

# S. J. McKee Archives



## ARCH 4: Makotchi-Ded Dontipi locale

http://archives.brandonu.ca/en/permalink/descriptions10215

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Series
Series Number: 4

Accession Number: 1-2010

GMD: multiple media
Date Range: 1992 to 2002

History / Biographical:

#### Introduction

Information on archaeological materials in this locale first came to the attention of Dr. Nicholson through Doug Jackson, a local artifact collector from Souris. Doug had observed archaeological materials that included bone, ceramics and lithic material that had been exposed by municipal road building activity, northwest of Lauder Manitoba

#### Environment

The Makotchi-Ded Dontipi locale is located among stabilized sand dunes in the Lauder Sandhills in Southwestern Manitoba, northwest of the village of Lauder. The area is a mosaic of medium grass prairie and copses of aspen poplar and aspen-oak, together with intermittent sedge grass marshes and small ponds. These wetlands are bordered with balsam poplar, water birch, willows and red osier dogwood.

The well-drained upland forest also contains saskatoon, chokecherry, wild current, hazelnut bushes and occasional wild plums. Lowland areas have nannyberries and high-bush cranberry. Wild strawberries grow in lightly shaded areas along trail margins and in open patches in aspen forest.

#### History of Excavations

The Makotchi-Ded Dontipi locale is a virtual "island" of forest and marshlands in a vast expanse of mixed grass prairie. This archaeologically and environmentally rich area was given the Dakota name Makotchi-Ded Dontipi, meaning "the place where we live".

#### Summation

Prior to European settlement, the area was a rich environment for hunter-gatherer people. Archaeological investigations from 1992 to 2002 have revealed numerous sites within the locale. Some of these sites have been extensively excavated while others have been identified or tested.

Seven sites that have been identified in this locale range in age from the historic through protohistoric periods and extend into the middle precontact period. The major sites are the initial Middle Missouri Duthie site, the late precontact Jackson, Bradshaw sites and the protohistoric Twin Fawns, Schuddemat and Hollow B sites. The multi-component Vera site includes historic Métis, late precontact Vickers Focus, and middle precontact Besant, Pelican Lake, McKean Complex and Oxbow occupations. Over 230 units were excavated as well as numerous test pits and several extensive surveys.

Scope and Content:

#### Scope and Content

The Series has been divided into seven sub-series, including (1) Duthie site (2) Jackson site (3) Twin Fawns site (4) Vera site (5) Schuddemat site (6) Bradshaw site (7) Hollow B site.

Name Access: Makotchi-Ded Dontipi locale

Subject Access: Archaeology

Arrangement:

Series is arranged by site and by year of field work.



### ARCH 2: North Lauder locale

http://archives.brandonu.ca/en/permalink/descriptions12079

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Series

Series Number: 2

Accession Number: 1-2010

GMD: multiple media

Date Range: 1997 to present

History /
Biographical:

#### ARCH 2: North Lauder Locale

The North Lauder locale has a long archaeological and geological history that is important for understanding the forces that shaped the region. Archaeological research in the locale shows that the area has been occupied by humans for at least the past 6,500 years. Environmental forces provided an area of diverse resources that attracted early peoples.

#### Environment of the Lauder Sandhills

The North Lauder locale is part of the greater Lauder Sandhills area. The glaciers that covered this region began to recede approximately 11,000 years ago leaving a large lake known as glacial Lake Hind. The Souris River, the Lauder Sandhills and the Oak Lake Aquifer are remnants of the environmental and geological forces that shaped the region.

The Lauder Sandhills region is characterized by a landscape of sand sheets and stabilized sand dunes interspersed with a variety of wetlands. This complex topographic and hydrological situation favoured the development of an island mosaic of mixed forest, wetland and meadow, surrounded by mixed grass prairie. The result was a large, isolated ecotone which provided a rich variety of subsistence resources for hunter-gatherers.

### Research in the Lauder Sandhills

Archaeologists from Brandon University have been conducting research in the Lauder Sandhills since 1991. Research in the North Lauder locale has focused on the Atkinson site, a 6,500 year old hunter-gatherer site and Flintstone Hill.

#### The Atkinson site

The Atkinson site is one of the oldest excavated sites in Manitoba and has been Radiocarbon dated to 6,500 years before present. The Atkinson site is located on the bank of the Souris River and was discovered when a hearth (fire pit) was seen eroding out of the bank. Based on the date of the site and the kind of lithics (stone tools) present it is considered a Gowen occupation. The Atkinson site is evidence that bison hunters were active on the northern plains at a very early date. Similar sites have also been found on the High Plains in the U.S. and are referred to as the Mummy Cave Complex.

The Atkinson Site is of great importance as it is the first undisturbed site of this type to be excavated in Manitoba and extends the range of these sites south and east from the type-sites in central Saskatchewan.

#### Flintstone Hill

The geomorphology of the glacial Lake Hind Basin over the past 11,000 years is known primarily through the study of a cut bank along the Souris River. Flint Stone Hill contains the most complete stratigraphic record for the post-glacial period on the northern plains. The site has been extensively studied by geoarchaeologists, geologists and paleoenvironmentalists over many years and their findings have contributed to our understanding of the region.

The North Lauder locale Borden designations of Atkinson site DiMe-27 and Flintstone Hill site DiMe-26.

#### Borden System

Archaeological sites in Canada are identified by the Borden system, which is a uniform site designation system. The country is divided into grids based on latitude and longitude in blocks of 10 x 20 minutes. The first 4 letters indicate the block and the following numbers indicate the actual site. For example the area of the Lauder Sandhills in southwestern Manitoba is identified by the letters DM and the North Lauder locale within that area is DiMe. The Atkinson site is DiMe-27 and the Flintstone Hill site DiMe-26. As new sites are discovered they will be numbered sequentially.

Scope and Content:

The Series has been divided into two sub-series, including (1) Atkinson site DiMe-27 and Flintstone Hill site DiMe-26.

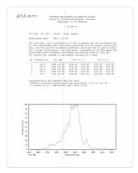
Name Access: North Lauder locale

Subject Access: Archaeology

Atkinson site DiMe-27

Arrangement:

Series is arranged by site and by year of field work.



## North Lauder locale Radiocarbon Report 3

http://archives.brandonu.ca/en/permalink/descriptions12329

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 2.5.3
Accession Number: 1-2010

GMD: multiple media

Date Range: 1997-2000

Physical Description: 1 page

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

North Lauder Radiocarbon Date report by IsoTrace Laboratory for Atkinson site #TO-13365.

### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Atkinson site and Flintstone Hill.

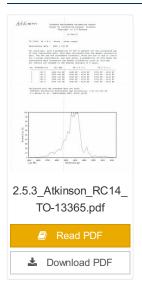
Name Access: North Lauder locale Radiocarbon Report 3

Subject Access: Archaeology

North Lauder locale

North Lauder locale Radiocarbon Report 3

#### **Documents**





## Crepeele locale Radiocarbon Report I

http://archives.brandonu.ca/en/permalink/descriptions11968

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 1.5.1 Accession Number: 1-2010

GMD: multiple media
Date Range: 2003-2008
Physical Description: 3 pages

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

Crepeele locale Radiocarbon Dates. C14 report by IsoTrace Laboratory for Crepeele site 2005 XU 8.

From 2003 to 2008 field work took place at the Crepeele locale with 75 - 1m x1m units excavated.

To help establish the cultural sequence at the locale Radiocarbon dates were obtained from the three sites in the Crepeele locale.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Crepeele, Sarah and Graham sites.

Name Access: Crepeele locale Radiocarbon Report I

Subject Access: Archaeology

Crepeele locale

Crepeele locale Radiocarbon Dates

#### **Documents**





## Crepeele locale Radiocarbon Report II

http://archives.brandonu.ca/en/permalink/descriptions11969

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 1.5.2 Accession Number: 1-2010

GMD: multiple media
Date Range: 2003-2008
Physical Description: 8 pages

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

Crepeele locale Radiocarbon Dates. C14 report by Beta Analytic Inc. for Crepeele site XU 48 and Graham site XU 54.

From 2003 to 2008 field work took place at the Crepeele locale with 75 - 1m x1m units excavated.

To help establish the cultural sequence at the locale Radiocarbon dates were obtained from the three sites in the Crepeele locale.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Crepeele, Sarah and Graham sites.

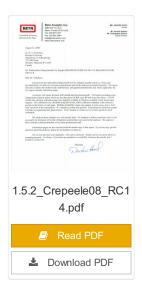
Name Access: Crepeele locale Radiocarbon Report II

Subject Access: Archaeology

Crepeele locale

Crepeele locale Radiocarbon Dates

#### **Documents**





## Crepeele locale Radiocarbon Report III

http://archives.brandonu.ca/en/permalink/descriptions11970

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 1.5.3 Accession Number: 1-2010

GMD: multiple media
Date Range: 2003-2008
Physical Description: 9 pages

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

Crepeele locale Radiocarbon Dates. C14 report by Beta Analytic Inc. for Crepeele site XUs 8, 30, 50.

From 2003 to 2008 field work took place at the Crepeele locale with 75 - 1m x1m units excavated.

To help establish the cultural sequence at the locale Radiocarbon dates were obtained from the three sites in the Crepeele locale.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Crepeele, Sarah and Graham sites.

Name Access: Crepeele locale Radiocarbon Report III

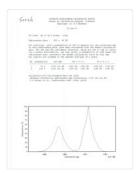
Subject Access: Archaeology

Crepeele locale

Crepeele locale Radiocarbon Dates

#### **Documents**





## Crepeele locale Radiocarbon Report IV

http://archives.brandonu.ca/en/permalink/descriptions11971

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 1.5.4 Accession Number: 1-2010

GMD: multiple media
Date Range: 2003-2008
Physical Description: 2 pages

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

Crepeele locale Radiocarbon Dates. C14 report by IsoTrace Analytic Laboratory for Sarah site XU17.

From 2003 to 2008 field work took place at the Crepeele locale. The Crepeele, Graham and Sarah sites were excavated with 75 - 1m x1m units excavated

To help establish the cultural sequence at the locale Radiocarbon dates were obtained from the three sites in the Crepeele locale.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Crepeele, Sarah and Graham sites.

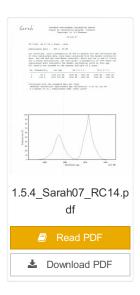
Name Access: Crepeele locale Radiocarbon Report IV

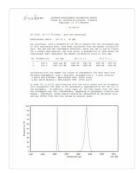
Subject Access: Archaeology

Crepeele locale

Crepeele locale Radiocarbon Dates

#### **Documents**





## Crepeele locale Radiocarbon Report V

http://archives.brandonu.ca/en/permalink/descriptions11972

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 1.5.5 Accession Number: 1-2010

GMD: multiple media
Date Range: 2003-2008
Physical Description: 2 pages

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

Crepeele locale Radiocarbon Dates. C14 report by IsoTrace Analytic Laboratory for Graham site XUs 5 and 8.

From 2003 to 2008 field work took place at the Crepeele locale. The Crepeele, Graham and Sarah sites were excavated with 75 - 1m x1m units excavated

To help establish the cultural sequence at the locale Radiocarbon dates were obtained from the three sites in the Crepeele locale.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Crepeele, Sarah and Graham sites.

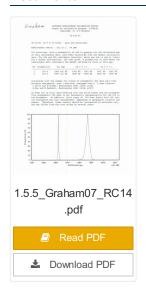
Name Access: Crepeele locale Radiocarbon Report V

Subject Access: Archaeology

Crepeele locale

Crepeele locale Radiocarbon Dates

#### **Documents**





## North Lauder locale Radiocarbon Report I

http://archives.brandonu.ca/en/permalink/descriptions12327

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 2.5.1
Accession Number: 1-2010

GMD: multiple media
Date Range: 1997-2000
Physical Description: 2 pages

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

North Lauder Radiocarbon Date report by IsoTrace Laboratory for Atkinson II site #TO-11882.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Atkinson site and Flintstone Hill.

Name Access: North Lauder locale Radiocarbon Report I

Subject Access: Archaeology

North Lauder locale

North Lauder locale Radiocarbon Report I

#### **Documents**







## North Lauder locale Radiocarbon Report 2

http://archives.brandonu.ca/en/permalink/descriptions12328

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 2.5.2 Accession Number: 1-2010

GMD: multiple media

Date Range: 1997-2000

Physical Description: 2 pages

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

North Lauder Radiocarbon Date report by IsoTrace Laboratory for Atkinson site #TO-10640.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Atkinson site and Flintstone Hill.

Name Access: North Lauder locale Radiocarbon Report 2

Subject Access: Archaeology

North Lauder locale

North Lauder locale Radiocarbon Report 2

Documents





## North Lauder locale Radiocarbon Report 4

http://archives.brandonu.ca/en/permalink/descriptions12330

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 2.5.4
Accession Number: 1-2010

GMD: multiple media

Date Range: 1997-2000

Physical Description: pages 5-7

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

North Lauder Radiocarbon Date report by Beta Analytic Inc. for Flintstone Hill #109529 and #109530.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Atkinson site and Flintstone Hill.

Name Access: North Lauder locale Radiocarbon Report 4

Subject Access: Archaeology

North Lauder locale

North Lauder locale Radiocarbon Report 4

#### **Documents**





## North Lauder locale Radiocarbon Report 5

http://archives.brandonu.ca/en/permalink/descriptions12331

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 2.5.5 Accession Number: 1-2010

GMD: multiple media
Date Range: 1997-2000
Physical Description: pages 3-5

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

North Lauder Radiocarbon Date report by Beta Analytic Inc. for Flintstone Hill #111142 and #111143.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Atkinson site and Flintstone Hill.

Name Access: North Lauder locale Radiocarbon Report 5

Subject Access: Archaeology

North Lauder locale

North Lauder locale Radiocarbon Report 5

### **Documents**



## North Lauder locale Radiocarbon Report 6

http://archives.brandonu.ca/en/permalink/descriptions12332



Part Of: RG 7 Beverley Nicholson fonds

1 page

Description Level: Sub sub series

Series Number: 2.5.6 Accession Number: 1-2010

GMD: multiple media
Date Range: 1997-2000

Material Details: Radiocarbon date reports have been scanned in multi-page PDF files.

History / Biographical:

Physical Description:

North Lauder Radiocarbon Date report by Beta Analytic Inc. for Flintstone Hill #109900.

#### Radiocarbon dating

The technique of radiocarbon dating was developed by Willard Libby and his colleagues at the University of Chicago in 1949.

Radiocarbon dating is used to estimate the age of organic remains from archaeological sites. Organic matter has a radioactive form of carbon (C14) that begins to decay upon death. C14 decays at a steady, known rate of a half life of 5,730 years. The technique is useful for material up to 50,000 years. Fluctuations of C14 in the atmosphere can affect results so dates are calibrated against dendrochronology. Radiocarbon dates are calibrated to calendar years.

Dates are reported in radiocarbon years or Before Present. Before Present refers to dates before 1950. The introduction of massive amounts of C14, due to atomic bomb and surface testing of atomic weapons, has widely increased the standard deviation on all dates after A.D. 1700 causing these dates to be unreliable.

Accelerated mass spectrometry can more accurately measure C14 with smaller samples and can date materials to 80,000 years.

Scope and Content:

Sub sub series contains radiocarbon dates from: Atkinson site and Flintstone Hill.

Name Access: North Lauder locale Radiocarbon Report 6

Subject Access: Archaeology

North Lauder locale

North Lauder locale Radiocarbon Report 6

### **Documents**





### Lovstrom survey

### http://archives.brandonu.ca/en/permalink/descriptions12407

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub-series

Series Number: 3.1

Accession Number: 1-2010

GMD: multiple media
Date Range: 1985-1986

History /
Biographical:

The Lovstrom surface collection came from small fields cleared within, and adjacent to, the major portions of the site which were excavated. The Lovstroms initial collection has since been added to by field personnel from Brandon University. The initial collections consisted of lithics and ceramics. A collection of faunal remains from the cultivated area was made by a Brandon University zooarchaeology class in 1986 which yielded specimens of elk, canid, mussels, and sucker, in addition to an expected abundance of bison. Since these materials were in a surface context, it may be that some of the faunal remains were historic.

The high biodiversity and evidence of pre-Europeon contact prompted the decision to test the Lovstrom locale. Nine 1m2 units were excavated in 1985 and, in 1986, an additional 15 1m2 units were excavated for a total of 24 test units. This testing indicated the presence of a large precontact locale with lithics, woodland ceramics and large amounts of reasonably well-preserved faunal materials.

The lithics indicated a late Prehistoric occupation (Nicholson 1986:35). However, the ceramics were more useful in that they identified the presence of Late Woodland cultures (Blackduck and Duckbay) and a single Middle Missouri vessel. It is believed that the Middle Missouri vessel was imported since the paste and construction/decorative technology differ distinctively from that of all other vessels recovered from the site. It was on the basis of an examination of these surface finds that the decision to test the Lovstrom site was made. These test excavations were conducted during the summers of 1985 and 1986.

Field investigations through shovel tests, excavation units, and examination of rodent mounds, indicated that the cultural deposits at the Lovstrom locale extend approximately 500m north from the edge of the Souris channel and eastward for over two hundred meters from the escarpment along Jock's Creek. The presence of dense forest vegetation covering much of the locale, and the subsurface nature of the archaeological deposits obscured surface indications.

Radiocarbon dates: Test Unit 4: 1215/320 BP and Test Unit 8 1280/190 BP

Scope and Content:

Sub-series has been divided into sub sub series including: Lovstrom survey 1985 and Lovstrom survey 1986

Name Access: Lovstrom survey
Subject Access: Archaeology

Lovstrom locale Lovstrom survey



### Lovstrom Block A - summary

### http://archives.brandonu.ca/en/permalink/descriptions12451

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub-series

Series Number: 3.2
Accession Number: 1-2010

GMD: multiple media

Date Range: 1987

History /
Biographical:

Block A was the most southern site in the locale. The excavation block consisted of 12 contiguous 1m2 units dug in a 3m x 4m rectangle. The block was the least productive of cultural materials, and bone preservation was the poorest. Under the sod, the black loam layer appeared at 5 cm below surface, and the glacial clay at 25 cm below surface. Excavators described the soil matrix as gritty and silty, and it became concrete hard when dried. The occupation or bone layer extended from 10 to 25 cm below surface and consisted of a contiguous scatter of FCR and unidentifiable large ungulate bone which was heavily processed and intensively scavenged by carnivores. Most cultural materials were recovered within this layer. Fire cracked rock (FCR) and small burnt bone fragments were present but no intact hearths or processing features were evident.

Non-cultural materials included limestone and other natural pebbles derived from the parent till. (These small limestone pebbles were apparent in the occupation layers in other blocks as well). Root and rodent disturbance was extensive throughout Block A. Most units were excavated to gravelly clay till. Nine of the twelve units were dug to level 4b, which ended at 40 cm b.s.

No further excavations were done at this site. No C14 dates were taken.

#### Scope and Content:

Sub-sub-sub series contains: Summary information of field methology, number and coordinates of excavations, personnel and their staff position; Field journals are daily records of recoveries, features and activities at the site; Site records include excavation level and unit summaries, feature sheets, profiles; sample records and maps; Artifact catalogues are lists and identifications of all artifacts recovered; Photographs are of excavation units, features, the landscape and personnel.

Name Access: Lovstrom Block A - summary

Subject Access: Archaeology

Lovstrom locale Lovstrom Block A



### Lovstrom Block A - site co-ordinates

http://archives.brandonu.ca/en/permalink/descriptions12452

Part Of: RG 7 Beverley Nicholson fonds

Description Level: sub sub sub series

Series Number: 3.2.1.1
Accession Number: 1-2010

GMD: multiple media

Date Range: 1987

Material Details: Field journals have been scanned in multi-page PDF files. Artifact

catalogues are PDF files in spreadsheet format. Photographs are in jpeg

format.

History /

Biographical:

Large scale excavations of five block sites took place in 1987 under the direction of Bev Nicholson with Jane Gibson as crew chief. Block A consisted of 12 excavation units.

Scope and Content:

Sub-sub-sub series contains: Summary information of field methology, number and coordinates of excavations, personnel and their staff position.

Name Access: Lovstrom Block A - site co-ordinates

Subject Access: Archaeology

Lovstrom locale Lovstrom Block A

#### **Documents**





### Lovstrom Block F - summary

### http://archives.brandonu.ca/en/permalink/descriptions12617

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub-series

Series Number: 3.7
Accession Number: 1-2010

GMD: multiple media

Date Range: 1988

History / Biographical:

In 1988 four 1m2 units were excavated in this Block F. The forest cover is identical to that of Block E, with an open oak forest with a light understory of saskatoon, hazelnut, poison ivy and sarsaparilla.

Underneath the litter mat (Ah) is a shallow, 15-20 cm "A" horizon of dark grey/brown silty loam with a high representation of pebble size clasts. The glacial clays, encountered at 20 cm below surface, consist of a matrix of light tan sandy clays containing rounded pebble to cobble size rocks.

The recoveries from this block consisted of a few ceramics, including Vickers Focus rim sherds, four lithic tools and a number of small bison bone fragments. There was no discernible cultural stratigraphy in the four 1m2 units and the limited deposits of bone, ceramics and lithics were dispersed randomly throughout the 25 cm of cultural matrix. The lithic materials frequencies were similar to those in Block E with local cherts and KRF being the most abundant categories. A small amount of fire-cracked rock and a few large identifiable bison bones were recovered – all distributed randomly with little evidence for any pattern of clustering.

No RC dates.

Scope and Content:

Sub-sub-sub series contains: Summary information of field methology, number and coordinates of excavations, personnel and their staff position; Field journals are daily records of recoveries, features and activities at the site; Site records include excavation level and unit summaries, feature sheets, profiles; sample records and maps; Artifact catalogues are lists and identifications of all artifacts recovered; Photographs are of excavation units, features, the landscape and personnel.

Name Access: Lovstrom Block F - summary

Subject Access: Archaeology

Lovstrom locale Lovstrom Block F



## Lovstrom Block H - summary

### http://archives.brandonu.ca/en/permalink/descriptions12638

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub-series

Series Number: 3.9
Accession Number: 1-2010

GMD: multiple media
Date Range: 1988 - 1991

History / Biographical:

The vegetation in block H is similar to other areas in the locale with an open oak forest with a light understory of saskatoon, hazelnut, poison ivy and sarsaparilla.

The excavations of the eight 1m2 units in 1988 resulted in the recovery of over 650 ceramic fragments including 20 rim sherds from at least four vessels, a grooved maul, fire-cracked rock, lithic debitage and a reworked Avonlea projectile point. A large amount of bison bone, including a number of axial elements and a fragmented skull were also recovered.

Based on the 1988 recoveries at the site further excavations took place in 1991. Nine excavation units were opened next to the previous excavations. Another 250 ceramic sherds were recovered in 1991. Nine vessels have been identified based on rim sherds. Vickers Focus and Woodland vessels have been identified and two vessels similar to Scattered Village Complex were recovered.

The lithic material assemblage is intermediate between Blocks G and E with KRF being the most frequent material category followed by local cherts.

Two features, a hearth and a curvilinear arrangement of rock were recovered. The high numbers of ceramic fragments suggests a habitation area, rather than hunting or butchering behavior. However, the separation of occupations at the site is difficult to establish and there may be different uses of the site by successive occupations.

Radiocarbon dates from this block indicate two occupations separated in time by some 300 years. XU 181 - 405/110 BP and XU 184 - 780/110 BP.

Scope and Content:

Sub-series has been divided into sub sub series including: Lovstrom Block H 1988 and Lovstrom Block H 1991.

Name Access: Lovstrom Block H - summary

Subject Access: Archaeology

Lovstrom Block H



### Lovstrom Block H 1988

http://archives.brandonu.ca/en/permalink/descriptions12639

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 3.9.1
Accession Number: 1-2010

GMD: multiple media

Date Range: 1988

Material Details: Field journals have been scanned in multi-page PDF files. Artifact

catalogues are PDF files in spreadsheet format. Photographs are in jpeg

format.

History / Biographical:

Directed by Dr. Nicholson and with lan Kuijt as crew chief, eight units were excavated in Block H in 1988. The vegetation is similar to other areas in the locale with an open oak forest with a light understory of saskatoon, hazelnut, poison ivy and sarsaparilla.

Radiocarbon dates from this block indicate two occupations separated in time by some 300 years. The excavation of the eight 1m2 units resulted in the recovery of over 650 ceramic fragments including 20 rim sherds from at least four vessels, a grooved maul, fire-cracked rock, lithic debitage and a reworked Avonlea projectile point. A large amount of bison bone, including a number of axial elements and a fragmented skull were also recovered.

The 650 ceramics recovered are of two kinds, representing at least four vessels. Stylistically, two of these vessels appear to be from the Vickers Focus and the third vessel may be Mortlach ware. The fourth vessel appears to be Blackduck and probably comes from the lower occupation. Also encountered were what is possibly a thin ash deposit in unit 180. The presence of a large number of bison axial elements is suggestive of primary butchering activities. Several canid bones were recovered scattered among the bison bone. Although there is no visible stratigraphic evidence, the 14C dates and the different ceramic types indicate more than one occupation in this area and it is likely that several types of behavior and use of space are represented.

High numbers of ceramic fragments are often assumed to be associated with activities characteristic of habitation areas, rather than hunting or butchering behavior. The lithic material assemblage is intermediate between Blocks G and E with KRF being the most frequent material category followed by local cherts.

Scope and Content:

Sub-sub-sub series contains: Summary information of field methology, number and coordinates of excavations, personnel and their staff position; Field journals are daily records of recoveries, features and activities at the site; Site records include excavation level and unit summaries, feature sheets, profiles; sample records and maps; Artifact catalogues are lists and identifications of all artifacts recovered; Photographs are of excavation units, features, the landscape and personnel.

Name Access: Lovstrom Block H 1988

Subject Access: Archaeology

Lovstrom locale Lovstrom Block H



### Lovstrom Block E 1991

### http://archives.brandonu.ca/en/permalink/descriptions12655

Part Of: RG 7 Beverley Nicholson fonds

Description Level: Sub sub series

Series Number: 3.6.3
Accession Number: 1-2010

GMD: multiple media

Date Range: 1991

Material Details: Field journals have been scanned in multi-page PDF files. Artifact

catalogues are PDF files in spreadsheet format. Photographs are in jpeg

format.

History /

Biographical:

Excavations took place in block E in 1987 and 1988 with 21 units opened. Ten further units were excavated in 1991 as part of the Brandon University Archaeological Field School, directed by Dr. Nicholson with Brett Waddell as crew chief and Theresa Hill as field assistant.

In 1991 a hearth was identified in Block E as well as a cluster of spoil dirt piles believed to represent material from a pit feature identified in the 1988 excavations. The pit feature is believed to be related to the recovery of clay that may have been used to build ceramic vessels.

Stratigraphic evidence of distinct activity areas at successive depths and radiocarbon dates indicate at least three occupations (380 BP, 700 BP and 860 B P). Three identified activity clusters occur stratigraphically, supporting these dated occupations.

Large numbers of lithics were recovered, forming an assemblage dominated by SRC and KRF with lesser amounts of porcellanite and quartzite. The upper occupation contained some Tongue River Silicified Sediment (TRSS). Eight Prairie Side-Notched points were recovered as well as a lunate biface and an end scraper. Fragments from a grey soapstone tube were also recovered.

#### Scope and Content:

Sub-sub-sub series contains: Summary information of field methology, number and coordinates of excavations, personnel and their staff position; Field journals are daily records of recoveries, features and activities at the site; Site records include excavation level and unit summaries, feature sheets, profiles; sample records and maps; Artifact catalogues are lists and identifications of all artifacts recovered; Photographs are of excavation units, features, the landscape and personnel.

Name Access: Lovstrom Block E 1991

Subject Access: Archaeology

Lovstrom locale Lovstrom Block E