NATIONAL MUSEUM
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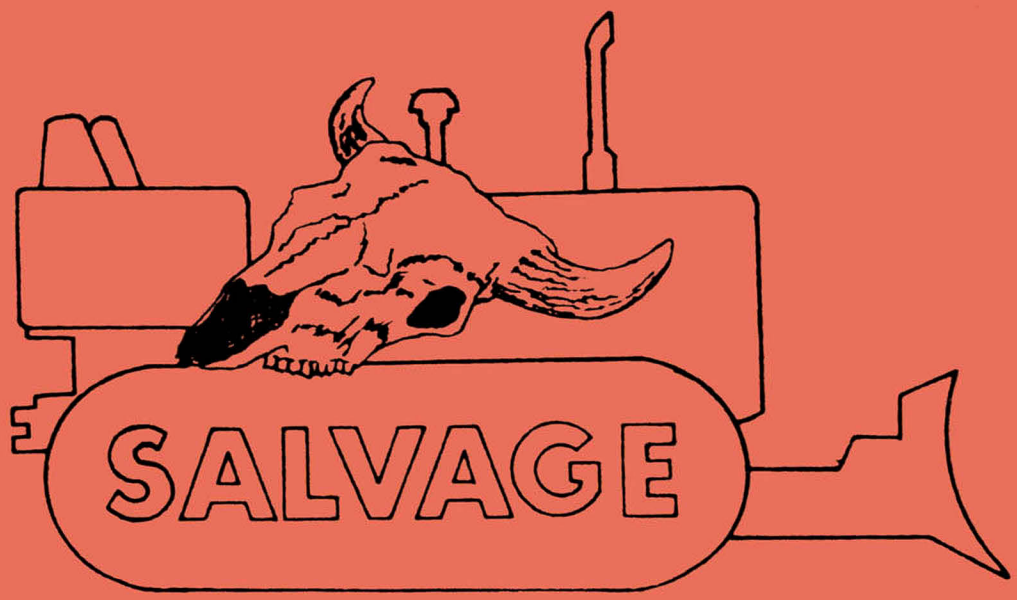
MUSÉE NATIONAL
DE L'HOMME
COLLECTION MERCURE

ARCHAEOLOGICAL SURVEY
OF CANADA
PAPER No.33

COMMISSION ARCHÉOLOGIQUE
DU CANADA
DOSSIER No.33

# SALVAGE CONTRIBUTIONS: PRAIRIE PROVINCES

R. WILMETH EDITOR




NATIONAL MUSEUMS OF CANADA

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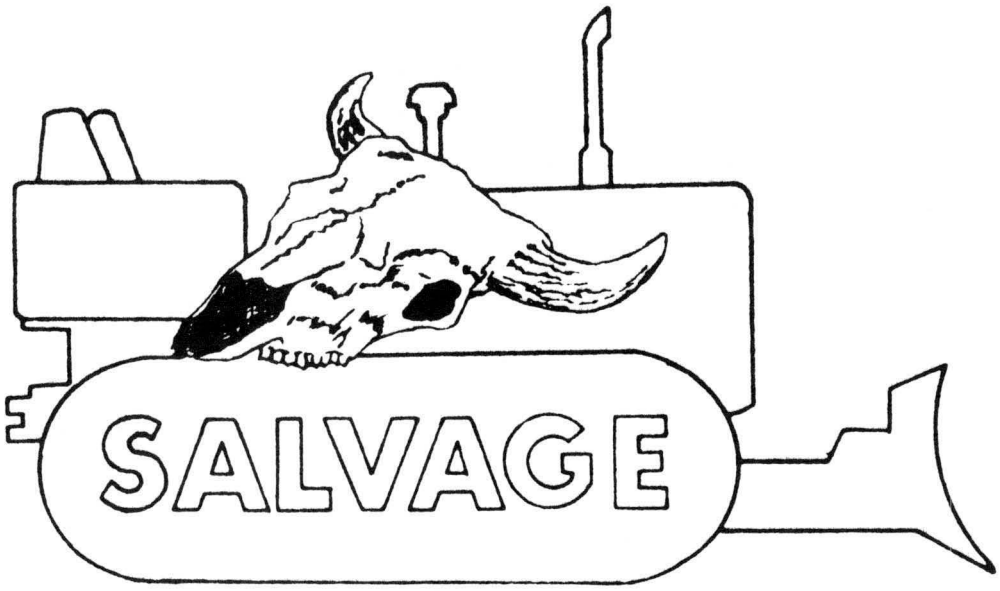


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## OBJECT OF THE MERCURY SERIES

The Mercury Series is a publication of the National Museum of Man, National Museums of Canada, designed to permit the rapid dissemination of information pertaining to those disciplines for which the National Museum of Man is responsible.

In the interests of making information available quickly, normal production procedures have been abbreviated. As a result, editorial errors may occur. Should that be the case, your indulgence is requested, bearing in mind the object of the Series.

## BUT DE LA COLLECTION MERCURE

La collection Mercure, publiée par le Musée national de l'Homme, Musées nationaux du Canada, a pour but de diffuser rapidement le résultat de travaux qui ont rapport aux disciplines pour lesquelles le Musée national de l'Homme est responsable.

Pour assurer la prompte distribution des exemplaires imprimés, on a abrégé les étapes de l'édition. En conséquence, certaines erreurs de rédaction peuvent subsister dans les exemplaires imprimés. Si cela se présentait dans les pages qui suivent, les éditeurs réclament votre indulgence étant donné les objectifs de la collection.

CONTENTS

# FOREWORD

R. Wilmeth

Archaeological Survey of Canada

A perpetual and frequently justifiable criticism of what has come to be known as salvage, emergency, or rescue archaeology relates to publication of the resulting data. Too often, the mass of data produced by successful field operations remains unavailable for an inordinate period of time, or never appears at all.

Since its inception nearly four years ago, the Salvage Program of the Archaeological Survey of Canada, National Museum of Man, has attempted to make available data from archaeological salvage projects as soon as is reasonably possible. Under the editorship of Dr. W.J. Byrne, summary statements have been issued for 1972 and 1973 and final reports have already been released on three projects in the Mercury Series (Nos. 19, 23, 24), while reports on another project have been published by Indian and Northern Affairs (Environmental Social Committee, Northern Pipelines, Task Force or Northern Oil Development, Reports Nos. 73-10 and 74-11).

At the present time, we are redoubling our efforts to make available results of salvage work and the present volume falls in this category. All of the projects included involve work in the Prairie Provinces, including the Prairie region itself, the Rocky Mountain foothills area and the Boreal Forest.

Sheila Minni's report on work in the Black Lake area of Northern Saskatchewan indicates that cultural relationships in recent times in this area involved both Athabascan (Taltheilei Shale Tradition) and Algonkian

(Selkirk) speakers. Geoffrey Rushowick records a bison kill site in southwestern Manitoba, where bison run up the terrace into a corral, rather than over the bluffs, as in the classic buffalo jump technique. Investigations by James L. Rogers tend to reinforce an earlier suggestion that the Upper Kananaskis Basin would prove significant relative to contacts with the Interior Plateau of British Columbia. More attention therefore needs to be directed to the foothills region of Alberta. The first of Michael Quigg's two papers contributes to the continuing development of the late prehistoric period in the High Plains region, while his second report, on the Burmis site, deals with the region even farther into the Rocky Mountains than the area studied by Rogers. Finally, the sequence at a multi-component buffalo jump in southwestern Saskatchewan is detailed by Gary Adams, adding to the growing documentation of this historic hunting technique.

The selection of these manuscripts and the task of editing them was completed by Dr. W.J. Byrne before he left the National Museum of Man to become Director of the Archeological Survey of Alberta. The final stages of preparation have been carried out by Roy Vontobel. Joel Nordenstrom prepared a number of the maps and plans.

NOTE

In order to maintain article continuity the abstract, résumé, acknowledgements and/or statement of aims of each of the six papers in this volume are included with the pertinent report rather than being combined in the preamble to the volume proper.

# THE STENDALL SITE (C3-Wa-1) IN THE RURAL MUNICIPALITY OF WALLACE, MANITOBA


## ABSTRACT

The Stendall site is a bison kill site located on a terrace of the Pipestone Creek in southwestern Manitoba. Cultural material excavated at the site include small side-notched projectile points, bifacial knives, hide perforators, scrapers, bone artifacts and pottery. Faunal remains consist mainly of bison bone. The occupation of the excavated portion of the site has been radiocarbon dated at 1100± 75 A.D. or 850± 75 B.P.



## RESUME

Le site Stendall est un site de dépeçage du bison qui se trouve sur une terrasse du ruisseau Pipestone, dans le Sud-Ouest du Manitoba. On trouve au nombre des vestiges culturels mis au jour à cet endroit de petites pointes de jet à encoches proximales, des couteaux bifaces, des poinçons à peaux, des grattoirs, des pièces en os et de la céramique. Les restes fauniques sont surtout des os de bisons. L'occupation de la partie du site qui a été fouillée remonte, d'après la datation au radiocarbone, à l'an 1100 ± 75 apr. J.-C., soit 850 ± 75 avant aujourd'hui.

ACKNOWLEDGEMENTS

The writer would like to express his thanks to all the people involved in the excavation and cataloguing of the material from the Stendall site. Special thanks is due to the Manitoba Archaeological Society who supplied many of the artifact forms and equipment, Arnold Geith of Virden, and Mr. and Mrs. E. Elliott and Mr. and Mrs. Ed Stendall of Butler.

# THE STENDALL SITE (C3-Wa-1) IN THE RURAL MUNICIPALITY OF WALLACE, MANITOBA

Geoff Rushowick

University of Saskatchewan

## INTRODUCTION

The Stendall site was initially discovered by Mr. Arnold Geith of the Manitoba Archaeological Society. Prior to the 1973 field season the site had been excavated by members of the Manitoba Archaeological Society. The analysis of the material recovered from the site and the writing of this report was financed by a contract with the Salvage Section, Archaeological Survey of Canada, National Museum of Man.

## LOCATION

The Stendall site is located in the southeast quadrant of Section 3, Township 10, Range 29 west of the principal meridian. The site is situated on a terrace of Pipestone Creek. The majority of the site is under virgin prairie while the extreme southern part of the site has been destroyed by cultivation and part has been disturbed by a plough cut going up the center of the site.

## GEOLOGY

The entire area is underlain by Cretaceous shales of the Riding Mountain formation. However, due to the transportation of rocks and rock fragments by the continental ice sheets which completely covered Manitoba, the surface deposits of this area contain material from many of the rock formations which underlie the Riding Mountain shale. The surface deposits are mainly of glacial origin and these deposits form the parent material from

which the soils have been developed (Erlich, Pratt, and Poyser 1956:19). The surface deposits at the Stendall site are glacio-fluvial. Glacio-fluvial deposits are represented by coarse material sorted from glacial till by rapidly flowing glacial streams. In the process of sorting, the water removed most of the silt and clay, leaving sand, gravel, cobbles, and boulders. The site is situated on an outwash plain. This is a gravelly area that has near level topography and contains some moderately deep ravines (ibid. 1956:21).

## SOIL

The soil found at the Stendall site is a member of the Blackearth zone. This zone exists as a broad belt of black or very dark grey soils in which the well-drained members have been developed under a growth of mixed prairie grasses in a region of sub-humid climate. Trees which have invaded the grassland occur along creeks and streams and surrounding local depressions, giving a park-like appearance to much of the Blackearth zone (ibid. 1956:39).

The soil at the site belongs to the Oxbow Association and is called the Oxbow Modified Phase. This type of soil occurs in narrow bands along eroded stream channels and in scattered areas adjacent to the valley of the Assiniboine River. These soils developed on boulder till that was eroded by glacial waters. The soils of the Oxbow Modified Phase exhibit little uniformity in surface texture and parent material (ibid. 1956:39-43).

## RELIEF AND DRAINAGE

The site is located on the Second Prairie Steppe of the Great Plains Region, locally known as the Western Uplands of Manitoba. The region the site is located in lies within the watershed of the Assiniboine River. Pipestone Creek in the southwest corner of the area flows into the swampy land surrounding Oak Lake. Oak Lake is partially drained by Plum Creek, a tributary of the Souris River (ibid. 1956:17).

## LOCAL VEGETATION

The site itself is located in the Aspen Parkland. This is an area of transition where in dry years the tall grass prairie is dominant and in wet years the aspen is the dominant vegetation. At present the site is under grass but a ravine 100 yards east of the site contains a large growth of aspen (*Populus tremuloides*), some oak (*Quercus macrocarpus*) and wild plum. Near the site many berry bushes and shrubs grow on the sandy outwash plains, including saskatoon (*Amelanchier alnifolia*), raspberry (*Rubus strigosus*), silverberry (*Elaeagnus commutata*), highbush cranberry (*Viburnum opulus*), gooseberry (*Ribes oxycanthoides*), pin cherry (*Prunus pennsylvanica*), choke cherry (*Prunus nana*), and black currant (*Ribes americana*).

## FAUNA

Prior to the coming of the White man the predominant animal was the buffalo (*Bison bison* L.). Other game animals included the pronghorned antelope (*Antilocarpa americana* (Ord) ), and elk (*Cervus canadensis*). Other animals found in the area included the buffalo wolf (*Canis lupus nubilus* Say), the thirteen-striped ground squirrel (*Citellus tridecemlineatus*), Richardson's ground squirrel (*Citellus richardsonii*), white-tailed jack rabbit (*Lepus townsendii* Bachman), coyote (*Canis latrans* Say), red fox (*Vulpes fulva regalis* Merriam), and badger (*Taxidea taxus taxus* (Schreber) ) (Bird 1969:9-10).

Birds are plentiful and include the sharp-tailed grouse (*Pedioecetes phasianelles* L.), mallard (*Anas platyrhynchos platyrhynchos* L.), blue-winged teal (*Anas discors* L.), and American coot (*Fulica americana americana* Gmelin).

## LITHIC ARTIFACTS

The artifacts recovered from the Stendall site were manufactured from either clay, lithic material or bone. Excluding pottery the artifacts

recovered from the site were divided into eight categories: projectile points, bifaces, end scrapers, side scrapers, worked flakes, gravers or hide perforators, hammerstones, and bone tools.

## Projectile Points

Eighty-eight projectile points were recovered from the Stendall site. Fifty percent or forty-four of the projectile points were too badly fragmented to be typed. Of the remaining projectile points, forty-one could be typed as Prairie Side-notched, two as Plains Triangular, and one as Plains Side-notched.

The diagnostic features of Prairie Side-notched include: 1) irregular outline; 2) poor quality flaking; 3) lack of symmetry (Kehoe 1966:830).

General characteristics include: 1) mediocre bifacial flaking; 2) irregular outline; 3) large, wide, shallow V-to-U shaped side notches; 4) irregular edge; 5) base is usually straight; 7) convex to straight body form (Kehoe 1966:830); 8) length 23.1-31.7 mm.; 9) width 11.9-17.3 mm.

The diagnostic features of Plains Side-notched, of which only one was recovered, are: 1) excellent definition of the angles about the base and notches (squarish effect), demonstrating fine control of the production of the edges; and 2) well-defined outline (Kehoe 1966:832).

General characteristics include: 1) well-defined outline; 2) a convex to nearly straight body form; 3) small deep side notches with a well-defined rectangular shape; 4) base and notch corners are square of form acute angles; 5) bases are concave or straight (Kehoe 1966:832).

The third type found was that called Plains Triangular. Two of these were recovered. These tend to have a small triangular outline and are devoid of side notches.

Of the eighty-eight projectile points recovered from the Stendall site, fifty-two were manufactured from brown chalcedony, thirty from chert, three

from agate, one from basalt, one from jasper, and one from granite:

| Material | Number | % |
|---|---|---|
| Brown Chalcedony | 52 | 59 |
| Chert | 30 | 34 |
| Agate | 3 | 3 |
| Basalt | 1 | 1 |
| Jasper | 1 | 1 |
| Granite | 1 | 1 |
| Total | 88 | 99 |

The vertical distribution of projectile points at the site is as follows: level A (0"-4")-34%; level B (4"-6")-39%; level C (6"-8")-16%; level D (8"-10")-3%; level E (10"-12")-5%; level F (12"-14")-1%; level H (14"-16")-2%.

## Bifaces

The biface category here includes any stone artifact worked on both surfaces except for projectile points and hide perforators.

Sixty-five bifaces were recovered from the site. Of these, sixty-four could be classified as knives and one could be classified as a chopper. The majority of the bifaces (77%) were broken, 19% were irregular in outline, 3% were triangular in outline, and 2% were ovoid in outline.

| Material | Number | % |
|---|---|---|
| Brown Chalcedony | 42 | 65 |
| Chert | 21 | 32 |
| Agate | 1 | 2 |
| Basalt | 1 | 2 |
| Total | 65 | 101 |

Vertical distribution of the bifaces is as follows: level A-31%; level B-45%; level C-11%; level D-12%; level G-2%.

The bifaces are between 14.6 and 61.9 mm. in length; 7.1 and 45.4 mm. in width and 2.1 and 29.1 mm. in thickness.

## Unifaces

A uniface is an artifact which is worked on one surface. Classes of unifaces recovered from the Stendall site include end scrapers, side scrapers, and worked flakes.

*End Scrapers:*

End scrapers are those scrapers which are retouched on the distal transverse margin (edge) and may or may not be retouched on their lateral margins (sides). Their function at the Stendall site was probably for scraping hides. Six shapes of end scrapers were recovered from the site: trapezoidal-48%; irregular-22%; broken-22%; retangular-3%; parallel-2%; ovate-2%.

| Material | Number | % |
|---|---|---|
| Brown Chalcedony | 34 | 57 |
| Chert | 21 | 35 |
| Agate | 3 | 5 |
| Quartzite | 2 | 3 |
| Total | 60 | 100 |

Vertical distribution of the end scrapers is as follows: level A-33%; level B-42%; level C-18%; level E-5%; level G-2%.

The end scrapers are 9.5 to 43.8 mm. in length, 9.7 to 38.3 mm. in width and 2.5 to 16.9 mm. in thickness.

*Side Scrapers:*

Side scrapers are unifacially worked artifacts with retouching along

the lateral margin, usually on the dorsal surface. Their function was probably to scrape hides although they could have been used for scraping wood or bone; they could also function as uniface knives. One hundred and nineteen side scrapers were recovered from the site. The shapes of the cutting edge of the side scraper include: convex-45%; straight-21%; concave-19%; spokeshave-5%; one convex and one straight edge-3%; one convex and one concave edge-3%; two convex edges-3%; two straight edges-1%; and one concave and one straight edge-1%.

| Material | Number | % |
|---|---|---|
| Brown Chalcedony | 90 | 76 |
| Chert | 23 | 19 |
| Agate | 2 | 2 |
| Quartzite | 2 | 2 |
| Quartz | 1 | 1 |
| Unknown | 1 | 1 |
| Total | 119 | 101 |

Vertical distribution of the side scrapers is as follows: level A-37%; level B-32%; level C-18%; level D-8%; level E-3%; level F-2%.

The side scrapers are 10.3 to 67.5 mm. in length, 8.9 to 40.1 mm. in width and 1.9 to 16.8 mm. in thickness.

*Worked Flakes:*

Worked flakes are artifacts which show small amounts of retouching. Their use is unknown although they probably functioned as uniface knives or scrapers.

Seventy-four worked flakes were recovered from the site. The majority were fragmented. The worked flakes were irregular in outline.

| Material | Number | % |
|---|---|---|
| Brown Chalcedony | 42 | 57 |
| Chert | 25 | 34 |
| Quartzite | 5 | 7 |
| Agate | 1 | 1 |
| Obsidian | 1 | 1 |
| Total | 74 | 100 |

Vertical distribution of worked flakes is as follows: level A-50%; level B-22%; level C-9%; level D-1%; level E-7%; level F-5%; level G-4%; level H-1%.

The worked flakes range from 9.9 to 62.4+mm. in length, 5.2 to 35.0 mm. in width and 1.9 to 22.0 mm. in thickness.

## Hide perforators

Eleven hide perforators were recovered from the site. These were probably used to cut holes in the hides to facilitate attaching hides to wooden frames.

| Material | Number | % |
|---|---|---|
| Brown Chalcedony | 7 | 64 |
| Chert | 3 | 27 |
| Obsidian | 1 | 9 |
| Total | 11 | 100 |

Vertical distribution of hide perforators is as follows: level A-27%; level B-64%; level C-9%.

The hide perforators range between 10.7 and 43.7 mm. in length, 3.1 and 18.9 in width and 1.3 and 6.1 mm. in thickness.

## Hammerstones

Only one hammerstone was recovered from the site and this was badly

fragmented. The hammerstone appears to be made from granite.

## STONE MATERIAL TYPES USED AT THE STENDALL SITE

As can be seen by Table I, brown chalcedony is the most frequently used material in the making of stone artifacts. The source of brown chalcedony or Knife River flint from sites in Manitoba is still debated. The only known documented quarries are near Knife River, North Dakota (Clayton, Bickley, and Stone 1970), but it is known that brown chalcedony occurs in the Souris gravels in Manitoba (Hlady 1965). Although no quarry has been found at the Souris gravels, the author feels that this is the most likely choice for chalcedony occurring at Stendall as the site is close to the gravels.

Chert was the next most popular material utilized in the manufacturing of artifacts at the Stendall site. The area near and around the Stendall site has several glacial gravels, and these were probably used as the primary source for chert.

Other materials, including basalt, jasper, granite, quartzite, and quartz, were probably obtained from the glacial gravels. The agate utilized in manufacturing artifacts recovered from the site occurs in the Souris gravels. At present the Souris gravels are still traversed by "rock hounds" because of the agate that is found there.

The one material that can be considered exotic is obsidian. Only two artifacts manufactured from this material were found at the site. Since there is no known source of obsidian in Manitoba, the material was probably obtained through trade.

### Lithic Debris

Table II contains a breakdown of all lithic debris recovered from the Standall site. Seven thousand one hundred and eighty-four flakes were recovered. Brown chalcedony and chert made up over 97% of all flakes

recovered. The other material recovered made up less than 1% in their respective category. No obsidian flakes were found. This would strongly suggest that the two obsidian artifacts were trade goods.

Only thirteen cores were recovered. Eleven were chert and two were brown chalcedony.

## POTTERY

A large number of potsherds were recovered from the Stendall site. Many of the sherds recovered were split and therefore could not be properly classified as to surface treatment.

### Manufacture

The potsherds appear laminated when viewed in cross-section, and some are exfoliated. This would indicate that manufacturing was done by means of the paddle and anvil technique. The clay for use in manufacturing was probably obtained from Pipestone Creek. The pot would be roughly shaped from a lump of clay. The clay would then be paddled to bond the particles of clay together, and also to thin the walls and shape the vessel. While the vessel was being shaped it would have been supported on the inside by the fist of the manufacturer or a rock. The paddle used in the manufacturing of pottery was made of wood and was covered with cord or fabric. This covering of cord or fabric left a characteristic impression on the exterior of the vessel. The inside of the vessel was usually smoothed using animal hide or grass (Strong 1972:374). Once the paddling was finished some vessels were smoothed over. The sherds that are found with this process are named cord-marked smoothed. Those that were not smoothed over are called cord-marked natural.

The Indians at the Stendall did not use a kiln for firing their pottery; instead, the clay vessel was placed in the campfire and "baked".

1975

No. 27 "Archaeological Reconnaissance in Northern Interior District of Mackenzie: 1969, 1970 and 1972" by Donald W. Clark. 405 p., 16 plates, 13 tables, 20 figures. $4.25

Approximately 75 prehistoric sites and nearly 50 historic or recent camps are reported for the areas north and west of Great Bear Lake. Collections are small and in most cases superficial, but groupings and periodization are attempted.

No. 28 "Of Men and Herds in Barrenland Prehistory" by Bryan H.C. Gordon. 564 p., 1 map, 20 figures, 48 tables, 38 plates. $5.75

This study attempts to elucidate the temporal and spatial interrelationships between the barrenland Pre-Dorset peoples, climates and caribou herds in the period 1500 - 700 B.C. Items such as discreteness of herds and human bands, band movements and communication and differing cultural patterns as evidenced in artifacts, are discussed. All are used in the formulation of the discrete band/discrete herd relationship.

No. 29 "The Prehistory of Lake Athabasca: An Initial Statement" by J.V. Wright. 193 p., 22 tables, 6 figures, 19 plates. $2.50

The position of Lake Athabasca relative to the Plains, Boreal Forest, and Arctic physiographic zones, which have changed through time in response to climatic fluctuations, has resulted in cultures adapted to these three zones occupying areas of the lake during certain periods. During the later prehistory the western half of the lake was exploited by a Plains-derived, bison hunting culture whereas the eastern half of the lake was exploited by a Boreal Forest-derived, caribou hunting culture.

No. 30 "Skeletal Variability in British Columbia Coastal Populations. A Descriptive and Comparative Assessment of Cranial Morphology" by Jerome S. Cybulski. 328 p., 68 tables, 13 figures. $3.75

Metric and non-metric techniques of analysis are used to study the interrelationships of the Haida, Kwakiutl, Nootka, and Coast Salish ethnic divisions of British Columbia. Both between and within group variation is considered based on crania in museum collections.

No. 31 "Archaeological Survey of Canada: Annual Review 1974" edited by George F. MacDonald. 72 p., 16 photographs; on request.

No. 32 "Prehistory of Saglek Bay, Labrador: Archaic and Palaeo-Eskimo Occupations" by J.A. Tuck. 265 p., 8 figures, 27 plates. $2.75

Description of Maritime Archaic, early Palaeo-Eskimo, and Dorset Eskimo occupations of Saglek Bay in northern Labrador with comment on settlement - subsistence, culture history, and possible prehistoric Indian and Eskimo contacts.

No. 33 "Salvage Contributions: Prairie Provinces" edited by R. Wilmeth. 212 p., 12 figures, 17 plates. $3.00

The six archaeological reports in this issue pertain to salvage operations carried out under contract with the Archaeological Survey of Canada, National Museum of Man. Three of the projects were located in southern Alberta, one each in northern and southern Saskatchewan, and one in southern Manitoba.