in a few instances the authors have chosen to provide both calibrated and uncalibrated dates. A table prepared by Yaroslav Kuzmin giving the calibrated equivalents of the radiocarbon dates at 1000-year intervals follows the Preface.

Area Coverage

The geographic regions (Figure 1) covered in this volume are the coastal regions from the Alaska Panhandle south through coastal British Columbia to southern Puget Sound in Washington, and the interior regions west of the Rockies from central Washington north through the Fraser River drainage in British Columbia, and across the arctic divide into the Peace River drainage in northeastern B.C. and the Yukon. In culture area terms this area encompasses much of the Western Subarctic, almost all of the northern and central portions of the Northwest Coast, and the northern and central parts of the Columbia-Fraser Plateau. The Nuu-chah-nulth region on the west coast of Vancouver Island and the ocean shores of Washington are not covered because chipped stone points are nearly absent there.

At the time of first contact with Europeans the peoples inhabiting this area earned their living by fishing, hunting, and gathering, and the bow and arrow was in universal usage. The atlatl (spear thrower) that was once used widely survived only among the Tlingit of the Alaska Panhandle. Chipped stone points tipped arrows in the Plateau whereas bone,

antler, ground slate, shell and sometimes wooden points more commonly tipped projectiles in the Yukon and Northwest Coast during the ethnohistoric period. For detailed coverage of the past and present lifeways of the native peoples of these regions see Helm (1981), Suttles (1990), and Walker (1998).

Organization and Content

The chapters in this volume are presented from north to south on the Coast and then south to north in the Interior. Content of the chapters varies from detailed descriptions of new finds of projectile points from specific sites (Chs. 2, 3, 4, 12, 16, and 19) to coverage of all or most the points from particular localities or sub-regions (Chs. 5, 6, 8, 9, 10, 11, 13, 14, 15, and 17). While the variable terminology

used by different authors can impede comparisons, we hope that the abundant illustrations will make it reasonably clear what each author is writing about. Classification is emphasized in Chapters 11 and 18, and ethnicity is a focal point in Chapter 14. Although microblades are made by flaking stone and can be parts of composite projectile heads, they are not covered in detail in this volume although their significance is brought up in Chapters 3, 4, 14, and 15. Recent studies of microblade industries can be found in Kuzmin, Keates, and Shen (2007). Chipped stone crescents, that may have been used as transversely hafted projectile heads, are not actually covered either. There are only two crescents (Figure 2) known from our region, both from the Lind Coulee site, and their use is uncertain.

Authors of several chapters (Chs. 3, 6, and 18) have gone beyond the mandated coverage and included data on other kinds of projectile heads. The editors decided to retain this information, but no attempt has been made to provide complete coverage of other than chipped stone points. One reason for inclusion of some points of other materials is that while projectile heads of bone and antler typify the late period on the Coast (Ch. 6) and in the Yukon (Ch. 18), it is not generally known that the

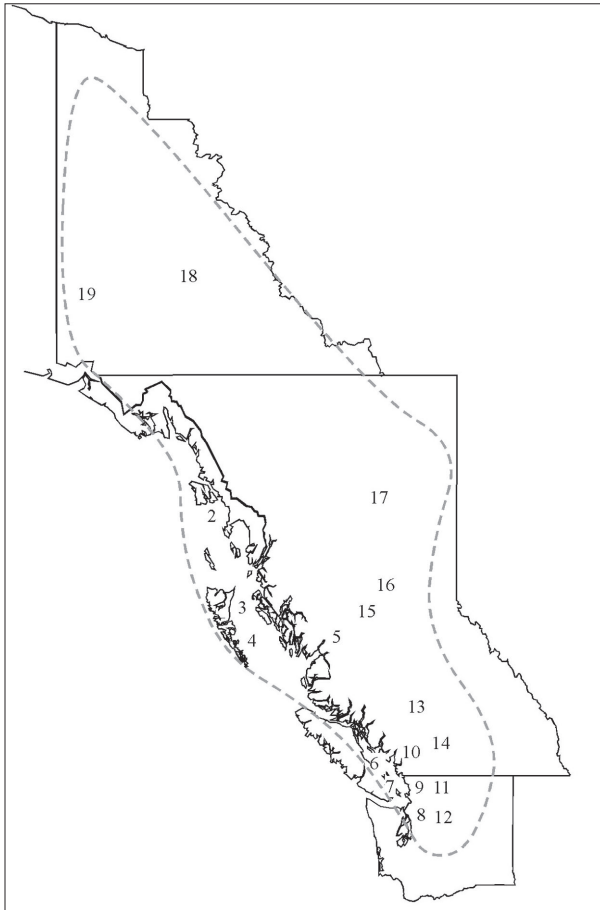


Figure 1. Map of the Yukon, British Columbia, and Washington with the regions covered enclosed by the dotted line. The numerals are the chapter numbers and are placed at the localities covered in the chapter indicated.

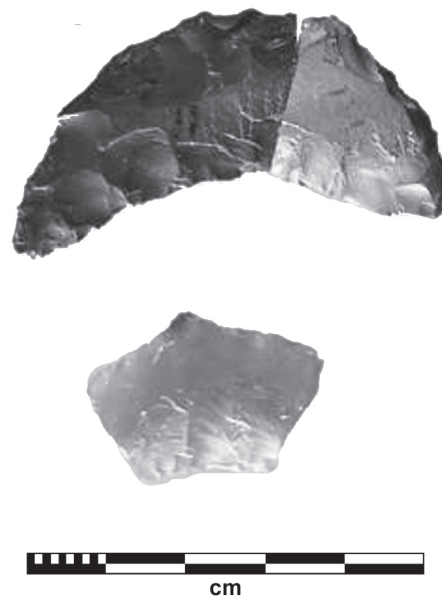


Figure 2. Crescents from the Lind Coulee site.

best provenienced early sample including the earliest bone harpoon head (Figure 3) is from the Lind Coulee site in the Plateau and dates about 9000 BP. Poor preservation is heavily involved with the scarcity of bone and antler implements, and the bone foreshafts found in Clovis components and at the Sentinel Gap site (Ch. 12) are probably only a few of the tools made of these perishable materials.

Classification and Typology

Projectile points have never been prominent in Northwest Coast archaeology, at least to the extent that archaeologists have relied on them on the Plains and other parts of North America. The



Figure 3. Barbed bone point, harpoon point with line notch, and elongate bone tool from the Lind Coulee site.

nature of the coastal archaeological record is that chipped stone points decline substantially in use after 5000 BP except in the Puget-Sound-Gulf of Georgia-Lower Fraser region where this decline occurs after 1500 BP; bone and ground stone technology replaced chipped stone on the Coast.

On the Canadian Plateau the few projectile points from excavated sites and the absence of a deeply stratified site didn't lead to point classifications until Richards and Rousseau (1987) formulated the sequence of points for the pit house horizons, and Fladmark (1996) excavated the stratified sequence at Charlie Lake Cave that while containing only a modest point assemblage, covered a long period of time. Point typology developed mostly isolated from that of adjacent regions.

There has never been a standard typology of points for this entire region. The earliest typologies used on both the Plateau (Collier, Hudson, and Ford 1942:58; Strong, Schenck, and Steward 1930:78) and on the Coast (M. Smith 1950:19) were based on Thomas Wilson's (1897:757-988) scheme using upper and lower case letters and numbers to designate attributes and formalize types. The later attempt at systematization by Earl Swanson (1962) at the *First Conference of Western Archaeologists on Problems of Point Typology* has unfortunately gone largely unheeded. The most advanced typology and the direction in which classifications should be moving is that advanced by Lohse and Schou (Ch. 11) that will enable sound quantitative comparisons to be made. The evolving Yukon Projectile Point Database (Ch. 18) is another step in the right direction. Hopefully the data contained in this volume will eventually lead to a typology for the entire area that will facilitate comparisons without obscuring significant differences.

The different authors use varied terms for the same attributes, and employ various approaches to analysis. Our lack of insistence on a standard terminology for projectile point attributes may have been a mistake, although the variation used is a true reflection of the state of the art as it presently exists in this area. There is no standardized typology such as that used in the mid-continental and eastern United States (Justice 1987). Typologies vary from none, backed up with sufficient descriptions and illustrations for readers to judge degrees of similarity and difference, to numbered types (Chs. 5, 9, 14) to named types with nearly unpro-

nounceable names (Chs. 3, 4), to highly quantitative multi-attribute modeling (Ch. 11) involving cluster analysis (Ch. 10), cladistics (Ch. 8), or multi-dimensional scaling (Ch. 15). Form or outline is the most common attribute used to differentiate types, and attributes of flake scars (Ch. 4) are used in several instances. Variations in hafting attributes—stemming and notching or their absences—are widely employed as diagnostic attributes in identifying types. The data from the dart and arrow shafts found with their points still attached in the Yukon ice patches (Ch. 18) suggest that these attributes may be purely stylistic or are at least unrelated to different types of hafts, although the nearly universal shift in North America from early points with either fluted, pointed, or convex bases, first to stemming and shouldering and then to notching suggests that the latter are more efficient (See Carlson 1983b, 1991; Musil 1988).

The Earliest Points

Clovis Fluted points lie at the bottom of the cultural sequence in the Columbia Plateau and the Puget Sound region of the Northwest Coast (Chs. 8, 11). Further north on the Coast the earliest points are laurel-leaf and willow-leaf foliates of which many exhibit collateral flaking and ground basal margins, and some have stems and slight shoulders (Chs. 2–5). There are some suggestions of fluted point derivatives in the Canadian portion of the Plateau (Ch. 13), and there is one re-worked multiple-fluted point (Ch. 17) from Charlie Lake Cave in the Peace River district of northeastern B.C. dated to 10,500 BP (Fladmark 1996) and other surface finds from there and the Rocky Mountain Trench (Ch. 17). Douglas Osborne (1956) documented the first fluted points recognized as Clovis from the Northwest, although Strong, Schenk, and Steward (1930, Pl. 12d) illustrated a point now recognizable as Clovis from the Dalles, Oregon. The only *in situ* Clovis fluted points from our region are those from the Ritchey-Roberts cache at East Wenatchee, Washington (Gramly 1996; Mehringer and Foit 1991), and although undated by ¹⁴C, post-date the Glacier Peak ash fall, and must lie in the range of Clovis dated most recently elsewhere at 11,050 to 10,800 BP (Waters and Stafford 2007) although some researchers still place Clovis beginnings at 11,500 BP. These points are now in the Burke Museum at the University of Washington.

Northwest Coast Point Sequences

No fluted points have been found on the Northwest Coast north of Puget Sound. The early points there tend to be either lanceolate (long and narrow) with ground lower margins or tear-drop foliates resembling the Chindadn points found in the Nenana Complex of central Alaska. Charles Borden (1960, 1968, 1983) worked out the first long sequence in the coastal environmental zone from excavations in the Fraser Canyon. Although he never did fully publish the point types as a sequence, he maintained a series of showcases in his laboratory each containing one of the cultural components for use by students and researchers. It is from these cases that Carlson (1983a Fig. 1:7) extracted the phase sequence and included the points from Borden's three early phases in his chart for the lower Fraser and Gulf Islands. The full sequence is shown in Figure 4, and photographs of four of the early points including one found later are shown in Figure 5. The lower margins of at least one of these points is ground. Although there are major gaps in this sequence it does show the progression from foliate to stemmed to notched forms that typifies the Coast Salish region. The recent discoveries at Prince George (Ch. 16) look like a component of the Milliken phase. Roger Luebbers (Hester and Nelson 1978:35–56) presented the first point sequence for the central coast of British Columbia based on the excavations at Namu (See Ch. 5).

The problem of determining the temporal range of projectile points from complex multi-component coastal sites is brought out in Chapters 9 and 10. Coastal point sequences are expanded and brought up to date in Chapters 2–11 of which the early points from Haida Gwaii (Chs. 3, 4), the Alaska Panhandle (Ch. 2), and the Bella Coola Valley (Ch. 5) are new discoveries.

The Columbia-Fraser Plateau Point Sequences

Luther Cressman and his students (Cressman et al. 1960) formulated the first long sequence in the Columbia Plateau based on excavations at sites at Five Mile Rapids, but unfortunately the projectile point typology they employed has proven to be unusable. The small assemblage in the earliest component in their sequence lacked points, but the other lithics and the faunal remains indicated it is a Windust phase component (Cressman 1977:134;

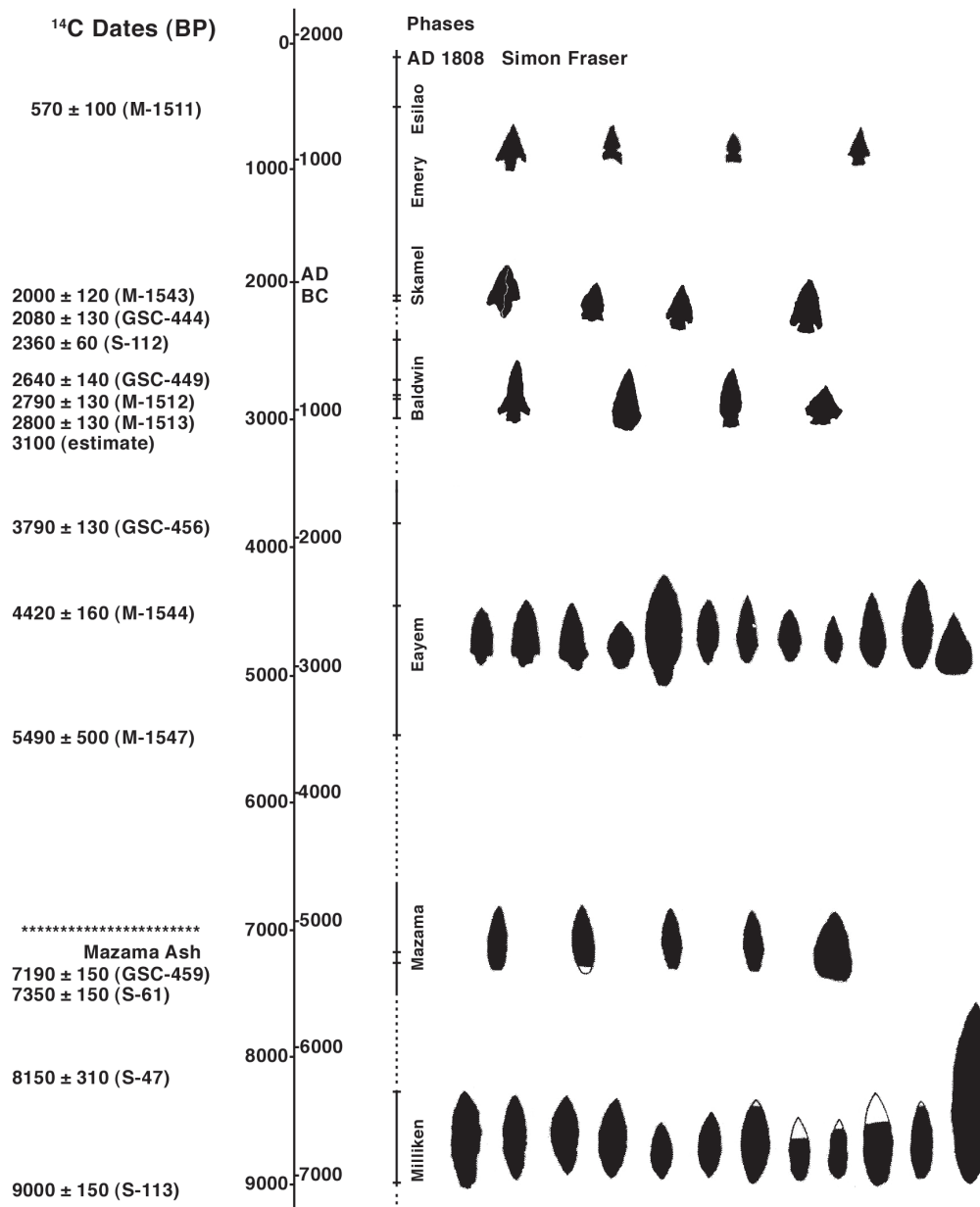


Figure 4. The sequence of projectile points at the Milliken site and Esilao Village in the Fraser Canyon based on Borden (1983), Carlson (1983a) and UBC collections.

Rice 1972:164) that is typified at other Windust sites by stemmed points. The absence of points is probably a consequence of small sample size. Foliate and single-shouldered points typify the next earliest component and place it in the Cascade phase.

The first early period site excavated in the Columbia Plateau was Lind Coulee excavated by Richard Daugherty in 1951–52 with a student crew from Washington State College (now University) and the University of Washington including Roy

Carlson. We were puzzled when we excavated the first projectile point (Figure 6) that was stemmed and not at all what we expected from this buried site. Daugherty (1956, 1962) however noted the similarities to early points from Lake Mojave and playa sites far to the south in the Great Basin and subsequent research (Carlson 1983b:76) identified a continuous distribution of stemmed points between these two poles. Claude Warren (1968) developed a phase sequence based very much on projectile



Figure 5. Bifaces from the Milliken phase at the Milliken site dating 9000-8000 BP.



Figure 6. Projectile points from the Lind Coulee site dating 9000-8500 BP.

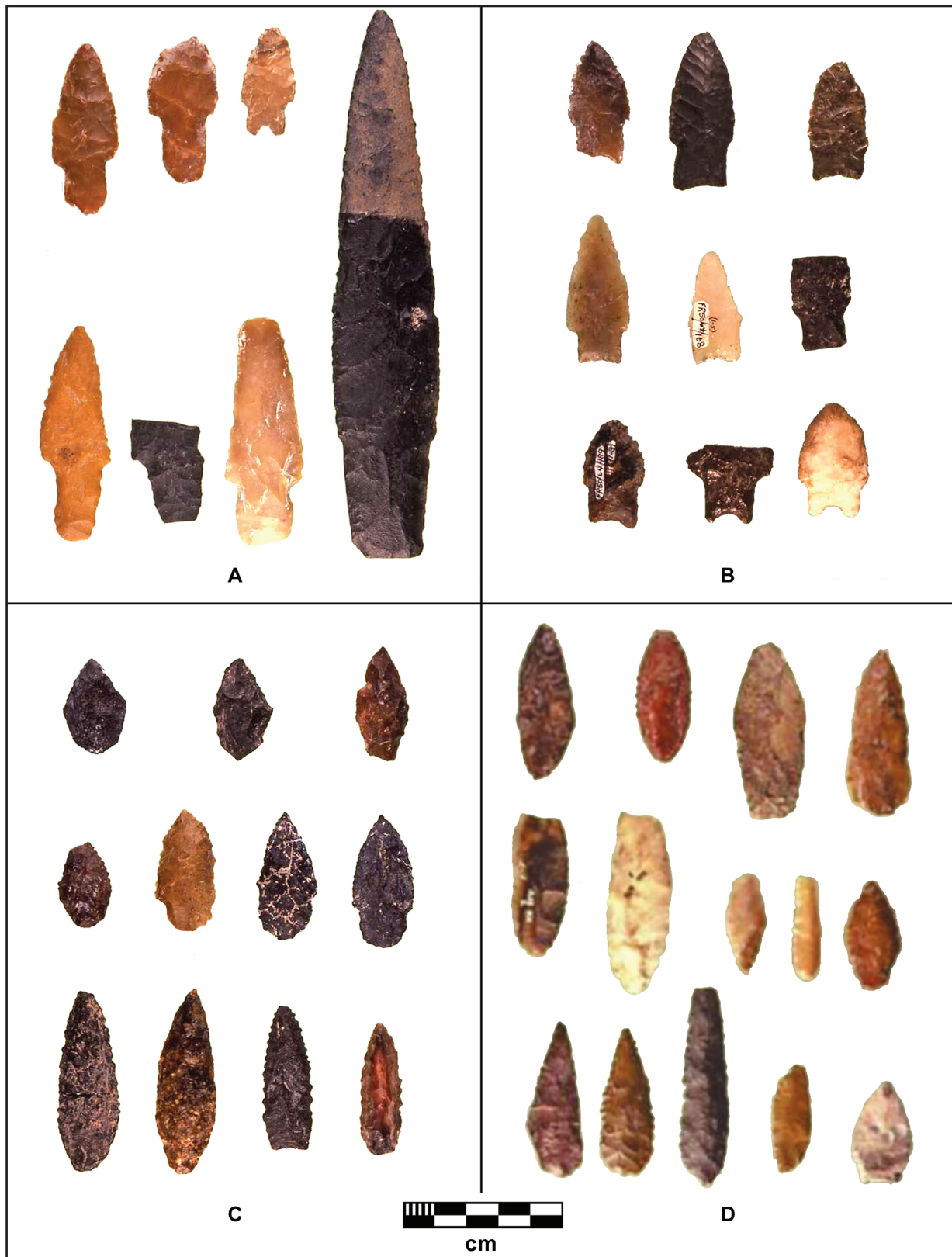


Figure 7. Projectile points from early components at the Marmes Rock Shelter. A, B, C Windust phase; D, Cascade phase. A, Marmes I dating ca. 10,000–9000 BP. B, Marmes II dating ca. 9000–8000 BP. C, Marmes III dating ca. 8000–7500 BP. D, Marmes IV dating ca. 7500–5000 BP.

points that was soon superseded by the sequence worked out at the Windust Caves, Marmes Rock Shelter and other sites (Bense 1972; Daugherty 1956; Leonhardy and Rice 1970; Rice 1972) of which the latter has been the most enduring. Projectile points from these excavations are shown in Figure 7. Further north on the upper Columbia Gar Grabert (1968) and David and Jennifer Chance (1978) published long sequences. Chapters 11 and 12 bring together the projectile point data from the Columbia Plateau.

On the Fraser Plateau in British Columbia David Sanger (1967) produced the first sequence for the middle Fraser and Thompson that was later revised (Richards and Rousseau 1987). Chapters 13–16 bring this projectile point sequence up-to-date.

Point Sequences in the Yukon and the North

While there was some early work in the Yukon by Scottie MacNeish (1964) the first enduring sequence was by Bill Workman (1978) which has been summarised and up-dated in Chapter 18. Knut Fladmark (1996) established the first sequence in the Peace River district from excavations at Charlie Lake Cave. This point sequence is repeated here in Chapter 17 and used as the basis for the point chronologies at other sites there and in the Rocky Mountain Trench (Ch. 17). Recent discoveries of Chindadn points in the Yukon are documented in Chapter 19.

This volume contains little about actual weapons systems of which stone points are merely the preservable parts. The earliest types of weaponry are thought to be the thrusting spear and the dart propelled by the atlatl. The debate as to whether Clovis knew and made use of the atlatl has been answered in the positive by Hutchings' (1999) study of impact fractures on fluted points. It is assumed Clovis also used the thrusting spear. On the Coast the earliest projectile heads found in the context of use (Ch. 3) are associated with bear dens and suggest thrusting spears used to impale bears as they were smoked out. As already mentioned, harpoons appear early and are differentiated from other types of projectiles by employing a detachable head or foreshaft with a line attached to the harpoon shaft. Harpoons were probably widely used from 9000 BP onward, but because of preservation are only found commonly in

shell middens in later periods. The best information on weapons systems has recently been discovered in the melting ice patches of the Yukon (Ch. 18) where bone and wooden parts as well as stone have been preserved. The bow and arrow appeared in the different regions between 2000 and 1500 BP.

In the final chapter (20) the editors review the projectile point sequences by time period and culture area, point out similarities and differences, and make inferences regarding cultural and ethnic continuity and change. Our working hypothesis is the obvious one that the peoples encountered here by European explorers in the late 18th and early 19th centuries are the direct descendants of the peoples who left the pre-contact archaeological remains. As has been pointed out previously (Carlson 1996:215) in order to infer linkages between archaeological assemblages and known peoples it is useful to go back to the distribution of cultures during the period of early settlement before diffusion and acculturation leveled differences, and see how this distribution correlates with that of linguistically different peoples at the time of contact. We consider both persistence and gradual change in projectile point forms in a region to be indicators of cultural and ethnic continuity, and radical change as an indicator of an introduced technology, while recognizing that such differences are not always clear-cut. We also consider that in any given time period the greater the similarity in forms and manufacturing techniques of projectile points, and the closer the propinquity in time and space of the artifact assemblages containing similar points, the greater the probability of ethnic congruity of the people who occupied the sites and made the projectile points.

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