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*Warren W. Caldwell*

*Wilson Duff and Charles E. Borden*

*Norman H. Lerman*

*Charles E. Borden*
Anthropology in British Columbia

ANTHROPOLOGICAL RESEARCH AND PUBLICATIONS, 1953–54

The amount of field research during the two years covered by this report declined somewhat from the level of 1951 and 1952. This resulted from the fact that several specialists in the area moved away or made temporary visits to other areas of the world. The number of publications, on the other hand, shows an increase.

ETHNOLOGY

From the University of British Columbia, Dr. Wayne Suttles accepted an invitation of the Pacific Science Board to undertake research in Okinawa, and has been on leave of absence during 1953–54. Gordon Campbell continued work on his Shuswap ethnography during 1954, supported by the University and the Canadian Social Science Research Council. Milena Nastich completed ethnographic work on the Lillooet and presented the results as an M.A. thesis.

Dr. Herbert C. Taylor, Western Washington College of Education, has begun a study of Comox-Kwakiutl relationships, aided by a grant from the Canadian Social Science Research Council. While teaching a course on Indians of British Columbia at the University of British Columbia, summer session, 1954, he undertook library research. This will be supplemented by archeological and ethnographic field work. In addition to this project, Dr. Taylor has continued his work on Indian claims cases in Washington.

At the Provincial Museum, most of the recent work has centred around totem-pole salvage and restoration. The programme to renew the exhibits in Thunderbird Park is now in its final year. A Kwakiutl house, opened with elaborate Kwakiutl ceremonies by head carver Mungo Martin last December, forms the centrepiece of the park. It is to be flanked by groups of Haida, Tsimshian, Bella Coola, and Nootka poles, now being prepared. Further details are available in the Annual Reports of the Museum.

A project to salvage the last totem-poles of the Haida villages of Skedans and Tanoo was successfully completed during the summer by Wilson Duff and a crew of Indians from Skidegate. The project was financed by a grant from Powell River Company to a widely representative committee. Six large poles were brought out, and are now in storage at the Provincial Museum and the University of British Columbia.

Two papers are under preparation by Wilson Duff—one on the sculptured stone bowls of South-western British Columbia, the other on an early census of the North-west Coast Indians.

Compared with earlier years, only a small amount of field research was done by University of Washington anthropologists. Sally Snyder continued ethnographic and linguistic study of the Skagit. Norman Lerman continued to work on his Okanagan material. John Mills, of the Bureau of Community Development at the University, is nearing completion of a manuscript which reconstructs Moachat (Nootka) culture history from historical narratives and ethnographic sources.

Dr. Erna Gunther is working on a movie and a paper based on films of Kwakiutl dances taken by Franz Boas. Also, she is preparing a paper on Captain George Vancouver's explorations in Washington waters.

Dr. Helen Codere, of Vassar College, spent four months in the Kwakiutl area on general ethnological research in the winter of 1951, aided by a Vassar College Faculty Fellowship. Several articles on the Kwakiutl are being prepared. During 1954–55 she will teach as visiting lecturer at the University of British Columbia and will continue her Kwakiutl research.
Philip Drucker, of the Bureau of American Ethnology, Smithsonian Institution, spent approximately six months in the field on the British Columbia coast and South-east Alaska during the fall and winter of 1953–54, in connection with an acculturation study in which modern intertribal native organizations—the Native Brotherhood of British Columbia and the Alaska Native Brotherhood—formed the focal point. These organizations are purposively oriented toward adaptation and cultural adjustment; the goal of the investigation was to determine the modern Indian's attitude toward, and interpretation of, his problems, and to learn what his approaches toward their solution have been. The study was essentially a continuation of that begun in South-east Alaska in the fall of 1952. As by-products of the main investigation, some very interesting materials on social and ceremonial patterns relating to the ethnographic time horizon were also collected. The research was supported principally by the Arctic Institute of North America under contractual arrangements with the Office of Naval Research, supplemented by grants from the Smithsonian Institution and the American Philosophical Society.

Dr. Edwin M. Lemert, University of California, visited Coast Salish and southern Kwakiutl groups again during the summer of 1953, and is completing two monographs on his work. One deals with the function of alcohol in North-west Coast culture (see Bibliography); the other with Bishop Durieu's religious system, which was developed at Sechelt in the 1860's.

ARCHEOLOGY

Dr. C. E. Borden, of the University of British Columbia, spent the summer of 1953 in Europe, where he gathered material for a course on Old World prehistory. This summer he has undertaken widespread surveys within the Province. In June and July he visited sites and collections in the Williams Lake, Vanderhoof, Fraser Lake, and Prince Rupert areas. Ten days were spent excavating the site of Gitsumkalum village, on a tributary of the Skeena River near Terrace, which is threatened by road construction. On Fraser Lake, evidence of talus-slope burials was found. In Vanderhoof Dr. Borden picked up the rich archeological collection of the late J. H. Sewell (see p. 37), and visited the sites at which most of the specimens had been found, before returning to Vancouver. For the remainder of July and August, Dr. Borden was joined by Mr. and Mrs. Roy Carlson, University of Washington. This period was spent in the Kootenay area, first making a survey of the Libby reservoir area on the Kootenay River from the International Boundary to Bull River, then surveying the shores of Columbia and Windermere Lakes. All this research was assisted by a grant from the University of British Columbia Committee on Research.

Dr. Douglas Leechman, National Museum of Canada, spent the period May to September, 1954, in British Columbia and adjacent areas examining archeological sites and collections. The early part of the summer was spent in the Southern Interior and the central regions of the Province. In early September Dr. Leechman teamed up with Dr. Herbert C. Taylor, Jr., and Wilson Duff on a survey of the area of Vancouver Island between Nanaimo and Sayward.

Douglas Osborne, Curator of Anthropology at the Washington State Museum, has been directing the archeological researches of several advanced students at the University of Washington. One, Warren Caldwell, has spent the past two seasons in charge of excavations in the famous Wakemap Mound, near The Dalles on the Columbia, financed largely by a National Parks Service grant. He plans to use the results of these excavations and a survey of important sites in adjacent areas in his doctoral dissertation. Earl Swanson spent the two seasons investigating the archeology of a small area just north of Vantage on the Columbia River. In 1953 he worked in a cave site and also in an old deposit along the river's edge. In 1954, though hampered by unusually high water, he investigated several other sites, and succeeded in working out the sequence of habitation in the area. Swanson's work was financed largely through university graduate school grants.
Alan Bryan has completed the excavation of the old fort and trading-post at Fort Spokane, working during 1953 and 1954 under the auspices of the Washington State Parks and Recreation Board. The area has since been made into a state monument. In addition, Bryan has conducted surveys and excavations of sites in Northern Puget Sound, and plans to use the results for his master's thesis. Roy Carlson has completed a study of the sites in the San Juan Islands area excavated over the last several years by University of Washington field-school crews. He will use this summation of the area as his master's thesis.

LINGUISTICS

Dr. A. H. Kuipers, Department of Slavonic Studies, University of British Columbia, continued his work on Squamish linguistics and in addition collected a Shuswap vocabulary. Gordon Marsh spent some time in the Yukon and Northwest Territories working on linguistics. In Puget Sound, Warren Snyder, of the University of Washington, worked on Suquamish linguistics.

APPLIED ANTHROPOLOGY

A comprehensive study of the contemporary Indian of British Columbia was begun early in 1954 by the University of British Columbia, with the co-operation of the Department of Citizenship and Immigration. Its aim is to assess the present social and economic status of the group and make recommendations for future policy. Administering the project are: H. B. Hawthorn, Director; C. S. Belshaw, Assistant Director; and S. Jamieson, Economist. Dr. Belshaw, Research Fellow of the Australian National University who recently joined the teaching staff, will take a year's leave of absence to give full time to the work. Advanced students are conducting community studies, as well as some specialized studies in welfare and economics. Senior specialists will participate in reviewing the position of the Indians with regard to agriculture, fishing, trapping, welfare, law, and correctional programmes, and government. The project is the first of its nature and magnitude in the social sciences in Canada, and may be the forerunner of others if it succeeds in proving its usefulness.

PUBLICATIONS

The following works of interest to students of this area have become available in 1953 and 1954:—

ALLEN, ROSEMARY A.

ANDRADE, M. J.

BARBEAU, MARIUS.

Caldwell, W. W., and Carlson, Roy L.

CLARK, ELLA E.

COLLINS, JUNE M.
DOUGLAS, GILEAN.

DUFF, WILSON.

ELMENDORF, W. W.

GARFIELD, VIOLA E.

GARTH, THOMAS R.

GJessing, GUTORM.

GLADSTONE, PERCY.

HARRINGTON, LYNN.

HAWTHORN, H. B.

de LAGUNA, Frederica.

LEECHMAN, DOUGLAS.

LEMERT, EDWIN M.


MCCLELLAN, CATHERINE.

McILWRAITH, T. F.

MaCNeish, June H.

Nesbitt, James K.
NETTLE, BRUNO.

OLSON, R. L.

SCOTT, LLOYD, and LEECHMAN, DOUGLAS.

SMITH, ALLAN H.

SMITH, MARIAN W.

SWADESH, MORRIS.

SWADESH, M., et al. (symposium).

SWANSON, EARL, and BRYAN, ALAN.

SWANTON, JOHN R.

TAX, SOL (editor).
1952. *Indian Tribes of Aboriginal America: Selected Papers of the XXIXth International Congress of Americanists.* University of Chicago Press.

WIKE, JOYCE.

**CONTENTS OF ANTHROPOLOGY IN BRITISH COLUMBIA, No. 3, 1952**


Anthropological Research and Publications, 1952
Notes on Coast Salish Sea-mammal Hunting..................................................Wayne Suttles
Gitksan Totem-poles, 1952.................................................................Wilson Duff
Results of Archeological Investigation in Central British Columbia........Charles E. Borden
A Uniform Site Designation Scheme for Canada.....................................Charles E. Borden
An Archeological Survey in the Lower Nooksack River Valley..............Richard V. Emmons
AN ARCHEOLOGICAL SURVEY OF THE OKANAGAN AND SIMILKAMEEN VALLEYS OF BRITISH COLUMBIA

BY WARREN W. CALDWELL

The following study is based upon data secured in the summer and autumn of 1952 during a joint archeological and ethnographic survey of the Okanagan and adjacent valleys. The project was made possible through a grant from the Agnes Anderson Fund, University of Washington, to Douglas Osborne, who fulfilled the dual position of administrator of the grant and adviser for the field researches.

Anthropological research has long recognized the dictum of an intimate relationship between the Plateau and North-west Coast culture areas. Kroeber (1923, p. 16; 1939, p. 28) notes the importance of strong Coastal-Asiatic influences but firmly restates the Interior basis of North-west Coast culture. Smith (1929, pp. 42-46), while affirming cultural homogeneity, suggests population movements from the Interior to the mouth of the Fraser River. Borden (1951), basing his observations upon materials from the Lower Fraser, finds a maritime orientation as a basic complex; deriving Plateau elements from the Interior, the resulting synthesis gives origin to the ultimate “North-west Coast” culture of the area.

Kroeber (1939, p. 56) considers the Fraser culture province as culturally nearest of all the Plateau regions to the North-west Coast, it “being a more specific cultural hinterland to the Northwest Coast than is either of the Columbia areas.”

A seemingly contrary, though perhaps not unreconcilable, view is expressed by Ray (1939, p. 147). Considering the western peripheries of the Plateau, he notes:—

In this case . . . the transfer has been largely unidirectional, inward to the Plateau . . . . As might be expected, the strongest identity is at those points where intercourse with the coast is easily maintained. This is along the great watercourses, the Columbia and the Fraser. The Wishram, Lilooet, and Thompson are the groups most influenced.

Ray (1939, p. 149), on the basis of cultural protection, further concludes that the geographically central groups, “Southern Okanagon, Colville, Sanpoil, Lower Spokane, and Columbia may with reasonable safety be viewed as most representative of older levels and fundamental aspects of Plateau culture.”

From the preceding it is evident that the Fraser River and its central drainage area are of considerable importance in current concepts of North-west prehistory. The Fraser Valley is demonstrably a route of cultural movement, though questions of direction or reciprocity are as yet in abeyance. It is also evident that the implications of cultural sequences in the Fraser and ramifying valleys are of vast import to the total backgrounds of the Northern and Southern Plateau.

The foregoing suggests that primary to an understanding of Lower Fraser and Coastal Salish problems is an investigation into the relationships existing between this coast-oriented region and the remainder of the Plateau culture area.

The cultural Northern Plateau is physically an integral part of the Fraser Plateau. Its southern portion is cut by a series of deep valleys of a general north-south tendency. Of these valleys, in terms of the current problem, two are suggested as of considerable cultural significance. The Okanagan Valley, a deep confluent of the Columbia, extends northward 150 miles, connecting by easy routes with the Nicola and Thompson drainages to the west. The Okanagan region thus forms a natural connection between the cultural developments of the Fraser and those of the Middle Columbia. Ethnographically, Teit (1930, pp. 252-253) has noted the early importance of a Thompson-Okanagan trade route. Smith (1910, pp. 143-147) has indicated extensions of this movement as far south as the Yakima and Walla Walla.

The northern or Canadian portion of the Okanagan Valley may be visualized as a deep trough, the northern three-fourths of which is characterized by a series of remnant lakes filling the canyon from wall to wall. The largest of the lakes, Lake Okanagan, extends from a point 10 miles north of Vernon 60 miles south to Penticton. Penticton
is situated upon a narrow isthmus separating Lake Okanagan from Dog or Skaha Lake. South of Vaseux Lake, separated from Skaha Lake by a resistant dyke over which the Okanagan River tumbles in a low falls, the canyon opens into a wide valley, an arid, river-terraced grassland extending south 20 miles to the International Border. In this region a series of small lakes terminates in Osoyoos Lake, straddling the United States-Canadian Boundary. Throughout the total length, the valley escarpment shows much relief; excepting the inter-lake isthmuses and southern grassland, the tendency of the country is vertical. Important local exceptions occur, however; these are in the form of stream delta and terrace developments which variable lake-levels have exposed during or prior to the cultural period under consideration.

A short distance south of the International Border, the Okanagan River receives the Similkameen River, a major confluent valley from the north-west. Like the Okanagan Valley, the Similkameen provides a ready route of access to the Nicola-Thompson region and direct access to the Lower Fraser, though through somewhat more difficult country. The headwaters of the Similkameen, in addition to those of its major confluent, the Ashnola, provide potential contacts with the Puget Sound via the Skagit River Valley.

Between the Okanagan and Similkameen Valleys are a number of low passes providing physical continuity between the two valley systems. Of these, two seem to be of greatest significance; an aboriginal route connected Princeton in the Upper Similkameen with Summerland on Lower Lake Okanagan. From Keremeos another valley opens, via a low pass, into the Okanagan Valley at Penticton. Two somewhat shorter passes—Cawston to Oliver, and Richter Pass—serve to tie the Lower Similkameen tightly to the Okanagan Valley. In the north the Douglas Lake route led directly into the Nicola-Thompson territory.

The northern portion of the Okanagan Valley is preponderantly forested, pines dominating. South of the lakes the valley is characterized by river-terraced grasslands, although cottonwood is abundant along the watercourses; aspen is found in quantity in the Similkameen region. Even to-day game animals are abundant. Trout are numerous in the lakes, and seasonal salmon occur in many of the more southerly rivers.

**HABITATION SITES**

I. SUBTERRANEAN CIRCULAR STRUCTURES

The northern portion of Lake Okanagan and adjacent Kalamalka Lake is characterized by a series of pits of relatively small diameter, 10 to 12 feet. South of Lake Okanagan and confluent valleys the pits are consistently of larger dimensions. House remains in the latter region are notably large; 40 feet at Summers Creek (CO-66)* and 80 feet at Wolfe Lake (CO-68) in the Similkameen Valley. Observed diameters in the total area show a range of 8 to 80 feet with a bimodal development of 10 to 12 feet and 18 to 80 feet. Only one pit evidences a conscious deviation from the round, and a distinct lip is normally apparent.

Range of depth is equally great—0.5 to 15 feet. The polar dimensions are exceptional; the bulk of the pits fall within a range of 1.5 to 2.5 feet. Extremes of diameter and depth are correlated.

Exact vertical and horizontal dimensions are frequently obscured by erosion. Locally, erosive tendencies are very apparent, particularly at Westbank on Lake Okanagan (CO-33), where pits have been largely obliterated.

Such underground houses generally occur in very small groups; in the Similkameen Valley, one or two at any location is the norm. In the Okanagan Valley, three to six houses are more characteristic, while one group near Oroville (O-5) contains fifteen.

* The site designations utilized on the included map represent field data. For purposes of brevity and in conformity with standard River Basin Survey practices, a shortened form is used in the following discussion, i.e., map designation C-O-24 becomes CO-24. Sites in the United States are prefixed O-.
Archeological sites in the Okanogan-Similkameen area.
Locations show considerable individual but little regional variability. The exact setting of any house or group of houses seems to have been a function of local ecological factors; there is no regional regularity. In the vicinity of Lake Okanagan, the low alluvial peninsulas previously noted and the lacustrine flats at the extremities of the lakes constitute the principle areas of settlement. South of the valley lakes, the house-sites are not found along the main waterways but rather in sheltered areas adjacent to such small lakes as characterize this area (CO-53) or on small confluent streams well removed from the river. In the Similkameen Valley the house-sites are noted in greater numbers along the river, occupying the low terraces above the flood-flats. It is apparent that numerous groups of houses were constructed well away from the principal waterways on small confluent streams. Near Oroville the largest surveyed site in the Northern Okanagan Valley (O-5) is situated deep inside the shelving walls of a well-protected lateral valley, removed 2 miles from the main channel of the Okanagan River. Similarly, the large pit at Wolfe Lake is three-fourths of a mile from the Similkameen Valley proper. Significantly, Osborne et al. (1952, p. 372) have suggested the possibility of off-river habitation as a logical explanation for the apparent lack of cultural depth in the Chief Joseph Reservoir area.

Most ethnographic sources indicate that the winter homes of most of the people were in the Columbia and larger tributary valleys. Ross (1923, p. 340), however, states that “The Indians after passing a month or six weeks in this roving state [fall hunting in the mountains] congregate again into roving bands for the purpose of passing the winter on the banks of small rivers, where wood is convenient and plentiful.”

The circular house-pits of the survey area indicate an intimate relationship with habitation forms recognized archeologically and ethnographically in the same and adjacent areas. Temporal continuity is apparent (Smith, 1900, p. 406).

Ethnographically, “... the exclusive type [of house] in the north-western Plateau (Okanagan, Thompson, Lillooet, Shuswap, Chilcotin), excepting the Carrier, is the circular pit with pyramidal roof. The pyramidal form comes primarily from the use of hip rafters running from the edge of the pit to an opening at the top” (Ray, 1939, p. 134). Pit construction was largely similar over the entire area, 2 to 6 feet deep, in well-drained protected locations. A few underground houses were constructed by the Okanagan and Sanpoil with the entrance hatch on the side rather than the top. The large majority of house-pits described in this section fall readily into this category. The large forms in the Similkameen area (CO-66, 68), historically Thompson and Nicola territory, have physical counterparts in the Thompson (Smith, 1899, p. 141) and Nicola (Smith, 1900, p. 406) Valleys.

The small shallow pits representing the lower range of diameter and depth (CO-3.5) suggest the remains of the conical lodges or “tipi” structures noted for the area.

The mat-covered tipi was a conical lodge built on a three or four pole foundation. This has been reported from all parts of our area [Sinkaitk] and from the Northern Okanagan. A circular pit about a foot deep was dug and three or four poles (both numbers were regularly used) sharpened and tied together at the top were set up inside the excavation. Other poles of smaller diameter were then tucked in among the foundation poles, the butt ends of all poles resting against the side of the pit. (Spier, ed., 1938, p. 39.)

II. SUBTERRANEAN CIRCULAR STRUCTURES WITH LINING OF STONES CONTINUING ABOVE THE SURFACE AS A LOW BROAD WALL

In areas of uneven ground surface, the stone wall completes the pit on the downhill side; the upslope sidewall is formed from natural earth. The stone walls are much disrupted; dislodged members falling inward and outward largely obscure the original dimensions. The range of diameter is small—internal, 4.5 to 13 feet; external, 12 to 16 feet. Range of depth, pit and superstructure, is 1.5 to 5 feet. Two variant examples were noted at Richter Pass (CO-92): (a) An oval pit, 6 by 12 feet, with no superstructure, and (b) an oval pit, 12 by 22.5 feet, divided internally into two circular pits 6 feet in diameter, no superstructure.

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These stone structures always occupy commanding positions; at Gellatly (CO-35) a single-walled structure stands immediately at the brink of a cliff dropping sheer to Lake Okanagan. Other than the structures at the western terminus of Richter Pass in the Lower Similkameen Valley (CO-92), these sites are somewhat removed from the physical routes of movement; they occur in lateral stream-valleys (CO-39) or upon bluffs overlooking lake-flats, always in relatively large groups. Ten associated pits were recorded at Richter Pass, with three others in the immediate vicinity. At Gellatly and Westbank at least six were apparent before disruption, and an equal number at Sawmill Creek on the east side of Lake Okanagan (CO-28).

It is probable that some of these structures have functioned as cache-pits. Cache-pits are an accepted feature of Plateau archeology (see CO-89).

As winter came on the supplies were removed from the arbors to rock shelters or pits, usually nearer the winter villages. The pits (ulakin('t») were from six to sixteen feet in diameter and two to four feet deep, always round. They were lined with flat rocks twice the size of one's head, made by splitting large rocks.

Sweet dry grass was laid down before the food was put in, and again on top of the food, perhaps some dirt, and then flat rocks piled on top . . . Generally the cache stood several feet above the ground level. (Spier, ed., 1938, p. 32.)

This description correlates nicely with that presented previously and suggested as house structures. While some of the smaller stone structures might well have served as cache-pits, there is abundant evidence suggesting that, alternatively, the larger pits were semi-subterranean stone-lined houses. Casual excavations at Sawmill Creek have recovered numerous “black” stone points. At Richter Pass a number of artifacts have been excavated from beneath the tumbled stones that filled the bottom of one of the larger pits. An asymmetrical scraper of obsidian, one convex edge finely retouched, and a large copper club “shaped like a fish” are unique in this region. The stones covering the artifact levels suggest that the superstructural walls were originally higher than is currently evident.

III. SUBTERRANEAN RECTILINEAR STRUCTURES

Rectilinear house-pits are present in very small numbers, but with surprising variety. It is impossible to note valid regularities with so few data; as a consequence, each house-pit site will be described in brief detail.

CO-85: 18 by 30 feet, 1.5 feet deep, low lip discernible, situated near the river edge of the first terrace above the Similkameen River at Hedley Mission. On the flood-flat below is another, square (30 by 30 feet, 1.5 feet deep), with low lip. Another was recorded upon a narrow bench against the west wall of a narrow canyon confluent to the Okanagan River (O-5).

CO-2: 20 by 40 feet, 1.5 feet deep, surrounded by a distinct lip of mixed earth and gravel, the removal of which has left a borrow-trench (1.5 feet deep) outlining the pit, is set in a narrow box canyon debouching into a small protected cove on the north-western shore of Lake Okanagan. A similar structure formerly existed near by.

CO-86: 24 by 30 feet, 1.5 feet deep, lined with logs, 8 to 10 inches in diameter, laid horizontally with interlocking butts. Earth is piled against the outer surface of the log walls to roof-level (1 foot above soil-surface). The earth so removed has left an oval ditch completely surrounding the house (cf. CO-2). The roof was probably supported by one or more ridge-poles resting upon horizontal gabled wall logs. The roof covering is of thick split slabs covered with earth.

Of the four sites described in this section, three are composed only of rectangular house-pits. All are characterized by no more than two pits each; however, one site (O-5) contains but a single rectangular pit in definite association with a large number of circular forms. In light of current data, we may assume that these pits (excepting CO-2, 86) are the remains of ethnographically reported mat houses.
The form of the mat lodge differed somewhat in the region north of Tonasket among the Northern Okanagan. Here the house was built over an excavation about a foot and a half deep, the poles of the frame being set inside the excavation. When the house was completed, pine or cottonwood bark was laid along the outside at the base, bark side in; grass was laid over this, and finally dirt was packed over the whole. (Spier, ed., 1938, p. 28.)

The single rectangular house-pit at Hedley Mission (CO-85) is probably of this category. Fragmentary ethnographic evidence gathered at the site partially confirms this view. The adjacent square pit is strongly suggested in a brief comment by Ray (Ray, 1939, p. 135):—

An essentially distinct type of earth lodge may be represented by the square pit of the Kittitas, Wenatchi, and Southern Okanagan. In all cases this lodge is supplementary to that built with a round pit.

Ray suggests that this may constitute a local development; Teit (1930, p. 227) describes a somewhat similar structure for the Lake and Okanagan groups.

The wood structure (CO-86) is unique in terms of this survey. It is beyond the scope of this paper to develop this problem in detail; however, despite strong suggestions of European influence, it is apparent that aboriginal progenitors of potential relationship existed in the Plateau. The Shuswap built lodges of logs partially covered with earth (Teit, 1909, p. 494). More pertinent is the Lillooet hunting lodge, the walls of which were constructed of logs laid one upon the other to a height of 1 metre. (Teit, 1906, p. 215.)

IV. Featureless Sites

The largest single group of habitation sites discovered by the survey lack aboriginally influenced surface features. Such sites are distinguishable only through varying quantities of material objects casually recovered from surface debris.

Quantitatively considered, these sites indicate a development from a scattering of artifacts suggestive of short-term residence to intensive habitation of a village nature. There are no observable regularities in the distribution of such sites; ecological conditions suggest a situation identical to that characterizing other modes of habitation in the region. The two sites of greatest apparent importance are located upon narrow isthmuses dividing the larger valley lakes. At Oyama, between Wood Lake and Kalamalka Lake, the habitation debris (CO-9) covers a large portion of the cultivated acreage east of the connecting channel between the lakes. Points have been numerous, and several burials have been fortuitously excavated here. Informants indicate that this isthmus formed a cul-de-sac utilized for the capture of deer driven by communal action down the adjacent canyon-slopes. A situation similar but larger in scale exists at Penticton (CO-4S). Elsewhere these sites are found upon the low outwash peninsulas that project into the lakes from the foot of the canyon-walls.

Approached from a qualitative view-point, this group of sites shows great similarity in artifact assemblage. The single outstanding exception is the data from Rolling Lake (CO-2S), north-east of Vernon. Here the artifacts have been found on the surface of the first terrace above the current lake-level. The material recovered is in the form of large flakes shaped by percussion techniques. Tool forms are few, primarily small thin flakes and large turtle-backed scrapers.

V. Rock Shelters

Despite the rugged terrain, numerous cliffs and outcroppings, the number of recognized rock shelters is negligible. CO-29 is a wind blowout in the conglomerate cliffs that form the south-west slope of Mount Bouchier. The opening overlooks the north flat at Westbank on Lake Okanagan, 1,500 feet from the water's edge. The floor is formed by well-compacted dust and gravel; evidences of fire are abundant in a natural fireplace and chimney adjacent to the main opening. The roof is covered by a thick old layer of soot.
CO-30 is a tent-shaped enclosure formed by the wedging of large talus boulders in their progress from the cliff above. This shelter is situated in the bottom of a vertical fault in the cliff 450 feet north-east of CO-29. The floor is composed of a thick layer of organic debris and the roof is well sooted.

CO-36 is a deep wave undercut in the low cliffs overlooking Lake Okanagan south of Gellatly. The site is currently accessible only by boat. Floor deposits have recently been covered by beach gravels; however, informants indicate that habitation debris formerly was visible. A small spring flows out of the rear wall of the shelter.

Immediately to the south is a small pictograph; a similar but smaller pictograph and shelter (CO-37) was noted 300 feet to the south.

CO-31 is a broad horizontal fissure in the lowest outcrop of the high cliff on the east side of Mud Lake, 8 miles north of Oliver. A faint trail gives access up a short rocky slope from the lake 225 feet to the north. Floor deposits, if such exist, are covered with numerous fragmented stones. Layers of soot are visible on the roof.

CO-78 is formed by the overhang of a large talus boulder 20 feet north of the old Princeton–Hedley Road, 8 miles west of the new highway bridge. No floor deposits are evident, although small quantities of soot were noted on the roof.

CO-84 is situated at the base of a deeply overhung cliff forming the northern margin of the Similkameen Valley, 3 miles east of Hedley. A very old talus slope extends from the shelter 50 feet south toward the Great Northern Railway right-of-way 100 feet beyond. Four stone cists, one opened, are identifiable in this slope immediately in front of the shelter. The habitation platform is well protected by large talus boulders. Against the west wall of the shelter is a stone-lined pit. The walls and roof overhang are covered with dense accumulation of old soot. Many pictographs are evident on the walls, both precedent and subsequent to the sooty layers. Floor deposits are thick and dry; points, fire-cracked stones, and bone fragments have been recovered.

**BURIAL PATTERNS**

Burials, in a markedly varied complex of patterns, constitute approximately 25 per cent of the total material remains recorded by the survey. The only note of consistency is the regular occurrence of burials, singly or in groups, in locations of physical prominence, on bluffs or cliffs overlooking principal waterways. However, even here there is an exception; talus burials, as a consequence of particular topographical and presumably cultural demands, are restricted to the low terraces above the Similkameen River.

There is no evident correlation between specific burial groups and known habitation sites, although physical proximity frequently suggests a relationship. Nor, despite the several burial types, is there evidence of juxtaposition of pattern.

**I. CEDAR CIST BURIALS**

The first group (CO-61) consists of a series of evenly spaced interments situated upon the low gravel terrace above the eastern end of the Osoyoos bridge. The burials average 3 feet below the current surface; they are all tightly flexed and ranked in regular rows across the small peninsula. An occasional body was surrounded by a cedar plank "cist." Structural members were 2 inches thick and were characterized by an extremely smooth surface treatment. Burial goods include a single set of copper ear-rings and a series of large obsidian and chert blades. Evidences of red ochre are abundant.

A similar group of burials (CO-47) was discovered atop the sand bluffs overlooking Skaha Lake, south-west of Penticton. In this instance the physical remains were burned. Burial goods were abundant—"jadeite" cels, pierced elk and deer teeth, obsidian and turquoise objects.

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II. Cairn Burials

A small series of burials is characterized by a surface superstructure of large stones. In a few cases the stones have a sub-surface extension, forming a covering for the body itself. There is no regularity in surface form. CO-48, a small series of cairn burials on the west bluff overlooking Okanagan Falls, produced no grave goods. A similar site, CO-46, was reported from the sand bluffs near Shingle Creek at Penticton. Water-worn boulders were piled over the body. One of these graves produced an abundance of sheet copper cylinders (4 to 5 inches long, three-eighths of an inch in diameter). A single fringed buckskin bag was also present.

Identical copper objects were found in a single cairn burial from the foot of Richter Pass in the Similkameen Valley. In this instance, rocks were piled above and about the body. Similar tubular "beads," strung on buckskin, were noted from a grave near Oroville in association with a large jadeite celt, a copper plate, fibre matting, a pipe of unknown type, and Dentalium shell. The formative stones completely covered the body.

III. Stone Cist Burials

A single definite group of cist burials (CO-84) was recorded as an associated part of the large rock shelter near Hedley. Visible superstructure consists of large flat stone slabs arranged in a rectilinear form. A possible group of similar structures was noted near the former customs-house in the Southern Similkameen Valley.

IV. Talus Slope Interment

Informants report talus burials as occurring locally in the Similkameen Valley. There are no such reports for the Okanagan region. In no case were specific burials seen during the survey; particular localities were indicated solely by informant data. On this basis, talus burials are attributed to the region from Princeton on the north and west extending south and east to Nighthawk below the American border.

V. "Stone Ring" Burials

A small series of burials in the Okanagan Valley have, as surface markers, a number of flat stones set into the earth in the form of a circle (3 to 5 feet in diameter). In all cases they are physically adjacent to recognizable prehistoric habitation sites.

VI. Simple Interment

By far the largest single group of burials lacks purposeful surface indication. This group, of course, evinces slight homogeneity. Both flexed and extended forms occur; burials are single and in groups. The largest number have produced no burial goods.

The discussions of habitation and artifact typology (see below) serve to suggest a condition of considerable cultural stability. The contrary, however, is evidenced by the assemblage of burial practices; superficially, several varieties may be noted. This discordance of burial and habitation pattern suggests logical alternatives; temporal sequence of burial form within the time-span of the persisting pattern of habitation type or the contemporaneity of several burial patterns. Teit (1930, p. 127), describing an analogous ethnic situation to the south, considers talus burials, wood and stone cists, etc., as merely regional alternatives within the same time period. It is quite possible that a similar relationship existed in the area of survey.

The category of cairn burials actually includes two very different types of structures. The cairn of stones is a common and widely distributed means of marking or protecting graves, but this sort of structure is usually strictly a surface feature; the body is deposited as an ordinary earth interment. The surface feature of the second form is a continuous development of stones piled above and about the body. In this form it seems closely allied to the talus and true cist burials and might well constitute merely a modification.
of the latter. The several modified "cist-cairns" recorded by the survey have all contained evidences of European contact material. The burials from below-surface cairns have produced none; the situation regarding stone circle burials seems to be similar. True cairn burials and stone circle burials, in the survey area, appear to be completely prehistoric.

The cedar cist burials in the Okanagan Valley have produced several examples of copper, probably of European origin. All other artifactual remains suggest prehistoric but late prehistoric origin; a simple copper tube was found in a similar grave in the Thompson region (Smith, 1900, p. 434).

The artifact assemblage present in the simple interments relates them to the cedar cist burials; at the current level of investigation the position of the remaining patterns is tenuous.

THE ARTIFACTS

The artifact assemblage available for study is remarkably small. Large collections have been accumulated in the survey area, but temporal and human factors have long since resulted in dissipation.

I. POINTS

Leaf-shaped Points.—Modified bases (flat, convex), occasional corner notching parallelizing long axis; range—length 2 to 4 inches, width 0.75 to 1.5 inches; material—basalts, very granular; technique—pressure flaked.

The granular nature of the material inhibits workmanship; there are few examples of fine craftsmanship. Exact data are absent, however; these points seem to be concentrated in the northern portion of the Okanagan Valley; close affiliation is evident with similar materials from the Upper Columbia region (Collier et al., 1942, Plate I, i to m, p. 135). Similar points are noted as abundant in the Thompson Valley (Smith, 1900, p. 408). The numerous and perhaps intimate physical connections between Lake Okanagan and the Thompson-Nicola Valleys would strongly support a presumption of relationship.

Triangular Points.—Corner or diagonal notched, tangs; corner notched, flaring tang, flat base or rounded base; or corner notching, converging tang, flat base.

This group of points constitutes a majority of all those noted in the survey area. As indicated in the previous section, non-stemmed points indicate strong affiliations to the immediate east and immediate west. The stemmed points of the majority group look to the south in a cultural continuity with Southern Okanagan (Sinkaietk) and adjacent people. A minimal correlation of deeply notched points with parallel tangs is noted with the Upper Columbia area (Collier et al., 1942, Fig. 107). A much stronger correlation must be emphasized for the Chief Joseph Reservoir (Osborne et al., 1952, Plate 110, k, u, v). An even stronger tie should be noted with the Columbia at The Dalles. From a reciprocal view-point, Osborne et al. (p. 370) have commented upon the same problem:

Non-stemmed points were more numerous in the Upper Columbia sites (Collier et al., 1942, p. 63, Table 4). A strong reversal of this trend is found in the Chief Joseph sites not so far downriver. As has been said, small short-stemmed diagonal-notched points were preferred between the Nespelem and Okanagan rivers along the Columbia. This compares with the Dalles-Deschutes area and differs from the Middle Columbia sites examined upstream from Umatilla, Oregon.

A single triangular obsidian point was recovered from a cedar cist grave near Penticton. The base was deeply concave, each of the isoscelene edges was serrated by four evenly spaced, square-cut notches. Similar notching or serrating techniques are noted for the Thompson Valley. Specimens of extremely varied shape have derived from Lytton (Smith, 1899, p. 136, Figs. 8–12, 15–18), Spences Bridge, and the Nicola Lake area (Smith, 1900, p. 409, Fig. 334). It seems probable that this point represents an item of Thompson-Okanagan trade.
A series of large convex-triangular, stemmed chert points has derived from Westbank on Lake Okanagan. These points include lengths up to 6 inches. Pressure flaking technique is notably fine. Details of tang and barbs are unknown. Several counterparts were found at Lytton in the Thompson Valley (Smith, 1899, p. 135, Fig. 2).

A single ground slate point of unknown form was reported from Penticton; very small numbers of ground slate points have been reported from the Thompson Valley (Smith, 1900, p. 409, Fig. 334, b, p. 136).

II. SCRAPERS

Turtle-back or keeled forms (flake tools, the bulb of percussion is evident); range—length 3 to 4 inches, width 1.5 to 2 inches, thickness 0.75 to 1 inch; material—ryolite; technique—percussion flaking (some examples show possibilities of conscious retouching).

This group of implements from Rolling Lake is found in association with many small unformed flakes. Elsewhere in the survey area, small cores, one end markedly convex, are typical.

III. CELTS

**Chipped Stone Celts.**—Tapering poll, asymmetric, convex bit; range—length 5 to 6 inches, width 2.25 to 2.50 inches; cross-section—flattened lenticular; material—ryolite; technique—percussion flaked.

Exact provenience is unknown, though they are presumed to derive from the Northern Okanagan Valley. They are notably few in number.

**Ground Stone Celts.**—Range—length 2 to 14 inches, width 2 to 2.5 inches; cross-section—rectangular, modified; material—jadeite, serpentine; technique—sawing and grinding, reciprocal saw cerfs are frequently evident.

Ground celts are present in small numbers throughout the survey area. Their recorded occurrence has been limited to what are presumably late graves (Collier et al., 1942, p. 71, Table 8, p. 43, Table 2), cedar cist and cist-cairn burials. Similar implements are noted for the adjacent Upper Columbia area (Collier et al., 1942, Plate XV, a-d, f) on the east, and in larger numbers for the Thompson Valley (Smith, 1900, Figs. 40 to 42, a) on the west. Ground celts are infrequent in the Southern Plateau (Smith, 1910, p. 62, 144). When they do occur they characteristically have an elliptical cross-section, as opposed to the rectilinear form noted in the survey region. The latter suggests possible ties with the Coast. Evident depth (Borden, 1951, p. 46) and probable distribution on the Coast suggests a coastal origin for this trait. Penetration into the Interior appears to be late.

IV. ANTLER WEDGES

A very small number of antler wedges have been noted in the survey area. Biface and uniface varieties are present. This extremely scanty occurrence is in accord with the data from the Upper Columbia (Collier et al., 1942, p. 86) and from the reported sites of the south.

V. MAULS AND PESTLES

**Elongated, Conical.**—Bases slightly convex; range—length 10 to 18 inches; diameter—maximum of 3 inches, tapering; material—basalt, fine grained; technique—ground and well polished.

Smith emphasizes similar pestles for the Yakima Valley (Smith, 1910, p. 144). Smaller, less tapering though reminiscent types are reported from The Dalles-Deschutes (Strong et al., 1930, Plate 23, h) and Upper Columbia (Collier et al., 1942, Plate XVI, b). This distinctive variety of pestle seems most closely allied to the south.

**Water-worn Boulders.**—Unformed except for a use-flattening, generally of only one end; range—length 5 to 12 inches, width 2 to 4 inches; material—igneous; technique—unformed.
Many similar forms are reported for the Thompson area (Smith, 1900, p. 411). Rough pestles of this variety evince a gradual transition of form into the category of hand-maul with flanged base and grip.

**Nipple-topped.**—Range—length 5 to 7 inches, width 3 to 4 inches (maximum diameter); material—igneous; technique—usually finely finished, ground and pecked.

Here as in the Thompson area the nipple-topped (Drucker, 1943, p. 49, Fig. 13) grip is the most characteristic variety. It may appear modified into a mere convexity. A single example with a flattened flange tip was noted near Princeton.

VI. MORTARS

Range—diameter 6 to 18 inches, height 6 to 18 inches; materials—igneous; technique—pecking; the hemispherical form is quite regular.

These hemispherical mortars have their counterpart in The Dalles-Deschutes area (Strong et al., 1930, Plate 22, a, b). They are also reported archeologically for the Thompson Valley (Smith, 1900, p. 413). A single example was noted formed from a large flat stone into which a circular depression had been worn. Similar examples were noted from The Dalles-Deschutes area (Strong et al., 1930, Plate 22e, 25a).

VII. GROOVED OR NOTCHED STONES

Range—length 7 to 8 inches, width 4 to 8 inches; material—igneous; technique—rough boulder unaltered, V-shaped groove pecked into surface.

A very small number of grooved stones have been found near the lakes of the Northern Okanagan Valley. The groove, paralleling the long axis of the stone, is V-shaped and quite deep. Strong et al. (1930, p. 110) suggest that such cobbles are sinker stones. Similar grooved sinkers were noted at Priest Rapids (Smith, 1910, p. 31, Fig. 13) and from the Upper Columbia (Collier et al., 1942, Plate XVII). Notched pebbles, also considered sinker stones, are much more numerous; they have been reported in large numbers from the Oroville area. Numerous similar examples are pictured by Strong et al. (Strong et al., 1930, Plate 18) from The Dalles-Deschutes region of the Columbia, from Priest Rapids (Smith, 1910, p. 31, Fig. 13), the Upper Columbia (Collier et al., 1943, Plate XVII), and from the Thompson area to the west.

VIII. MISCELLANEOUS

**Turquoise.**—A single small turquoise pendant was found in association with a serrated obsidian point from a presumably late grave near Penticton (CO-47). The object is three-eighths of an inch wide at the base, the sides tapering symmetrically to a width of seven-thirty-seconds of an inch at the top. A \( \frac{1}{16} \) inch hole occurs centrally, one-sixteenth of an inch from the top border (probably drilled from one side only); the object is one-sixteenth of an inch thick and is highly polished throughout. An almost identical turquoise object was excavated from a grave in the Upper Columbia in association with Dentalium, copper and glass beads (Collier et al., 1942, pp. 55, 76, Plate XI). Collier et al. note that no turquoise deposits are known nearer than Nevada (1942, p. 76).

**Haliotis Shell.**—A suspenory object of Haliotis was taken from a grave near Oroville in association with objects of copper, Dentalium, etc. Details as to structure and typology are lacking. Presumably similar items were found in The Dalles-Deschutes area (Strong et al., 1930, p. 73).

**Dentalium Shell.**—See Haliotis for local provenience. Dentalium constituted the most widespread and largest group of shell items from the sites of The Dalles-Deschutes area (Strong et al., 1930, p. 72, Plate II). Large quantities were discovered in the burials of the Upper Columbia (Collier et al., 1942, p. 93). Smith notes that Dentalium in the Thompson Valley was imported from coastal sources via the Chilcotin (Smith, 1899, b, p. 134).
Copper Ear Ornaments.—Three-quarters to 2 inches, flat, fish-shaped, incised details. These objects were included in a cedar ring burial from Osoyoos. Function as ear ornaments is indicated by their position adjacent to cranial remains well preserved by leached copper salts. There are no data as to the provenience of this copper; however, it may well be contact material. These graves are probably all historic, yet native copper is known from the area north of Lytton (Smith, 1899, b, p. 133).

Animal Teeth.—A large number of elk teeth were found with a single crevice or cave burial near Oyama on Kalamalka Lake. Animal teeth are frequently encountered archeologically in the Plateau. Smith records elk-tooth pendants in large numbers from the Thompson Valley (Smith, 1899, b, p. 152).

PICTOGRAPHS

The pictographic paintings of the survey area occur in the greatest number and complexity in the Similkameen Valley. In the lake area of the Okanagan Valley, rock pictures constitute only a minor adjunct of the archeological context. In the Similkameen the pictures are most numerous in the region between Princeton and Hedley, where they are encountered, at irregular intervals, along the aboriginal trail following the northern bank of the river. In the lake region of the Okanagan Valley the pictographs occur in small numbers upon cliffs and large outcrops overlooking the water. Throughout the total region, pictographic sites are in positions of considerable physical prominence. A favoured locale is upon cliff-faces overlooking the confluence of streams (CO-42); such paintings may be quite complex. Frequently isolated talus boulders (or groups of boulders) are utilized. This is particularly evident in the North-western Similkameen Valley. Several instances of pictographs have been noted in association with rock shelters (CO-36, CO-37).

Rock surfaces utilized may be very irregular, though the most complex pictures occur on flat, smooth, protected basaltic surfaces. Preservation is demonstrably less satisfactory on granitic outcrops.

All observed paintings were done in red pigments; variations of shade and intensity are probably due to uneven weathering as well as differing points of origin and mixing of ingredients. A small number of black pictographs have been reported (Cain, 1950, p. 4). There may be variations in the quality of the red pigment in a single set of pictures, but there is no instance of polychrome.

Techniques of application are variable; some pictures suggest application with a brush, others indicate finger painting (Cain, 1950, p. 5). Draughtsmanship is equally variable. Component figures indicate a range of maximum dimension of 0.5 to 2 feet. Individual paintings are statistically evenly divided between those of a single component and those of two or more; some examples are notably complex; CO-42 is an outstanding example. The series of pictographs in the Upper Similkameen is pictured in part by Teit (1930, pp. 283–287). Superimposition of individual figures is a regular phenomenon. In some cases, repeated retracing or refreshing of specific figures is apparent.

It is beyond the scope of this paper to discuss in detail questions of design elements and motif. However, a few correlations and tendencies should be noted. Anthropomorphic and zoomorphic figures are common; the human figure, naturalistically and fantastically portrayed, is frequent, though stick and circle figures are perhaps more common. Most varieties of zoomorphic portrayals are amorphous, although various quadrupeds are distinguished; the mountain-goat is frequent and readily identifiable by its horns (Cain, 1950, p. 36), and the horse is indicated at least once by its rider.

Frogs, snakes, centipedes, and other more conjectural insects are identifiable but infrequent (CO-42). Geometric elements, the rake, the cog-wheel, angular meanders (Cain, 1950, pp. 38–39), and the sunburst in varying forms frequently stand alone, or they may exist in combination, often in the form of zoomorphic or anthropomorphic constructs.
It seems apparent that characteristically there is a much greater dependence upon strictly geometric forms than in the Southern Okanagan Valley. The great abundance and complexity of realistic and representative forms noted in the latter region was not present in the north (Cain, 1950, p. 7-45). Although distributions are incomplete, it might be suggested that the Similkameen Valley represents a peripheral region of pictographic development. The strong ties are with the already published data from the south.

CONCLUSIONS

From the foregoing it is apparent that archeologically the Okanagan-Similkameen area partakes intimately of the pre-European trends noted elsewhere in the Plateau. The survey materials provide, of course, an incomplete picture of the prehistoric cultural situation. The material is, however, adequate to support some particularized comments in terms of the broader pattern.

Emphasis upon fish as a basic factor in subsistence economy is lacking; none of the material adjunct of fishing is archeologically evident. On the contrary, stone points, most assuredly hafted as projectile weapons, constitute a majority of recorded artifacts; points are numerous, but stone net-sinkers are infrequent. Further, house-sites are not chosen with a primary view toward accessibility to fishing locations, but rather toward the control of deer runs and adequate water and shelter. Emphasis seems undeniably upon hunting. With the exception of the stone structures, defence does not seem to have been significant in the selection of habitation sites. Fishing constitutes an important subsistence factor among the Southern Okanagan; there is no archeological depth apparent for such an activity in the north, although from Oroville south, sinkers are numerous. The lacustrine environment in the north would limit the application of many of the fishing techniques (riverine) utilized among the Southern Okanagan.

Teit and Smith have both suggested that the Okanagan Valley constituted an important trade route between the Middle Fraser and the Columbia Basin. Archeologically this approach receives considerable vindication; evidences of contact are to the west and to the south with Okanagan and Similkameen Valleys as alternative intermediaries. In the former, evidences of intensive trade are limited to the region south of Lake Okanagan, precisely that region which is most closely tied to the Similkameen Valley. Teit suggests the Northern Okanagan-Thompson Valley tie as most important as a trade route. Archeologically this is neither supported nor denied; however, the evidence of trade material and apparent cultural tie with the Thompson area is more clearly developed in the southern portion of the valley, presumably via the Similkameen route. The importance of the Similkameen area as an aboriginal trade route should be emphasized, at least as a contemporary alternative to the Lake Okanagan-Thompson tie.

Associations indicate that most if not all the evident trade activity is late and possibly a reflection of earliest European trade conditions on the Coast. Many other intraregional similarities are undoubtedly the consequence of the as yet undocumented archeological patterns of the Plateau.

It seems evident that much of the material presented in the previous section is late in terms of an absolute chronology. This is demonstrably true of the polished celt or planing adze complex; most examples of which have come from cedar cist graves, burials which in the Okanagan and adjacent areas have produced an abundance of copper, often identifiable as European in origin. The data are probably not all recent, but no depth or continuity can as yet be demonstrated.

On a conjectural basis, one may assume that something more generalized underlies these seemingly late manifestations. The material representative of an earlier period is patent in the collected data and hence not too different from it, probably merely lacking certain specializations giving peculiar colour to the later period. The strongest suggestions of age are indicated by the large flake scrapers of Rolling Lake (CO-25), which differ technically and typologically from the remainder of the data. Similar implements
have been noted from presumably old sites in the Southern Plateau. This is not a new problem in Plateau prehistory; Smith (1899, p. 161), commenting on the Thompson Valley, notes:—

Up to this time (1900) we have no evidence of a change of type or of material change of culture since the earliest times of which we have knowledge.

Osborne et al. (1952, p. 372), on the basis of more mature observation, has indicated that a single cultural level was found in the Chief Joseph Reservoir:—

The fact that the same types of Indian artifacts were found with trade goods and without would seem to bear out Ray's (1932, p. 10) statements as to cultural isolation and slow rate of change for this area.

The Okanagan data would seem to confirm the homogeneity of material pattern characteristic of these adjacent areas.

In light of this relatively static situation, one may assume that elements lacking a developmental sequence or elements not demonstrably recent are of long standing in the regional cultural pattern.

The foregoing suggests important implications regarding current theories of Northwest Coast prehistory. As previously indicated, Borden, working with materials from the Lower Fraser (Borden, 1951), postulates an interior outflux impinging upon a marine oriented "Eskimoid" culture to produce the "developed southern aspect" of Northwest Coast culture. Basic to these considerations is the series of traits which Borden considers "Interior" in origin. On the basis of the traits which he has selected, we must consider "Interior" to refer to the cultural hinterland of the Lower Fraser region, the Northern Plateau sub-culture area. A listing and brief commentary follows:—

**Barbed Harpoons with Tang and Lateral Line Guards.**—There is no evidence of such artifacts in the survey area. They are archeologically infrequent elsewhere in the Plateau. Small numbers of barbed bone points are reported archeologically for the Thompson Valley, but they lack the line guard (Smith, 1899, p. 137).

**Barbed Fixed Projectile Points of Antler.**—Not recorded for the survey area.

**Emphasis on Stone Chipping.**—Chipped scrapers, knives, and projectile points, particularly points of complicated outline. Chipped points are the characteristic variety of the archeological Plateau; ground points are statistically insignificant. The category of complicated outline seems to be strongly affiliated with the Thompson Valley where such points may be late. The single example from the Okanagan Valley is from a late grave, probably proto-historic.

**Massive Stone Carving.**—None evident in the survey area. Elsewhere in the Plateau the distribution is limited. It is singular in that it is confined to restricted portions of the Lower and Middle Columbia and Fraser Rivers. While archeological depth is lacking, the impression is strong that such carvings are late and perhaps coastally oriented.

**Heavy-duty Woodworking Tools.**—Including large antler wedges, pestle-shaped stone hammers, large adze-blades of nephrite and serpentine. Antler wedges are present in the survey area only in very small numbers. Elsewhere in the Plateau there is scarcely greater evidence. Stone hammers or mauls may possibly have greater depth than do large adze-blades of homogeneous materials; woodworking may be a secondary use. Ethnographic evidence indicates an extensive and perhaps earlier use as food-pounders. Large adze-blades are also restricted in number and noted only from proto-historic and historic graves. As previously suggested, the distribution suggests a coastal or exotic origin.

It seems evident that despite gaps of a sequential nature, these Interior traits (excepting chipped stone points), from the point of view of the survey, seem to possess but slight archeological depth in the Okanagan-Similkameen area. The relationships noted above under Artifacts suggested that temporally the situation is similar elsewhere in the Plateau. All indications seem to support Ray's emphasis upon unidirectional diffusion up the major rivers to the Plateau (1939, p. 147). Despite the apparent support for such a view, there is conceivably no temporal inconsistency between Borden's
interpretation and present data, particularly regarding heavy-duty woodworking tools. By implication, they would have to appear on the Coast from the Interior by at least 500 years ago (Borden, 1951, p. 44-46). In the Okanagan Valley, jadeite adzes have been found in cedar cist burials which contain copper of European origin. While this does not deny the possibility of depth, there is no evidence of any considerable continuity in the region. For Borden's purposes, a well-developed woodworking complex of long standing would have to have been present in the Interior at least 500 years ago. Scanty distribution in the Plateau and reciprocally wide distribution on the Coast militate against such a presumed Interior origin.

Borden seems to rely heavily upon the Thompson Valley materials as a source for his "Interior" traits. As has been repeatedly noted, all data suggest this material to be late. As early as 1900 Smith stated:—

... both culture and physical type suggest that the peoples of the coast and those of the interior (Thompson) developed on distinct lines, and that points of resemblance are due to later contact. (Smith, 1900, p. 433.)

Archeologically these seems to be little support in the Okanagan-Similkameen region for the details of Borden's theory of Coast-Interior relationships. It would not be intellectually defensible to deny the possibility of strong down-river influences of an early and basic nature, on the basis of such a limited and particularized research as this. It is very apparent, however, that there was much activity in the reverse. In terms of the foregoing presentation, a re-examination of the orthodox configurations of North-west Coast prehistory should be undertaken.

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SOME ASPECTS OF PREHISTORIC COASTAL-INTERIOR
RELATIONS IN THE PACIFIC NORTHWEST*

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In a paper three years ago I presented and discussed some facts and problems relating to North-west Coast prehistory (Borden, 1951, pp. 35-52). Theories prior to my review of this question envisaged the historic cultures of the coastal regions as the product of a gradual specialization of ancient Interior cultures to a maritime environment. The recent hinterland cultures of the Columbia-Fraser drainage, usually referred to as the Plateau, and of the Intermountain Athapascans were assumed to provide approximate illustrations of an early stage of North-west Coast culture (Kroeber, 1939, p. 28).

A corollary to the assumption that North-west Coast culture was derived from an ancient Interior culture base had to be that the earliest coastal cultures should still exhibit a marked Interior cast without advanced adjustments to their new environment. However, contrary to expectations, our investigations in the Fraser Delta revealed, in addition to cultural assemblages similar to those which Harlan Smith had discovered at the turn of the century, and on which the theories of the time were largely based, other assemblages that were evidently both older and strikingly different in content. Thus the early horizons of the Locarno Beach and Whalen Farm sites featured one-piece toggling harpoon-heads, composite toggle heads, antler foreshafts for toggling harpoons, a highly developed slate-grinding industry, including ulos and other types of knives, numerous skillfully ground lance-points, medial labrets, a small replica of a human skull carved in bone; in short, a whole cluster of elements quite evidently not derived from the Interior but suggesting rather an advanced adjustment to a maritime environment and a strong affiliation with ancient Pacific Eskimo cultures in Alaska. It is this culture for which we now have the C 14 date of 2430 (+163) years.

Conspicuously lacking in this early maritime culture of the southern North-west Coast was a series of elements characteristic of other early but evidently later assemblages occurring in the Fraser Delta. On the basis of some of these elements, Harlan Smith (1903, p. 190 f.; 1907, p. 439) and Drucker (1943, pp. 126-128) had earlier postulated close linkages of these later cultures with the Interior. Following their lead, I presented in my paper a list of traits which appeared to be of Interior derivation. It included barbed harpoons with tang and lateral line guards, barbed fixed projectile-points of antler, emphasis on stone chipping (chipped scrapers, knives, and projectile-points), massive stone carving, heavy-duty woodworking tools (including large antler wedges, pestle-shaped stone hammers, large adze-blades of nephrite and serpentine).

The archeological evidence from the Fraser Delta seemed to suggest three periods of cultural development for this part of the Pacific Coast:—

(1) An early period with a well-developed maritime or “Eskimoid” culture which presumably had spread down the coast from the north.

(2) An intermediate period marked by the arrival of Interior groups, adjusting to a coastal environment, adopting and modifying elements of the early maritime culture, and initiating the great woodworking industry of the Coast.

(3) A late period in which the southern aspect of North-west Coast culture achieved its historic form through the final repatterning and integration of elements derived from the early Interior and Coast cultures.

* In part a response to Warren W. Caldwell’s suggestion that current theories on North-west Coast prehistory be re-examined in view of his findings in the Okanagan and Similkameen Valleys. See Caldwell’s report in this issue on an archeological survey of that area.

† The age determination was made by the Department of Chemistry, University of Saskatchewan (University of Saskatchewan Sample No. S-3), with apparatus and equipment set up under a grant from the Saskatchewan Research Council.
Ethnographic considerations and the slender archeological evidence from other areas suggested a similar course of development, or rather variations on this same basic theme, for other parts of the North-west Coast. In concluding my paper I suggested that in view of the new data the notion regarding the earliest culture stage on the North-west Coast be revised, and that the nature of the subsequent development be conceived not so much as a gradual specialization of an early Interior culture base to the conditions of a new coastal environment but as a welding and blending of early Interior culture with an early maritime culture already present on the Coast and of later stages of Interior culture with Coast cultures that had evolved under the direct impact of the early maritime culture.

The validity of certain details in this reconstruction has been questioned by Warren W. Caldwell in his report of an archeological survey of the Similkameen and Okanagan Valleys which appears in the present issue of this publication. In the course of the survey, Caldwell was unable to find evidence in the areas investigated for the presence of some of the elements listed by me as probably of Interior origin. In the case of certain other elements in this list, he finds that they have little archeological depth in the survey area and he regards them as late importations. Caldwell maintains that "temporally the situation is similar elsewhere in the Plateau," and he quotes with approval an early statement by Harlan I. Smith to the effect that the peoples of the Coast and of the Interior developed on distinct lines, and that points of resemblance are due to later contact (Smith, 1900, p. 433). "All indications," according to Caldwell, "seem to support Ray's emphasis upon unidirectional diffusion up the major rivers to the Plateau" (Ray, 1939, p. 147). Caldwell suggests that the results of his survey have "important implications regarding current theories," and that in view of his findings "a re-examination of the orthodox configurations of North-west Coast prehistory should be undertaken."

We may pause here briefly to note the following:—

1) Although there is abundant evidence of a strong culture flow from the Coast to the Interior in late prehistoric and proto-historic times, it is hazardous to conclude from such evidence that there was no movement of culture in the opposite direction at earlier periods.

2) It is important in this connection to recall also that even Harlan Smith in later reports dealing with his investigations on the Coast altered his earlier views and concluded not only that the Interior had influenced cultural developments on the Coast, but also that Interior groups had migrated to the coastal region, bringing the art of stone chipping and other Interior elements with them. (Smith, 1903, p. 190 f.; 1907, p. 439.)

Since Caldwell's doubts as to the correctness of my interpretations of cultural developments on the Coast were aroused chiefly by his failure to find in the survey area the series of elements suggested as derived from the Interior, or, when he did find them, is inclined to regard them as late importations from the Coast, we have to consider the evidence in some detail.

Germane to the evaluation of Caldwell's own findings are certain particulars on the survey which he was good enough to supply at my request. The survey of this considerable area was conducted in less than ten weeks by a party varying between one and three persons. No excavations were made, except "very small-scale tests at several sites" to determine the nature of the fill matrix. The number of artifacts collected (evidently all surface material) reached a total of some sixty items. The discussion and conclusions are based on these and "several hundred" artifacts in "Pothunter" and casual local collections. To be sure, negative evidence, if well founded, may constitute valuable data. In this instance, however, it would seem that some of Caldwell's negative findings are likely to be due to the nature of his survey, and that they do not necessarily reflect the true cultural situation.
In the absence of potsherds, which in other areas provide convenient clues regarding cultural relations in time and space, in the Pacific Northwest we shall have to look for other indicators from which to extract similar information. Despite certain difficulties, significant information may be derived from the changes in type, style, manufacturing techniques, and materials of chipped stone artifacts, as well as from the relative importance of such implements in the economy of individual groups at different times and places. My contention that certain Fraser Delta assemblages are markedly Interior in character is based in considerable part on the strong emphasis in these particular cultures on stone chipping for projectile-points, knives, scrapers, etc., as well as on typological similarities existing between Coast and Interior specimens. Mr. Caldwell passes over this important complex rather lightly.

It is well known, of course, that stone chipping has always been a major industry in the Interior until modern times. The history of chipping on the Coast, however, is distinctly different. While chipped stone artifacts are not absent in the early maritime culture, the types are essentially dissimilar to those occurring in the Interior. Moreover, in this ancient Coast culture, stone chipping is completely overshadowed by the slate-grinding industry.

It is only in the assemblages of the intermediate period during which, I believe, there occurred population shifts from the Interior to the Coast, that stone chipping becomes important. There are many chipped artifact types of this intermediate coastal period which can be duplicated in the Interior. Indications are that eventually it will be possible to show that the sequence of types is similar in certain coastal and inland regions.

By the beginning of the late period, when North-west Coast culture was fully developed, the art of stone chipping had declined into insignificance. A consideration of the probable reasons for this decline and disappearance of stone chipping in the coastal area is of interest. I would suggest that land hunting, for which chipped points were primarily used in the Interior, became unimportant on the Coast, and that the bow and arrow was found to be ineffective for taking sea-mammals. Furthermore, chipped stone knives were replaced on the Coast by knives of ground slate, which were taken over from the early maritime culture. Finally, skin clothing, which had been indispensable in the Interior, proved to be impractical in the moist coastal climate. The disappearance of chipped stone scrapers is, therefore, probably indicative of the reduced importance on the Coast of working skins. Thus a study of the history of stone chipping alone may provide important clues regarding the prehistoric events in this area.

Mr. Caldwell reports finding no evidence of barbed harpoons with tang and lateral line guards or of barbed fixed projectile-points of antler in the survey area and evidently infers that such artifacts were not used. It should be noted, however, that Mr. Caldwell does not report finding any archeological evidence either of other antler and bone tools, such as awls, bodkins, needles, punches, flakers, knives, chisels, digging-stick handles, unbarbed arrow and lance points, fish-hooks, beaming-tools, sap-scrapers, beads, and so forth. It would, of course, be reckless to conclude from the negative evidence of this survey that all of these items were also lacking in the survey area. I know from personal experience in the Northern Plateau that repeated freezing and thawing of bone and antler artifacts which were left on the surface or in the frequently shallow deposits of Interior sites promotes their rapid decay and disappearance. Failure to find implements of such organic materials in the course of a site survey cannot, therefore, be taken as reliable evidence that they were not present originally. Information from Interior sites where implements of perishable materials were well covered, and hence preserved, is, therefore, of special importance and should not be overlooked.

Excavations of burials in the Upper Columbia region, some of them—judging from the absence of contact goods—of pre-European date, have yielded numerous bone and antler artifacts, including the disputed harpoons with tang and lateral line guard (Collier et al., 1942, pp. 52, 53, 79; cf. Plate IX, i). Evidence from other parts of the Interior is still scanty, but Drucker reports the presence of such harpoons on the Upper Skeena
in the territory of the Interior-dwelling Gitksan (Drucker, 1943, p. 126), and a small specimen of this type is among the items in a collection from a site on the Lower Columbia near Portland, Ore.* The British Columbia Provincial Museum has four barbed harpoons with lateral line guards (three with bilateral and one with unilateral barbs) from the Lytton area.† Judge Henry Castillou, of Williams Lake, in Shuswap territory, has a barbed harpoon with tang and lateral line guards, excavated on Williams Lake. The far-flung distribution of this harpoon type in the Interior and the evidently restricted distribution on the Coast point to an Interior origin.

In the Fraser Delta only one-piece toggling harpoons have been found in the deposits of the early maritime period (Locarno Beach II). Barbed harpoons with tang and lateral line guards appear in the early part of the intermediate period together with numerous stone artifacts. Moreover, they seem to be confined to the deposits of this period (Marpole-Point Grey-Old Musqueam). Even though this Interior harpoon type was modified on the Coast to render it more suitable for sea-mammal hunting, it was replaced later in the intermediate period (Whalen II) by the more efficient composite toggling harpoons, which seem to have been developed from the one-piece toggles late in the early maritime period (Whalen I). Composite toggling harpoons of various types were standard equipment along the southern North-west Coast for sea-mammal hunting and fishing until the twentieth century, and toggle types for harpooning fish diffused far into the Interior along with other elements of the developed North-west Coast culture. The presence of barbed harpoons with tang and lateral line guard at relatively recent Interior sites evidently cannot be attributed to late influence from the Coast. On the contrary, such harpoons appear to be survivals from an early Interior culture base.

Mr. Caldwell found no evidence for stone carving in the survey area. He considers the distribution of this art restricted in the Interior, its manifestations late and coastally oriented. It is not possible here to enter into this complicated problem at length; a brief discussion of certain aspects will have to suffice.

It is not particularly surprising that a rather hurried survey should fail to encounter examples of stone sculpture. They are generally rare in the entire area of their distribution, the frequency of their occurrence—although variable from place to place—being in the order of one carving to many hundred other artifacts. I should mention, however, that on a recent trip into the Interior I noted the occurrence of zoomorphic stone carving on vessels and pestles in the Okanagan, i.e., in the area surveyed by Caldwell.

The known distribution of stone carving in the Interior is very wide. It extends from the Humboldt Basin in Nevada north through Oregon and Washington to Shuswap territory in British Columbia (Smith, 1900, p. 431; Strong et al., 1930, pp. 106–110; Drucker, 1943, pp. 127–128). Important elements suggest a genetic relationship of this entire carving complex, but a study of subject-matter and stylistic features reveals two main divisions: (1) A southern group, comprising the sculpture of the Columbia River valley, and (2) a northern group encompassing the Fraser River-Puget Sound area (Wingert, 1952, p. 11). The Columbia River province can again be subdivided into three main regional centres which extend from the Yakima Valley and the Middle Columbia area around Vantage to Sauvies Island in the Lower Columbia near Portland, Ore. (Wingert, 1952, p. 12). The western limits of this southern province evidently do not extend to the coast proper. The distribution of this carving appears to be strictly inland, and it certainly strains one's credulity that this widespread and impressive complex should have been inspired by late influences from the North-west Coast. The certainty of conception and masterful technical execution of many of these sculptures strongly suggest that this art has a long tradition behind it, and that its inception is to be sought in the Interior rather than on the Coast.

The still sparse evidence of the occurrence of zoomorphic stone implements along the Upper Columbia (Collier et al., 1942, p. 69, Plate XVI, e, g) and in the Okanagan

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* Information furnished through the courtesy of Roy Carlson and W. W. Caldwell.
† Thanks to information sent by Wilson Duff, of the British Columbia Provincial Museum.
area (see above) hints at a northward extension of this southern province and its possible overlapping with its northern counterpart. Despite striking differences in style and subject-matter, there are equally striking indications that the carving complexes of the Columbia and Fraser Rivers are historically related. Wilson Duff is preparing a paper on stone sculpture in British Columbia, and I shall therefore limit my comments to a few particulars.

The northern limits of stone carving in Interior British Columbia appear to be in present Shuswap territory. However, our knowledge of the archeology of Interior British Columbia is still extremely limited, and we must be prepared for unexpected developments. Thus a skilfully executed zoomorphic carving, found near the west end of Fraser Lake, Central British Columbia, in present Carrier Indian territory, has just been received by the Museum of Anthropology, University of British Columbia. This specimen, of course, may be intrusive in that part of the Province; on the other hand, it may be the first indication that eventually we shall have to extend the distribution of stone sculpture in the Interior to include this area.

Farther south in the Fraser drainage region, some of the main centres of stone carving occur along the lower reaches of the river between Yale and Mission City. However, by contrast with the southern province, this northern stone sculpture is not confined to the Interior, but extends to the mouth of the Fraser and fans out from there some distance north and south along the coast of the Mainland and leaps the Strait of Georgia to include the opposite coast of Vancouver Island approximately between Comox and Victoria.

Despite the inclusion of this limited salt-water area in the northern province of this art, it seems easier to account for its presence on the Coast by assuming a spread of the culture with which it was associated down-river to the Coast than to assume the reverse, particularly if we consider the immense total distribution of the stone-carving complex in the Interior.

Few specimens of stone sculpture have been recovered in the course of systematic excavations. In the Fraser Delta and adjacent areas it seems to belong in the early intermediate phase, being associated here with emphasis on stone chipping, numerous barbed points of antler, barbed harpoons with tang and lateral line guards, and other elements of restricted distribution on the Coast and of probable Interior origin.

Along with harpoons, certain types of chipped implements, and other elements of this culture, stone carving seems to be confined to the early intermediate period (Marpole-Point Grey-Old Musqueam). There is as yet no evidence for its occurrence in later deposits of the Fraser Delta area. Yet it should not be surprising to encounter carved stone objects occasionally in recent sites, for evidently recent Indian groups did not hesitate to utilize ancient carved stone vessels, etc., if they happened to find them near their habitation sites. Teit reports this practice for the Upper Lillooet (Teit, 1906, p. 204), and Duff gives similar information for the Upper Stalo Indians (Duff, 1952, p. 61). Perhaps the art of stone carving persisted longer in some areas than in others. Its disappearance on the southern North-west Coast may have been a consequence of the increasing importance in later times of wood as a medium for manufactures and artistic expression.

As a final group of traits of probable Interior derivation, I listed large antler wedges, pestle-shaped stone hammers, and large adze-blades of nephrite and serpentine. This triad of heavy-duty tools constitutes the basis for the woodworking industry of the southern North-west Coast. Occasional medium-sized antler wedges and small adze-blades, or rather chisels, of materials available on the Coast, such as bone, shell, slate, and very rarely of tougher stone, do occur in the deposits of the early maritime period. Such implements were adequate for carving bone and antler and for working wood on a small scale, but were inadequate for large manufactures. Heavy-duty tools are required for

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* The carving on the broken handle of a maul or club represents the head of a bird-like creature. It was presented by the finder, Dr. George Cuzner, of Fraser Lake, to the late J. H. Sewell, of Vanderhoof.
splitting planks from cedar logs, for dressing large house-posts, and in the manufacture of dugout canoes. It certainly seems significant that according to present evidence the implements necessary for woodworking on a large scale first appear on the Coast together with elements discussed earlier as of probable Interior origin.

Mr. Caldwell suggests that "for Borden's purposes, a well-developed woodworking complex of long standing would have to be present in the Interior at least 500 years ago." It is quite certain that the woodworking industry had its beginning on the Coast much earlier than 500 years ago, but we need not assume that it arrived on the Coast fully developed. Even in recent times there was no woodworking in the Interior comparable to that of the North-west Coast, although adzes, wedges, and hammers were used for felling and trimming branches off small trees, for splitting timber, for readying posts and rafters for earth lodges, etc. I would suggest that it was the meeting of an ideal medium, like the straight-splitting, easily worked wood of the red cedar, with suitable implements which gave rise to the great woodworking industry of the Coast.

There are good reasons for assuming that the essential implements are of Interior provenience. Tough, fine-grained stones suitable for efficient adze-blades are rare or absent on most parts of the Coast, but do occur in fair abundance in some regions of the Interior, for instance, near the confluence of the Thompson and Fraser Rivers. It is likely that adze-blades of such stones were originally brought to the Coast from such regions, and that subsequently, when woodworking began to flourish in the coastal area, they became valuable items of trade and constituted an important incentive for maintaining contacts with the Interior. It is interesting to note that very large adze-blades are rarely found on the Coast, but are fairly numerous in some Interior centres, where they were probably made for export. If large adze-blades are late in the Upper Columbia and Okanagan regions, as indeed they seem to be, it is more likely that they were brought in from such Interior centres than from the Coast.

The main reason for including large antler wedges among the elements of Interior origin is that they first appear together with numerous adze-blades and large hand-mauls. It is of interest to note, however, that such wedges were the only objects of antler observed by Caldwell in the area of his survey.

The pestle-shaped stone hammer or hand- Maul of the Pacific Northwest is almost certainly the Interior pestle or food-pounder specialized for woodworking, i.e., for the specific purpose of driving wedges, straight-adzes, etc. Whether this specialization occurred in the Interior or on the Coast is not yet known, but it is certainly suggestive that the whole series of transitional forms from the cylindrical food-pounder to the fully developed woodworking hammer with striking-head, tapering shaft, hand-flange, and nipple top is found only in the Interior.

It is difficult and somewhat futile at the present state of research to attempt correlations between the Coast and the Plateau, since there is as yet little time perspective for the Interior materials. Most of the material recovered to date seems indeed recent. Efforts should be made to investigate older sites in the Canadian Plateau and to isolate the earlier cultural horizons. For the time being, I see no compelling reason for modifying our present tentative reconstruction of North-west Coast prehistory. I cannot accept the theory that the Coast and the Interior developed independently, and that the interrelations between the two areas are limited to late cultural influxes from the Coast to the Plateau. The archeological evidence and present ethnic distributions attest strong earlier cultural movements outward from the Interior to the Coast. Our outline of prehistoric events has received additional support through the carbon 14 date of 2430±163 years for the early maritime culture. This date leaves ample time for the postulated welding and blending of the early Coast and Interior complexes which eventually resulted in the historic North-west Coast culture pattern.

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A SCOTTSBLUFF-EDEN POINT FROM BRITISH COLUMBIA
BY WILSON DUFF AND CHARLES E. BORDEN

A projectile-point exhibiting a combination of features characteristic of Eden and Scottsbluff types (Fig. 1) was received recently by the Provincial Museum of British Columbia in a large collection of historical, ethnological, and archeological specimens from the East Kootenay region of British Columbia. The data on the provenience of the point are unfortunately meagre and inconclusive, but indicate with fair probability that it was found in the vicinity of Lake Windermere, in extreme South-eastern British Columbia.

The collection was that of the late Basil G. Hamilton, of Invermere, B.C. Over half of the archeological specimens are listed in Mr. Hamilton’s catalogue with information on their provenience. The present point is described, and the following note added: “As far as I remember, belonged to the Windermere District.” Mr. Hamilton appeared to have no knowledge of its possible significance, as he described it simply as a “long, narrow, beautifully shaped grey flint arrowhead with square end.” A. C. Davidson, nephew of Mr. Hamilton, who is in charge of his estate, wrote, in answer to a request for further information on the point: “You can be sure that it was found in the Windermere District.”

Fig. 1. The Scottsbluff-Eden point which probably came from the Lake Windermere area.
Actual size.

The point is fashioned of grey chert, which is said to be of natural occurrence in the Windermere area. The flaking on one face of the specimen is partly obscured by a coating of travertine. The point has the following dimensions: Length, 69 mm.; width, 19 mm.; width at basal insets, 17 mm.; thickness, 9 mm.

In a series of features, including outline and dimensions (though the length is rather short), the point bears a considerable resemblance to specimens of the Eden type as illustrated and described by Wormington (1949, pp. 54, 56, 58, 59, 63). The basal insets are very slight; the edges of the stem and of much of the blade are parallel. As in
many early points, the basal edges are ground smooth. There is a marked median ridge on one face, another Eden feature, but the other face has the flat convexity more characteristic of Scottsbluff specimens (Wormington, 1949, p. 54). Also the chipping technique is more like that of Scottsbluff points. The collateral flake-scars are quite shallow, rather irregular, and on the flatter face frequently extend from the edge to beyond the middle of the width. There is some fine retouching along the edges of the face with the median ridge and near the tip of the other face. The base is thinned by the removal of narrow spalls, the scars of which extend vertically upward from the basal edge.

Lake Windermere, in which vicinity the point apparently originated, is located about 200 miles north of the southern end of the Rocky Mountain Trench, that spectacular steep-sided valley which extends for some 1,100 miles in a continuous, nearly straight line from the Liard River valley in Yukon Territory through British Columbia to Flathead Lake, Mont. (Robinson, 1953, p. 37). Little is known as yet regarding the delineation and movement of glacial features in the Far West during terminal and post-Pleistocene times, but the Rocky Mountain Trench is believed to have been generally free of ice as early as the last or Valders advance (ca. 9000 B.C.) of the Wisconsin glaciation (Quimby, 1954, p. 321).

This long valley thus looms as a potential migration route for paleo-Indians (Robinson, 1953, p. 37; Quimby, 1954, p. 319). It is of interest to note in this connection that the MacHaffie site, an Early Man site near Helena, Mont., which has yielded a succession of Folsom, Scottsbluff, and late types (Forbis and Sperry, 1952, pp. 127–133; Sellards, 1952, p. 132) is situated not far from the southern end of the Rocky Mountain Trench. More recently R. S. MacNeish (1954, pp. 248–249) has reported the occurrence of points resembling Scottsbluff on a high beach at the west end of Maxhamish Lake. This small lake near the Liard River in North-eastern British Columbia is about 150 miles east of where the Liard and its tributaries the Turnagain and Kechika form the northern part of the Rocky Mountain Trench. There is, therefore, a strong possibility of the occurrence of Early Man sites along the length of this immense natural highway. As part of its summer programme for 1954 the University of British Columbia is planning to conduct a survey of a section of this likely migration route in the Kootenay region of South-eastern British Columbia.

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AN OKANAGAN WINTER DANCE*

By NORMAN H. LERMAN

The Okanagan Indians inhabit the Okanagan Valley in the Plateau region of Eastern British Columbia and Washington. The Winter Dance which I shall describe was held near the small town of Riverside, Wash., in February, 1954.

The Winter Dance is one of the few surviving practices of Okanagan aboriginal culture. As recently as forty years ago the dance was performed in its traditional manner. In the past the performers wore costumes, ate Indian foods, and sang and danced in an elaborate manner. At the dance which I wish to describe, daily work-clothes were worn, European foods were eaten, and only the older people performed or had any true interest in the ceremony. Thus the dance is now only a residue of the Okanagans' most highly developed artistic and religious spectacle.

The dance is held each year during the months of February and March. Each dance session occupies two to five nights of the week, usually on the week-end. The dance begins around 7 o'clock in the evening but does not get into full swing until after 10 o'clock. The end of the night's dancing is at dawn, about 7 o'clock in the morning. On all nights except the last one the dance follows the regular pattern. But on the last night, just before dawn, there is gambling and the giving of gifts.

The dance is held in the largest room, usually the living-room, of a male or female shaman's house. In the centre of the room is a bare pole affixed to the ceiling and floor. This pole acts as the centre point for all activity during the dance. Only a shaman may touch this pole, and consequently only shamans can lead the singing and dancing.

Before performing, a shaman will begin humming a song softly while he sits or stands in some part of the room. As he sings louder he approaches the pole. He may walk around the pole singing to it or hold out his arms to the pole as he sings. When he grasps the pole in both hands he has become one with his guardian spirit. As long as he is holding the pole his words are not his own but those of his guardian spirit. Guardian spirits speak unintelligibly and in a low voice, and, therefore, the guardian spirit's words must be transmitted to the audience by another person. For this purpose an interpreter stands by the shaman and repeats the guardian spirit's speech in a loud voice. The interpreter may be anyone in the audience and is sometimes another shaman. This pipeline from the guardian spirit via the shaman and the interpreter continues for as long as the guardian spirit has something to say to the audience. As a rule the guardian spirit makes prognostications of the future, gives free advice, and makes comments on present events.

When the guardian spirit has had its say, the shaman begins to dance while still grasping the pole. This is a sign for the assembled people to begin dancing. The shaman is at the pole, the interpreter near by, and the people shuffle, hop, or stomp around these two and the pole. After three or four minutes the shaman moves his hand down the pole and says, "Hoooo," which is a signal for the dancing to cease. After another exchange between guardian spirit, shaman, and interpreter the dancing resumes. The performance continues until the shaman becomes exhausted. Everyone may then take a short rest, but at the height of the evening's excitement, when one shaman leaves the pole, another may jump out from the dancers and immediately continue. This pattern for the dancing and singing held true for all performers. However, each one had his or her own variations. For instance, the hostess shaman had a small stick with ribbons and small bells attached with she shook during the dancing. She was the only one to utilize any musical instrument aside from the human voice.

A number of special events occurred at the dance. One shaman attempted to cure a girl with a sore foot. This was done by having the girl and some of her relatives march solemnly around the pole during a guardian spirit-shaman-interpreter exchange. This same shaman was also responsible for one of the most important incidents of the night.

* Research for this paper was done under the auspices of the Agnes Anderson Fund of the University of Washington.
While at the pole he began to sing one of his dead grandfather’s songs. The power of the song was so great that he lost consciousness. When this happened, everyone stood around in shocked silence, not knowing what to do. Finally, the shaman’s hands were placed in cold water, and he revived to continue where he had left off. Everyone thought the occurrence highly irregular, but nevertheless awesome.

At 1 a.m. a shaman went to the pole and began to chant; everyone sat down, and food was served. The lunch consisted of bologna sandwiches, water, candy, nuts, and halved oranges. When everyone was served, the shaman and the servers of the food sat with the food in a circle around the pole and ate. When everyone was finished eating, the shaman resumed his chanting and the door was opened. The opening of the door let in fresh air and signified a short intermission.

During the evening various shamans distributed small strips of cloth. For each strip of cloth the shaman put up a dollar, or he may have had a blanket stand for all his strips. About 4 a.m. all those with the same coloured strips began gambling for the shaman’s prize. The gambling was on a blanket with a card game called “waluks.” When one person got all the strips, he had won the shaman’s prize. The shaman collected the strips and saved them as an augmentation of his own power.

When the gambling was completed, the shamans took turns at the pole to sing and give away gifts. During the evening a few shamans gave away small things, like silk handkerchiefs, but the gift-giving did not begin in earnest until just before dawn. The presents were given to specific individuals or piled on the shaman and people came up and took them. The things given away were yardage, blankets, cigarettes, money, silk scarves and handkerchiefs, jackets, hats, and anything else the shaman had with or on him. The last gift-giver was the shaman who was host. This shaman usually is more lavish in his presents. The last things given away by the host shaman were the blankets covering the windows. When these blankets were ripped off, the light streamed in and the dance was officially ended.

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JOHN HENRY SEWELL, 1885–1953

By Charles E. Borden

With the passing of John Henry Sewell, of Vanderhoof, on October 1st, 1953, British Columbia lost one of its serious and most active amateur archeologists. Jack Sewell was not interested in collecting artifacts merely for their own sake. In The Scout Leader of June, 1946, he deprecated “relic hikes” that were organized for the sole purpose of “gathering curios for private collections,” and he went on to show how ancient habitation sites, food remains, and artifacts may yield significant information about the life and history of the early inhabitants. To increase such knowledge and to assist professional investigators in the recovery of prehistoric remains were among Jack’s chief aims.

Jack Sewell’s life was varied and colourful. He was born in Minnedosa, Man., in 1885, and received there his formal education. In 1904 Jack went to High River, Alta., where he rode the range for a year before going into business. After his marriage to Alpha Welton, of Red Deer, he moved to Saskatoon and engaged in a series of successful business ventures until his retirement in 1946, when he came to Vanderhoof to live with his son-in-law and daughter, Don and Bessie Heron.

Jack Sewell was always active in community affairs. He served on the board of governors of Emmanuel College, Saskatoon, and for many years was on the Saskatoon District Council of Boy Scouts. In 1935 he became one of the founders of the Saskatoon Archeological Society and subsequently served as its president and secretary. At the time of his death he was secretary of the Liberal Association of his district and also secretary of the Vanderhoof Board of Trade.

Jack’s interest in archeology goes back to 1929, when he discovered his first arrowhead in the rut of a sandy road. It was characteristic that he should become curious about the techniques that went into the manufacture of the stone implements he found on his excursions. He made a comprehensive study of raw materials and performed countless experiments in order to recapture the fracturing, flaking, and chipping techniques by means of which stone tools had been produced. The results of this research he laid down in a manuscript which in some respects goes beyond similar studies by experts on this continent and in Europe. Indeed, his proficiency as a flint knapper attracted the attention of anthropologists in the two hemispheres. The British Museum in London exhibited examples of his art along with the percussion and pressure flaking-tools he had employed in their manufacture. Both the National Museum of Canada and the Provincial Museum of British Columbia made documentary films of his various techniques. On several occasions he put on demonstrations for the benefit of students at the University of British Columbia.

During the years of his “retirement” Jack made extensive site surveys in the Vanderhoof area, carefully recording the location of sites and the artifacts he found on them. The results of some of this work are embodied in his report Archaological Remains in Central British Columbia (1950), which was one of the contributions to the first issue of this publication. It was his expressed wish that his records and collections should eventually be donated to the University of British Columbia.

Jack Sewell must be credited with the rediscovery of Chinlac, an important Carrier Indian village site near the confluence of the Stuart and Nechako Rivers. It was largely because of his urging that the University of British Columbia carried out investigations at Chinlac in 1950 and 1952. His personal assistance and his initiative in enlisting the co-operation of his friends in Vanderhoof contributed greatly to the success of this venture.

Jack also played a valiant part in the second season of the Tweedsmuir Park Archeological Project (July to September, 1952) by discovering new sites, instructing members of the field party in the techniques of stone chipping, as a provider of food and
camp cook, and, not the least, by his jolly presence. Those who had the privilege of
camping with him will never forget his sour-dough pancakes, his juicy moose-steaks,
and his birthday cakes decorated with birch-bark roll candles.

We shall miss Jack Sewell. In his years as a resident of British Columbia, he made
a fine contribution to the archeology of the Province. His last letter was full of infor­
mation on new sites he had discovered and of wonderful projects for the future. I can
only join his daughter in wishing "that he had been granted more time to do a few more
of the things he so enjoyed."

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