

UNIVERSITY OF SASKATCHEWAN
RADIOCARBON DATES VIII

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Radiocarbon Dating Laboratory
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This series reports some of the measurements made since publication of the previous list. Methods essentially remain as described in Saskatchewan II (R, 1960, v 2, p 73). The laboratory now joins operation with the National Museum of Canada, Ottawa. The prime purpose is to provide radiocarbon dating service for Canadian archaeologists through the National Museum, although commercial services are available to others as analytical capacity permits.

SAMPLE DESCRIPTIONS

I. GEOLOGIC SAMPLES

Scrimbit series, Saskatchewan

Wood from buried forest, 3.6 to 5.2m below surface in glacial kettle, J Scrimbit farm near Kayville (49° 46' N, 105° 11' W). Found in layer of gyttja (Dew, 1959). Coll and subm 1958 by B A McCorquodale, Sask Mus Nat Hist, Regina (now Prov Mus Alberta, Edmonton).

S-80. **11,500 ± 300**

10cm diam conifer trunk in horizontal orientation 3.9m below surface.

S-81. **10,000 ± 250**

Root of stump 1.2m high, preserved in upright position. Sample from level of cones and needles 4.6m below surface.

S-83. **11,700 ± 300**

Wood from cones and needles horizon, 5.2m below surface.

S-85. **10,400 ± 250**

Wood from limbs in horizontal orientation, 3.6m below surface.

General Comment (BAM): S-80 poorly preserved, date anomalous. Time span correlates with gyttja laminae count (Bard, 1959).

S-685. Sutherland, Saskatchewan **14,040 ± 465**

Bone from 4.6m gravel bed below 0.6m boulders and overlying Floral Formation till, near Saskatoon (52° 12' N, 106° 35' W). Coll 1972 by C R Harington; subm 1972 by E A Christiansen. *Comment* (EAC): date and field evidence indicate gravel deposited by glacier which deposited Battleford Formation. Boulder layer interpreted as lag concentrate from erosion of latter till formation.

S-793. Camp Mackay, Saskatchewan 11,120 ± 150

Wood from testhole in Qu'Appelle Valley 43.6 to 44.2m below valley bottom in Qu'Appelle Alluvium (50° 31' N, 102° 18' W). Coll 1973 by C Higgins and E A Christiansen; subm 1973 by E A Christiansen. *Comment* (EAC): dates early deposition of Qu'Appelle Alluvium.

S-794. Esterhazy, Saskatchewan 11,260 ± 150

Wood from testhole in Qu'Appelle Valley near Esterhazy (50° 31' N, 102° 09' W). From brecciated shale overlain by 21.3m till and 2.4m sand, underlain by 29.9m till. Coll 1973 by C Higgins and E A Christiansen; subm 1973 by E A Christiansen. *Comment* (EAC): till cover interpreted as landslide since glacier position 160km NW of site at this time (Christiansen, 1978).

Fort Qu'Appelle series, Saskatchewan

Shells from testhole in Qu'Appelle Alluvium near Fort Qu'Appelle (50° 46' N, 103° 48' W). Coll 1973 by C Higgins and E A Christiansen; subm 1973 by E A Christiansen.

S-795. 6445 ± 135

Shells 3.4 to 4m below valley bottom.

S-796. 8395 ± 115

Shells 12.2 to 12.8m below valley bottom.

General Comment (EAC): dates part of Qu'Appelle alluvium deposit.

S-804. Weed Creek, Alberta 2765 ± 90

Bison bone from 1.1m below surface, in lower terrace sand deposits, 3.9m above present bed of Weed Creek, near Thorsby (53° 17' N, 113° 57' W). Coll and subm by R C Shelford, Univ Alberta, Edmonton. *Comment* (RCS): date younger than other dates on terrace for N Saskatchewan R of 6600 yr (Shelford, 1975).

S-950. Waterhen River, Saskatchewan 1855 ± 75

Peat from base of 2.1m deposit covering Waterhen R valley bottom (54° 25' N, 108° 38' W). Coll and subm 1974 by E A Christiansen. *Comment* (EAC): dates beginning of peat formation at this valley location.

Beaver River series, Saskatchewan

Peat and wood fragments from augerhole in alluvium under 2.7m road fill in Beaver R valley (54° 15' N, 108° 58' W). Coll and subm 1974 by E A Christiansen.

S-960. 1600 ± 100

From 0.3m below top of peat bed.

S-961. 3205 ± 65

From 0.6m below top of peat bed.

S-962. 3140 ± 105

From 0.9m below top of peat bed.

General Comment (EAC): dates peat accumulation for site location in Beaver R valley.

Waterhen River series, Saskatchewan

Peat from augerhole 6.4m below road fill surface in depression near the Waterhen R (54° 27' N, 109° 12' W). Coll and subm 1974 by E A Christiansen.

S-963. 490 ± 65

From 0.3m below top of peat bed.

S-964. 9935 ± 170

From 3.0m below top of peat bed.

General Comment (EAC): dates beginning and present state of peat accumulation for site location.

Eagle Creek series, Saskatchewan

Bone fragments from fresh exposure by redeposition and bluff slump caused by 1973 creek channel diversion, Eagle Creek valley, NW of Tessier (51° 47' N, 107° 30' W). Coll and subm 1975 by T S Woolf, Geol Sci, Univ Saskatchewan.

S-1073. 850 ± 60

From redeposition exposure, on creek bed surface.

S-1074. 2365 ± 70

From 2m below surface, in clay matrix, bluff slump.

General Comment (TSW): secondarily deposited bison bones, post Wisconsin age. For geology of area, see Scott (1962).

S-1075. Park Valley, Saskatchewan 4210 ± 75

Charcoal from 1cm bed 1.2m below surface in flood plain deposit, exposed in alluvium E bank of S Saskatchewan R (51° 49' N, 106° 43' W). Coll and subm 1975 by E A Christiansen. *Comment* (EAC): date implies only 1.2m of sediment deposition during last 4000 yr.

Mission Lake series, Saskatchewan

Carbonaceous silt from augerhole in slough bottom (50° 43' N, 103° 46' W). Coll and subm 1976 by E A Christiansen.

S-1169. 2950 ± 80

0.30m below surface.

S-1170. 4980 ± 85

0.91m below surface.

S-1171. 7040 ± 115

1.52m below surface.

S-1172. **9735 ± 120**

2.13m below surface.

General Comment (EAC): rate of recent sedimentation over dated interval constant at 2.54cm/100 yr.

Goodale Farm 026 series, Saskatchewan

Gyttja and mollusk shells from augerhole in slough bottom (52° 03' N, 106° 30' W). Coll and subm 1976 by E A Christiansen.

S-1173. **1355 ± 80**

Gyttja 1.83m below surface.

S-1174. **3225 ± 50**

Gyttja 2.13m below surface.

S-1175. **4815 ± 70**

Gyttja 2.74m below surface.

S-1176. **5480 ± 75**

Mollusk shells 2.74m below surface.

S-1177. **7160 ± 110**

Gyttja 3.66m below surface.

Goodale Farm 029 series, Saskatchewan

Carbonaceous silt from augerhole in slough bottom (52° 03' N, 106° 30' W). Coll and subm 1976 by E A Christiansen.

S-1178. **6705 ± 180**

From 1.52m below surface.

S-1179. **9290 ± 155**

From 2.13m below surface.

S-1180. **10,730 ± 280**

From 2.74m below surface.

Horseshoe Lake Core series, Alberta

Gyttja core from 1.22m to 7.47m below lake level, 657 amsl, Horseshoe Lake, 6.4km SW of Metiskow (52° 21' N, 110° 45' W). Coll and subm 1976 by E I Wallick, Alberta Research Council, Edmonton.

S-1181. **2000 ± 100**

1.22 to 1.26m depth.

S-1182. **2200 ± 85**

1.59 to 1.63m depth.

S-1183. **2750 ± 70**

1.95 to 1.99m depth.

S-1184. 2.30 to 2.34m depth.	3345 ± 155
S-1185. 2.65 to 2.69m depth.	3365 ± 85
S-1186. 3.05 to 3.09m depth.	3960 ± 165
S-1187. 3.50 to 3.54m depth.	4625 ± 105
S-1188. 3.96 to 4.00m depth.	5160 ± 80
S-1189. 5.49 to 5.52m depth.	8600 ± 435
S-1190. 7.42 to 7.45m depth.	10,180 ± 160

General Comment (EIW): sedimentation rate 0.1cm/yr, similar to Lake Wabamun, 32.2km W of Edmonton. S-1190 indicates sedimentation post glacial.

Agar Slough 01 series, Saskatchewan

Carbonaceous silt from augerhole in slough bottom, near Saskatoon (52° 03' N, 106° 30' W). Coll and subm 1976 by E A Christiansen.

S-1191. 0.61m below surface.	3295 ± 125
S-1192. 4.27m below surface.	9300 ± 220
S-1193. 4.57m below surface.	9630 ± 230
S-1194. 4.88m below surface.	10,560 ± 255

Agar Slough 02 series, Saskatchewan

Carbonaceous silt from augerhole in slough bottom, near Saskatoon (52° 02' N, 106° 29' W). Coll and subm 1976 by E A Christiansen.

S-1195. 1.22m below surface.	1570 ± 115
S-1196. 4.27m below surface.	9620 ± 210

Martens Slough 01 series, Saskatchewan

Carbonaceous silt from augerhole in slough bottom, near Saskatoon (52° 02' N, 106° 29' W).

S-1197. **8350 ± 200**

2.74m below surface.

S-1198. **10,240 ± 250**

4.57m below surface.

S-1199. **11,070 ± 245**

6.40m below surface.

General Comment (EAC): sedimentation post-glacial.

Lebret series, Saskatchewan

Wood from testhole, Qu'Appelle Valley bottom (50° 45' N, 103° 41' W). Coll and subm 1976 by C Higgins and E A Christiansen.

S-1224. **5740 ± 85**

Wood from 6.4m below valley bottom.

S-1225. **7380 ± 110**

Wood from 22.6m below valley bottom.

General Comment (EAC): deposition of Qu'Appelle Alluvium started before 7380 yr with sedimentation rate diminishing with time.

Lake View Beach series, Saskatchewan

Wood from testhole, Qu'Appelle Valley bottom (50° 42' N, 103° 38' W). Coll and subm 1976 by C Higgins and E A Christiansen.

S-1228. **4260 ± 90**

Wood from 5.5m below valley bottom.

S-1229. **4730 ± 85**

Wood from 6.4m below valley bottom.

S-1230. **4965 ± 80**

Wood from 10.1m below valley bottom.

General Comment (EAC): dates indicate diminishing sedimentation rate of Qu'Appelle Alluvium.

S-1231. Reindeer Lake, Saskatchewan **6420 ± 115**

Peat from base of deposit, 1.8m below surface on topographic high, Site DA-631, Reindeer Lake (56° 15' N, 103° 35' W). Coll and subm 1976 by D Alley, Saskatchewan Research Council, Saskatoon. *Comment* (DA): date agrees with other basal peat ages for area.

Grande Cache series, Alberta

Peat from fen and bog area, unglaciated plateau Mine Pit 8, Grande Cache (53° 49' N, 119° 09' W). Coll and subm 1977 by J D Campbell, Alberta Research Council, Edmonton.

S-1277. **5320 ± 95**

Peat from Crescent Lake fen, from 2.38 to 2.44m below surface.

S-1278. **4510 ± 145**

Peat from bog, 4.42 to 4.57m below surface.

S-1279. **7705 ± 75**

Peat from bog, 5.33 to 5.49m below surface.

General Comment (JDC): post Wisconsin peat accumulations.

S-1280. Blairmore, Alberta **4790 ± 90**

Peat from 1.73m to 1.80m below surface, large fen W branch of Gold Creek near Chaudron Peak, Blairmore (49° 35' N, 114° 27' W). Coll and subm 1977 by J D Campbell. *Comment* (JDC): date indicates post Wisconsin age, deposit believed in part to be older.

S-1304. Sioux Crossing, Saskatchewan **10,110 ± 185**

Wod from testhole, Qu'Appelle Valley bottom (50° 48' N, 103° 54' W). Coll 1974 by C Higgins and E A Christiansen; subm 1976 by E A Christiansen. *Comment* (EAC): deposition of Qu'Appelle Alluvium started before 10,110 yr.

Riddell series, Saskatchewan

Bone from gravel pit exposure of Floral-Battleford Formations (Christiansen, 1978), 4.8km N of Sutherland (52° 09' N, 106° 36' W). Coll and subm 1975 by T S Woolf.

S-1305. **15,340 ± 500**

Metapodial bone (*Equus*) from sands 1.5m below Floral-Battleford Formation contact.

S-1306. **4560 ± 115**

Bison bone fragments from Battleford Formation, 30cm below surface.

General Comment (TSW): date S-1305 within expected range for Pleistocene sequence, S-1306 post Wisconsin age may indicate human activity.

S-1308. Edson, Alberta **9560 ± 190**

Calcareous tefra deposit in spring discharge area near Edson (53° 59' N, 117° 28' W). Coll and subm by R Voguiell, Alberta Research Council, Edmonton. *Comment* (RV): date indicates deposit post Pleistocene.

II. ARCHAEOLOGIC SAMPLES

S-141. Constable Property site, British Columbia **450 ± 60**

Charcoal from Constable Property site (DkSf-3), Comox Bay, Vancouver I. (49° 40' N, 124° 55' W). From Sq 2, depth 45.7cm, shell midden, Coll and subm 1960 by K Capes, Natl Mus Canada. *Comment* (KC): artifacts similar to Millard Creek site, date too recent, possible intrusive charcoal from late culture marked by shell and slate fragments.

S-143. Mansfield Property site, British Columbia 2370 ± 70

Charcoal from Mansfield Property site (DkSf-1), Sec 66, outside city limits Courteney, Comox Valley (49° 41' N, 124° 59' W). From Sq 1, depth 0.9 to 1.2m, midden of alternate shell and gravelly sand layers. Coll and subm 1960 by K Capes. *Comment* (KC): certain artifacts suggests San Juan phase relationship, id with late phase on Fraser delta (Carlson, 1960). Chipped stone and ground slate points deviate and date implies older lower levels than late Fraser delta complex.

S-144. Campbell River site, British Columbia 810 ± 80

Charcoal from Campbell River site (EaSh-1), W side of mouth of Campbell R, opposite Spit Reserve (50° 02' 40" N, 125° 15' W). From Level 3, fire evident zone, assoc with 2 chipped stone points, obsidian and quartz pieces, depth 33cm. Coll and subm 1960 by K Capes. *Comment* (KC): relationship of site unknown.

S-145. Fort Rupert site, British Columbia 5275 ± 110

Charcoal from Fort Rupert site (EeSu-1), Beaver Harbour, E coast Vancouver I. (50° 42' N, 127° 24' W), 0.8km E of Hudson Bay Co fort founded AD 1849. From Layer 3, stratified shell midden over 3m deep. Coll and subm 1960 by K Capes. *Comment* (KC): unexpectedly early date since bone points and wood-working tools are traits of late San Juan phase (Carlson, 1960). Two resemblances to artifacts from early Straits of Georgia—Juan de Fuca sites were noted.

S-168. Dunn site, Saskatchewan 5000 ± 120

Charred bone from Dunn site (DgNf-1), NE1/4-8-22W2, near Amulet (49° 38' 06" N, 104° 56' 40" W). From undisturbed area below plow zone, over 30 Scottsbluff-Eden points and fragments coll from surface of cultivated field. Coll and subm 1961 by T F Kehoe, Saskatchewan Mus Nat Hist (now Milwaukee Pub Mus). *Comment* (TFK): relatively late date for Scottsbluff-Eden as this Cody complex material from a Wyoming site dated 6650 ± 600 BC (I-245: R, 1964, v 6, p 269-279). Site also included Oxbow occupation dated 3250 ± 130 BC at Oxbow Dam site (S-44: R, 1960, v 2, p 80).

S-211. LeVesconte Mound, Ontario 1170 ± 95

Charcoal from LeVesconte Mound, Concession 1, Seymour Twp, Northumberland, Ontario (44° 11' 05" N, 77° 40' 18" W). From Sq 6D, 53cm depth. Accretion mound constructed by Point Peninsula peoples, containing rich assortment of Hopewellian grave goods. Should date latest period of Hopewellian influence in Ontario ca AD 500. Coll and subm 1962 by W A Kenyon, Royal Ontario Mus. *Comment* (WAK): date 300 yr too recent, no other evidence to support such a late Hopewellian influence in Trent Valley; however, no reason to suspect sample contamination.

S-469. Ouimet site, Ontario 1070 ± 260

Charcoal (NMC-318) from Ouimet site, W end of Oblate Mission I., opposite Lansdowne House, Attawapiskat Lake (52° 13' 30" N, 87° 53' 30" W). From Test Pit I, clearly demarcated Laurel component. Stratified site Late Woodland (Blackduck), Laurel and possible Archaic components. Date should resolve temporal position of Laurel Tradition and represents first Laurel date on the Hudson Bay drainage. Coll and subm 1968 by J V Wright, Nat Mus Canada. *Comment* (JVW): date too recent. An earlier date, AD 250 (S-464: R, v 15, p 199) is regarded as dating occupation.

S-508. Dougall site, Ontario 2185 ± 220

Charcoal (NMC-358) from Dougall site (BdGu-2), side Coucheching Narrows, Simcoe Co (44° 37' N, 79° 23' W). From Sq B, 20cm depth, below Point Peninsula material. Site has continuous occupation from Middle Woodland to historic period. Should date earliest component, early Point Peninsula, Middle Woodland period as 2000 yr. Coll and subm 1969 by J V Wright. *Comment* (JVW): date agrees with AD 170 ± 110 (S-507: R, v 15, p 206) for Point Peninsula occupation of site (Wright, 1972).

Steeprock Lake site series, Manitoba

Charcoal from Steeprock Lake site (C2-UN-55), Prov Govt Campground, Porcupine Forest Reserve, NE1/4-12-42-28-W1, Manitoba (52° 36' 05" N, 101° 21' 30" W). Non-ceramic site with late Paleo-Indian, Early Archaic and Late Archaic tool assemblages. Early component dominated by Early Archaic tool forms with Simonsen-Logan Creek affiliations. Coll by A A Simpson for W M Hlady, Manitoba Archaeol Soc; subm 1970 by R Wilmeth, Natl Mus Canada.

S-615. Steeprock Lake site, Level 5 2480 ± 120

Charcoal (NMC-457) from apparent hearth, depth 20.3 to 30.5cm, in dark red sand level of Sq 205N10W, upper terrace, Level 5 Early Archaic component. Assoc with chopper blade and lithic debris.

S-616. Steeprock Lake site, Level 3 3950 ± 130

Charcoal (NMC-458) from Floor Level 3, depth 15.2 to 20.3cm, in dark red sand, Sq 225N20W, upper terrace, Early Archaic component. Assoc with early tool assemblage, including side-notched point.

General Comment (AAS): dates more recent than estimate ca 6000 yr but consistent with site dark red sand strata overlying light red sands.

Gray Burial site series, Saskatchewan

Human bone fragments from burial site (EcNx-1a), situated above glacial drainage channel, NW of Swift Current, (50° 21' N, 107° 54' W). Large burial site on relatively homogeneous sand deposit. No stratigraphic sequence observed, assoc with Oxbow projectile points. Coll 1970

and 1971 by J Wilson, T Foster and B Clark; subm 1971 by J F V Millar, Univ of Saskatchewan.

S-619. Burial 23	4955 ± 165
S-646. Burial 42	3755 ± 100
S-647. Burial 46	5100 ± 390
S-693. Burial 59	3550 ± 295
S-706. Burial 30	3485 ± 195
S-707. Burial 65	3750 ± 180

General Comment (JFVM): dates seem to cluster into groupings, no stratigraphic or cultural evidence for this observation.

East Pasture site series, Saskatchewan

Bone fragments from East Pasture site (EcNx-4), NW of Swift Current (50° 21' N, 107° 52' W). From Test Pit 18, lowermost horizon assoc with Oxbow culture artifacts. Coll 1970 and 1971 by J Wilson; subm 1971 by J V F Millar.

S-638. Unit 77/114	265 ± 80
Assoc with unid. pottery, 70 to 80cm below surface.	
S-639. Unit 70/143	2405 ± 80
Horizon immediately above Oxbow level.	
S-637. Unit 70/143	4235 ± 55
Oxbow horizon 60 to 100cm below surface.	

General Comment (JFVM): dates consistent with cultural affiliation and stratigraphy.

Sibbetson Lake site series, Northwest Territories

Charcoal from Sibbetson Lake site, 80.5km W of Fort Simpson, NWT (61° 50' N, 121° 10' W) on point, NW end of Sibbetson Lake. From hearth I to 8cm below surface, 18.3m from lake shore in silt, assoc with artifact assemblage termed Mackenzie Complex. Coll 1972 by K Dice and L Korotopetz; subm 1972 by J F V Millar.

S-691.	2225 ± 170
1 to 8cm depth.	
S-703.	2265 ± 385
1 to 8cm depth.	

General Comment (JFVM): dates correlate well with the cultural assoc, represents transitional stage between middle and late period of Déné prehistory of W Mackenzie Basin.

Bell site series, British Columbia

Charcoal from Bell site (EeRk-4), 16km NE of Lillooet, British Columbia, on E bank of Fraser R at 700m asl (50° 44' 35" N, 121° 49' 30" W). 23 prehistoric housepits of various ages, most cultural material attributed to Kamloops phase, ca AD 1250 to 1800. Oldest occupation coincides with use of microblades ca 2550 to 550 BC. Good organic preservation and high artifact yield have added to knowledge of late prehistoric life of area. Coll 1971 by J Hubbard, R Torrens, J Bade, D Best, M Freisinger, S Lawhead and J Levitt for A H Stryd, Cariboo Coll, Kamloops, British Columbia; subm 1972-1974 by R Wilmeth.

S-659. Housepit 22a 1930 ± 70

Charcoal (NMC-502), depth 75cm below surface on bottom, oldest floor. Assoc cultural material assigned to Component 3, 2nd oldest at site, containing atlatl points, no evidence of bow and arrow use, and no microblades, ca 500 BC to AD 1.

S-660. Housepit 22b 1215 ± 90

Charcoal (NMC-503), depth 35cm below surface. Assoc with dark-colored stratigraphic zone containing Kamloops phase cultural material, youngest occupation of House 22 and site, ca AD 1300 to 1700.

S-661. Housepit 23 1560 ± 90

Charcoal (NMC-504), depth 45cm below surface, overlying only living floor in house. Assoc cultural material Kamloops phase, one of largest artifact samples of site, ca AD 1300 to 1700.

S-662. Housepit 2 1305 ± 80

Charcoal (NMC-505), depth 20cm below surface, from charred and burned wood overlying only living floor in house. Floor assoc with material Component I, Kamloops phase, ca AD 1100 to 1300.

S-709. Housepit 13 1380 ± 65

Charcoal (NMC-506), depth 28cm below surface, above only living floor in house. Assoc Component I, Kamloops phase, ca AD 1100 to 1600.

S-763. Housepit 19 1430 ± 60

Charcoal (NMC-507), depth 40cm below surface. Single living floor assoc with developed form of Kamloops phase. House almost fully excavated yielded nearly 3000 tools. Good organic preservation resulted in recovery of carvings in bone and antler, also wide range of tools, ca AD 1300 to 1700.

S-764. Housepit 1 2965 ± 95

Charcoal (NMC-508), bottom of large post hole, 102cm below surface and 72cm below only living floor. One of larger assemblages of site but no diagnostic artifacts, ca AD 1000 to 1800.

S-765. Housepit 21 **1470 ± 40**

Charcoal (NMC-509), depth 118cm below surface, assoc with oldest floor. Directly overlying sample was stratigraphic zone containing 1% volcanic ash, presumably Bridge River ash dated to late 1st millennium BC, ca 500 BC to AD 500.

S-937. Housepit 5 **1380 ± 65**

Charcoal (NMC-728), timber feature overlying only floor in house, presumably part of house superstructure. Single component occupation, early Kamloops phase.

S-938. Housepit 14 **1575 ± 145**

Charcoal (NMC-729), depth 40 to 50cm below surface, probable roof fill directly overlying bottom floor. Adequate diagnostic material lacking, probably belongs to Lillooet phase.

General Comment (AHS): dates part of 24 dates on Bell site and part of 50 radiocarbon ages of archaeol assemblages from Lillooet area, interior British Columbia. One, possibly 2 pre-housepit occupations, one with microblades, were uncovered but assemblages are small and not yet dated. Bell site housepits span 3 tentative archaeol phases a) poorly represented, unnamed phase prior to Lillooet phase but not assoc with microblades termed Nicola phase (Stryd, 1973), b) Lillooet, and c) early Kamloops phase. S-659 and S-764 provide min and max dates for pre-Lillooet phase, supported by dates from housepit 1, Mitchell site (S-580-582: R, 1975, v 17, p 335). These demonstrate that housepits are almost as old as 3000 yr and are not assoc with microblades, contrary to findings of Lochmore-Nesikep locality just S of Lillooet (Sanger, 1970). S-938 provides an age estimate of Lillooet phase which terminates ca AD 450, S-662 unacceptably young for this phase. Other dates acceptable for earliest manifestations of the Kamloops phase, except S-661 is somewhat too old. Distinction between Lillooet and Kamlops phases not always certain, considerable continuity and overlap exists between these 2 archaeol units. Dates also exhibit overlap, period 1560 ± 90 to 1305 ± 80 BP. Rejection of oldest Kamloops phase dates, S-661 and I-6067 (R, 1976, v 18, p 184) and youngest Lillooet phase dates, S-662 and I-6077C, unpub, suggest AD 450 for boundary between these 2 phases, but more complex overlapping may exist.

Junction site series, Northwest Territories

Charcoal (KjNb-6), ca 200m from Thelon Game Sanctuary (63° 39' 30" N, 104° 28' 20" W). Site 200 by 400m subject to erosion of blowout side walls, central portion destroyed by aeolian action, result materials from all 7 levels on common level suitable for cluster analyses. Coll 1971 by B Yorga, S Burger, P Kettles, J Hunston and 1972 by B C Gordon; subm 1972 and 1973 by B C Gordon, Natl Mus Canada.

S-663. Junction site, Level 3 1915 ± 140

Charcoal-sand mix (NMC-512) assoc with quartzite basally-ground point, quartzite microblade and blade-core fragment, a sidescraper-unifacial knife fragment, bifacial knives and tubular end scraper, ca AD 1000.

S-710. Junction site, Keewatin level 5060 ± 310

Charcoal-sand mix (NMC-513) from lowest or Keewatin level, Sq 55, 4S2E. Should date initial occupants of region, ca 2000 to 2500 BC.

S-664. Junction site, Keewatin level 3085 ± 70

Charcoal-sand mix (NMC-514).

S-718. Junction site, Level 3 1600 ± 65

Charcoal (NMC-575) assoc with side and end scrapers, tabular endscraper, blades, biface and uniface fragments.

S-719. Junction site, Thelon II or Keewatin level Modern

Charcoal (NMC-576). Should date Thelon I or II, ca 2500 yr BP or older.

S-720. Junction site, Level 3 1085 ± 80

Charcoal (NMC-577) assoc with quartzite sideblades.

S-732. Junction site, below Level 5 1775 ± 100

Charcoal (NMC-578) from below Levels 5, 4 and 3 and above Arctic Small Tool tradition level. Assoc with keeled endscraper and combination side-endscraper, ca AD 200 to 500.

S-733. Junction site, Level 2 1515 ± 110

Charcoal (NMC-579) Area C, assoc with crude lanceolate point.

S-734. Junction site, Level 3 1780 ± 215

Charcoal (NMC-580).

General Comment (BCG): 1st complex stratified site in barrenlands, few Shield Archaic, Pre-Dorset and Taltheilei dates prior to Junction site, hence narrow age-range initial estimates. Additional barrenland excavations suggest the following cultural assignments; S-710 Shield Archaic, S-664 Arctic Small Tool, S-663, S-718, S-734 Middle Taltheilei, S-720 Late Taltheilei. Area C, Level 2 and Area B below Level 5, S-733 and S-732 date Middle Taltheilei. S-719 coll a few cm below surface, near center of blowout where old cultural floors emerge apparently contaminated by more recent campfires.

Tezli site series, British Columbia

Charcoal from Tezli site (FgSd-2), W end of Kluskus creek on both shores, 1067m asl (53° 04' 30" N, 124° 30' 05" W). Large pit house village site, multiple occupations both within and between houses. Upper levels may represent Carrier Indians, lower levels may pre-date Carrier occupation. Coll 1971 by K Dedecker, A Lewicki, A Scholz, T Lorenz and P F

Donahue; subm 1972, 1973, 1975 by P F Donahue, Univ Wisconsin (now Archaeol Survey of Alberta, Edmonton, Alta).

S-666. Tezli site, Housepit B, hearth **240 ± 155**

Charcoal (NMC-525) from central hearth, ca AD 500 to 1800.

S-667. Tezli site, Housepit B, Feature 20-71 **3275 ± 405**

Charcoal (NMC-526) from rock concentration with charcoal 20 to 30cm below surface, Sq N2/E1. Should date most recent occupation ca AD 500 to 1800.

S-768. Tezli site, Housepit D, hearth **335 ± 135**

Charcoal (NMC-527) from central hearth ca AD 500 to 1800.

S-769. Tezli site, Housepit D, E wall **3850 ± 140**

Charcoal (NMC-528) 80cm below surface, N1.3m/E0. Should date oldest occupation ca AD 500 to 1500.

S-770. Tezli site, Housepit F **2335 ± 120**

Charcoal (NMC-529) at base of hole above river gravel. Should date 2nd house row, ca AD 500.

S-771. Tezli site, Housepit J **1920 ± 190**

Charcoal (NMC-530) at base above river gravel. 2nd row of parallel housepits, ca AD 500.

S-1035. Tezli site, Housepit Q **100 ± 60**

Wood (NMC-792) from Feature I2-71, post remains in B horizon of House Q. Post dug into C horizon and did not extend up through A horizon. Should date summer surface occupations rather than pithouses, cluster of 3 structures different than others of site, assoc 3 microblades, ca AD 1.

General Comment (PFD): dates agree with interpretation of cultural history. S-667 and S-769 date earliest known construction of pithouses, older than original estimate. S-1035 regarded as recent intrusion, *ie*, fence post.

Blind Bay Rock Shelter series, British Columbia

Charcoal from Blind Bay Rock Shelter (EfQu-10), Shuswap Lake (50° 54' 04" N, 119° 22' 55" W). Small rock shelter under schist outcrop overhang. Cultural affiliation uncertain, assoc with one crudely fashioned stemmed point and one lanceolate shaped point. Coll 1972 by S Johnson, J D Stewart, Univ Calgary, and K Fladmark, Simon Fraser Univ; subm 1973 by R Wilmeth.

S-725. Blind Bay Rock Shelter, Zone I **3290 ± 140**

Charcoal (NMC-563) from concentration within thin layer of charcoal-stained beach gravel. Lowest part of earliest cultural zone, 0.47 to 0.49m below surface.

S-726. Blind Bay Rock Shelter, Zone I 1695 ± 165

Charcoal (NMC-564) from base of lowest cultural zone, 0.30m below surface.

S-727. Blind Bay Rock Shelter, Zone IV 1485 ± 90

Charcoal (NMC-565) from concentration of charcoal beneath fallen schist slab in middle cultural zone, 0.25m below surface. Assoc with much tiny flakes showing signs of heat treatment.

S-728. Blind Bay Rock Shelter, Zone V 430 ± 65

Charcoal (NMC-566) from highest charcoal-stained layer, below fallen schist slab, 0.17m below surface.

General Comment (JDS): earliest occupation to date of Shuswap Lake sites (Fradmark, 1973), contrary to original expectation of Paleo-Indian occupation suggested by geology and meager artifacts (Stewart, 1973). S-725 and -726 date difference possibly from disturbance during prehistoric occupation due to loose gravel deposits; Zone I probably represents long depositional period rather than single component of short period. Rock shelter intermittently occupied during dated period.

S-742. Carruthers site, Saskatchewan 3050 ± 80

Charred bone from Carruthers site (FbNs-3), near N edge of Dunfermline Sand Hills (52° 12' 10" N, 107° 02' 46" W). Assoc with Oxbow projectile points in cultural layer 35 to 50cm below surface. Coll 1972 and subm 1973 by I G Dyck, Sask Mus Nat History, Regina. *Comment (IGD):* minimum age for Oxbow complex, site marked by abundant small end scrapers and sparse animal bones indicating special activity area.

Saatut site series, Northwest Territories

Caribou bones from Saatut site (PeHa-1), Borden Peninsula, W coast of Eclipse Sound, on S shore of flat point, S end of Navy Board Inlet, Baffin I. (72° 43' 45" N, 80° 13' W). Small artifact rich Dorset site, Saatut I 2.7m asl, Saatut II 5cm asl, however artifacts suggest contemporary occupations. Coll and subm 1973 by Fr G Mary-Rousselière, Catholic Mission, Pond Inlet.

S-755. Saatut I, Caribou bone (NMC-594) 1530 ± 80

From Sq 7, Dorset midden, should date local phase of culture characterized by specialized industry ca AD 100.

S-881. Saatut I, Caribou bone (NMC-657) 1325 ± 90

From Sq 41 and 42, lower level of midden.

S-756. Saatut II, Caribou bone (NMC-595) 1925 ± 70

From Saatut II house.

S-850. Saatut II, Caribou bone (NMC-654) 1180 ± 90

From Sq 5, House 1.

General Comment (GM): previous dates on seal bones Saatut I AD 440 and Saatut II 445 BC were too far apart for typologically similar sites (S-590, -671: R, 1975, v 17, p 337, 342). S-755 and -756 still too far apart to support contemporary occupations. S-850 and -881 both too recent.

Stendall site series, Manitoba

Bone from Stendall site, Pipestone Creek, SE Sec 3 Twp 10 R 29W1 (49° 48' 10" N, 101° 19' 53" W). Large buffalo kill-processing site. Coll 1972 by A Gerth; subm 1973 by W M Hlady, Manitoba Archaeol Soc.

S-785. Stendall site, Level 2 **755 ± 60**

Bone, probably bison (NMC-604) from 5.1 to 10.2cm below surface.

S-786. Stendall site, Level 3 **965 ± 70**

Bone, probably bison (NMC-605) from 10.2 to 15.2cm below surface.

General Comment (WMH): dates indicate occupation period of 2 centuries although assoc artifacts suggest a shorter period.

White site series, Ontario

Carbonized wood and charcoal from White site, Lot 34, Conc 6, Pickering Twp (44° N, 79° W). Site ca 207m asl, ca 0.8 to 1.2 ha, on secondary R Terrace and yet undetermined area of main terrace above small branch of W Duffin Creek. Shallow cultural deposits, apparent difference in carbonized seed remains and scarcity of faunal remains are in sharp contrast to nearby Drapper site, suggest site was large seasonal camp with structures for specialized economic activities. Ceramics extremely varied and include Huron Incised, Black Neck, and basket-impressed types. Coll 1973 by P G Cook, S Sawford and R Naras; subm 1973 by B Hayden, Virginia Commonwealth Univ (now Simon Fraser Univ).

S-791. White site, Sq 42-44N, 5-7E **320 ± 70**

Carbonized cedar stump (NMC-616) from W wall of Sq, depth 15cm below surface, in midden deposit which extends to 30cm depth, assoc with carbonized corn kernels, fish and animal bones, and ceramics. Rich midden in vicinity of hearth and several pits.

S-792. White site, Sq 20-22S, 10-12W **435 ± 85**

Charcoal (NMC-617) from Feature 2, depth 12cm below surface, basin-shaped depression between 2 gravel bars, refuse filled. Sample from 3cm below light gray ash lens and 5cm above river gravels. Midden yielded much vegetal material, carbonized corn kernels, fish and animal bone but little ceramics.

S-858. White site, Sq 18-20S, 4-6W **1070 ± 105**

Charcoal (NMC-618) from Feature 1, refuse filled basin-shaped depression. Poor recovery of cultural and organic material.

S-857. White site, Sq 18-20S, 8-10W 645 ± 105

Charcoal (NMC-619) from Feature 1 depth 12 to 15cm, assoc with carbonized corn kernels and sherds.

S-859. White site, Sq 42-44N, 5-7E 225 ± 90

Charcoal (NMC-620), depth 30 to 33cm, lower portion of midden containing abundant pottery, fish, animal, and human bone.

General Comment (BH): dates are from various locations on site hence may represent more than 1 component. S-858 appears anomalous but may represent early Iroquoian occupation, excluding S-858 mean value compatible with contemporaneous occupation with Draper site.

S-797. Atherly Narrows site, Ontario 4560 ± 115

Wood from fish weir stake, Atherley Narrows between Simcoe and Couchiching Lakes, N Hwy 12 bridge, Mara Twp (43° 36' 19" N, 79° 22' 05" W). Id paper birch (*Betula Papyrifera*). Coll 1973 by K Cassavoy; subm 1973 by R B Johnston, Trent Univ. *Comment* (RBJ): date agrees with previous dates on other weir stakes (Johnston & Cassavoy, 1977) slightly older than 2500 BC.

S-798. Constance Bay Site-2, Ontario 1855 ± 110

Charcoal from Constance Bay Site-2 (BiGa-3), on Constance Creek, 48km W of Ottawa (45° 28' N, 76° 04' W). Assoc with Middle Woodland ceramics and lithics. Coll and subm 1973 by G D Watson, Ottawa. *Comment* (GDW): date consistent with Middle Woodland ceramics of site.

Grant Lake site series, Northwest Territories

Charcoal and peat from Grant Lake site (KkLn-2) NE end of Grant Lake, Dubawnt R, Keewatin Dist (63° 43' 20" N, 100° 26' 10" W). Agate Basin site, probable fall caribou hunt location ca 5550 to 6050 BC. Coll 1973 and subm 1973, 1975, by J V Wright.

S-809. Grant Lake site, Sq C Feature 1 2025 ± 100

Charcoal (NMC-666) under firestone of Feature 1. Should date 1st occupation of area.

S-833. Grant Lake site, Sq C Feature 2 160 ± 50

Charcoal (NMC-667) from N edge of hearth in Feature 2 on surface of duft.

S-810. Grant Lake site, Sq A Feature 2 3620 ± 105

Charcoal (NMC-668) from concentration in duft, 25.4cm below surface.

S-811. Grant Lake site, Trench I 1515 ± 85

Peat (NMC-669) from trench 6m E of Sq D, 66cm below surface and 35.6cm below occupation level. Non-cultural, should pre-date Agate Basin level and post-glacial plant mat. Geol significance and earliest possible time of man in area.

S-1056. Grant Lake site, Sq A, B and C 7220 ± 850

Carbonized bone (NMC-808-812) combined sample from Components A, B and C. Should date 1st human occupation of area and period relative to similar materials to S and W.

General Comment (JVW): apparent erratic contamination of samples except S-1056 where max range acceptable date.

S-814. Butte site, Quebec 805 ± 95

Charcoal (NMC-673) from Butte site (Cb-Fd-7), Becancour municipality, 0.8km E of Laviolette Bridge, 1.6km S of St Lawrence R (42° 18' N, 72° 32' W). Site on hill summit, ca 192m N-S, 41 to 180m E-W, 10m above surrounding terrain and river level, W slope sand, E slope clay. Occupation zone irregular and discontinuous, varies in depth relative to surface. From Pit N10, depth 25cm, assoc with Lamoka point. Should compare to Lamoka remains of N Y State and date level of Champlain Sea for this period ca 2000 bc. Coll 1973 by P Gauthier; subm 1974 by R Marois, Nat Mus Canada. *Comment (RM):* Lamoka and Brewerton points indicate earlier period, sample not related to remains.

S-815. Bouvais site, Quebec 2180 ± 140

Charcoal (NMC-674) from Bouvais site (CbFd-5), on narrow terrace, probable ancient beach, midway S flank of hill below Butte site (CbFd-7), Becancour municipality, 0.8km E of Port Laviolette, 1.6km S of St Lawrence R (42° 18' N, 72° 32' 18" W). Occupation zone rests on gravel S edge and fine sand on N edge of terrace. From Pit N103, 23cm below surface on fine sand, assoc with expanded base drill, base of occupation zone. Same occupation zone in Pit N4 yielded Lamoka point shorter than point of Butte site. Comparison to S-814 should mark possible change of Lamoka points and indicate retreat rate of Champlain Sea. Coll 1973 and subm 1974 by R Marois. *Comment (RM):* date seems too recent as site yielded no potsherds, ceramics in use in area since 800 bc.

Beaumier site series, Quebec

Charcoal from Beaumier site (CcFd-2), St-Odilon on sand terrace with abrupt face 6m high, E bank St Maurice R, 4.8km from mouth (48° 22' N, 72° 34' W). Site 130 by 30m, intersected by 3 deep depressions former creek tributaries to St Maurice R. Occupation zone at surface, scattered artifacts, regularity of surface broken by mounds, one containing 20cm charcoal. Site linked to development of St Lawrence Iroquois. Coll 1972 by C Ouayou, P Courbin, J Trudel and A Gérard; subm 1974 by R Marois.

S-816. Beaumier site, Pit NIW9 145 ± 80

Charcoal (NMC-675) from Level I, Zone C, depth 11cm below surface. Assoc with uncollared rim sherd decorated with cord-wrapped stick impressions in vertical above oblique above horizontal bands from lip to shoulder, lip pointed. Interior also bears cord-wrapped impressions ca AD 1000.

S-817. Beaumier site, Pit W6 280 ± 135

Charcoal (NMC-676) from Level 1, Zone C, depth 14cm below surface. Assoc with uncollared rim sherd decorated with linear impressions forming a double horizontal row of cross-hatch. Lip also cross-hatch decorated, interior not decorated. Woodland cultural complexes of region not clearly defined or chronologic position certain. Date should give chronologic position and aid evaluation of change evidenced by pottery ca AD 1000.

S-836. Beaumier site, Pit 05 370 ± 70

Charcoal (NMC-678) from Level 1, Zone D, 18cm below surface.

S-837. Beaumier site, Pit N, 05 185 ± 75

Charcoal (NMC-679) from Pit N, 05, Level 1, Zone D, 20.5cm below surface.

S-838. Beaumier site, Pit S, 08 375 ± 70

Charcoal (NMC-680) from Level 1, Zone B, 9cm below surface.

General Comment (RM): S-816 and -837 rejected as too recent since no group of Trois-Rivières region of 17th or 18th centuries, historic period, known to have assoc artifacts. S-817, -836, and -838 are reasonable at lower error range; latter 2 assoc with sherds from a single vessel. Age difference between S-836 and -837 from adjacent pits at same depth unexplained; implies contamination or site disturbance during historic occupations.

Draper site series, Ontario

Charcoal from Draper site (AlGt-2), left bank Duffins Creek, Pickering Twp, 289 asl (43° 56' 30" N, 79° 10' 20" W). Late Ontario Iroquois site, almost certainly ancestral to Huron. Possibly fortified, located along steep stream terrace. Coll 1973 by M Malberg, M Dawding, P Naras, A Simmons and B Hayden; subm 1974 by B Hayden.

S-818. Draper site, Sq 42-44N, 42-44E 590 ± 75

Charcoal (NMC-621) assoc with Feature 2, hearth in A3 soil horizon, ca AD 1450.

S-819. Draper site, Sq 28-30N, 66-68E 210 ± 80

Charcoal (NMC-622) from sub-Sq 4, Feature 2, hearth 24 to 27cm depth. Should date house occupation, ca AD 1450.

S-860. Draper site, Sq 20-22N, 72-74E 405 ± 65

Charcoal (NMC-623) from sub-Sq 12 and 16, Feature 1. Should date house occupation.

S-861. Draper site, Sq 22-24N, 72-74E 570 ± 95

Charcoal (NMC-624) from sub-Sq 13 and 14, Features 2 and 3, 30 to 35cm depth. Should date house occupation.

S-862. Draper site, Sq 22-24N, 70-72E 430 ± 85

Charcoal (NMC-625) from sub-Sq 11 and 15, fill of Posthole 1, 36cm depth. Should date house occupation.

S-863. Draper site, Sq 46-48N, 42-44E 495 ± 65

Charcoal (NMC-626) from Feature 4, 42 to 5cm depth. Should date house occupation.

General Comment (BH): all samples from interior of Structure 2, average of all samples AD 1500, excluding S-819 average AD 1452, both closely agree with ceramic age estimate AD 1450 to 1500 (Wright, 1966).

Saamis site series, Alberta

Bone and charcoal from Saamis site (EaOp-6), 2.5km upstream from entrance of Seven Persons Creek into S Saskatchewan R, NE 1/4 Sec 24 Twp 12R6W4, 724 asl (50° 1' N, 110° 42' W). Coll 1973 by V Gadd, J Stuber and B Burton; subm 1974 by L Brumley, Medicine Hat Coll, Medicine Hat, Alberta.

S-824. Saamis site, Area C 435 ± 125

Bone (NMC-635) from excavation Unit 73, SE quad and excavation Unit 77, SE quad, 0.9m below surface. Late prehistoric site assoc with meat processing activities. Should date earliest occupation ca AD 1600 to 1700.

S-825. Saamis site, Area E 85 ± 70

Bone (NMC-636) from excavation Unit 78, NE quad, sparse layer of bone in bank along Creek. Potsherds from single Late Prehistoric vessel recovered. Probable bison butchering-processing site.

S-827. Saamis site, Area B 210 ± 80

Charcoal (NMC-642) from excavation Unit 116, NE quad, Level 1, Feature 72, depth 7.6 to 66cm below surface. Late prehistoric or protohistoric campsite area. Sample from one of a number of basin hearths, which contained layers of fire-cracked rocks; deer, bison and dog bones; and 2 large duck-stamped rim sherds.

General Comment (LB): S-824 and -827 within expected age range and correspond to stratigraphic sequence. S-825 unacceptable should date close to S-824.

S-826. Stampede Camp, Alberta 3690 ± 95

Charcoal (NMC-637) from Stampede Camp site (EaOp-4), on Seven Persons Creek, NE 1/4 Sec 24 Twp 12R6W4, 661 asl (50° 01' N, 110° 39' W). From excavation Unit 17, Feature 5, large rock-filled basin hearth. Late prehistoric campsite based on ceramics and projectile points ca AD 1500 to 1600. Coll and subm 1973 by I. Brumley. *Comment* (LB): date 2000 yr older than estimate based on single potsherd and several Plains Side-notched projectile points; no earlier diagnostic artifacts recovered. Sample definitely assoc with hearth fill, no disturbance evident. Multicomponent site is concluded although lack of supporting evidence.

S-828. Point Beazer site, Alberta **430 ± 90**

Charcoal (NMC-643) from Point Beazer site (DhPh-3), on 1st terrace above W side St Mary R (49° 07' N, 113° 12' W). From Feature 3, irregular rock-lined hearth, 74 to 79cm below surface, 25N130W, Level 4. Assoc with fire-broken rock, argillite flakes and chopper, butchered bone, canine mandible, and an obsidian flake, dated AD 1590 by obsidian hydration method. Multicomponent campsite in Old Women's phase of late prehistoric period, assoc with kill-site (DhPh-2). Coll 1973 by B Burles; subm 1974 by J M Quigg, Univ Calgary (now Archaeol Survey Alta, Edmonton, Alberta). *Comment* (JMQ): although hearth not directly assoc with major cultural refuse, date in Old Women's phase time range, earliest occupation of site. Obsidian date in reasonable agreement.

S-829. DhPh-13 site, Alberta **1150 ± 120**

Charcoal (NMC-644) from DhPh-13 site, W side St Mary R, on 2nd terrace (49° 12' 45" N, 113° 15' 05" W). From irregular rock-lined hearth, Test 3, Level 4, 58cm below surface, assoc with side-notched projectile point and potsherd. Single component occupation level in Old Women's phase, in buried Ah horizon within Chernozemic soil profile. Debris included fire-cracked rock, butchered bison bone, ceramics and flakes dispersed over large area with concentrations in activity areas, ca AD 1200. Coll 1973 by J Thompson; subm 1974 by J M Quigg. *Comment* (JMQ): 1 of few early dates for Old Women's phase in S Alberta; similar artifacts from Belly R valley DgPk-75 site dated AD 750 (S-724; R, 1975, v 17, p 348). Sample provides evidence that Old Women's phase spread across S Alberta during this time.

Cape Freels-I site series, Newfoundland

Charcoal from Cape Freels-I site (DhAi-1), on high ridge along Cape Cove between S Bill and Cape Island, Bonavista Bay (49° 14' 10" N, 53° 29' 20" W). Series of Maritime Archaic seasonal encampments, 1000 to 3000 bc. Coll by P Bishop and P Carignan; subm 1974 by P Carignan, Memorial Univ (now Newfoundland Mus).

S-830. Cape Freels-I site, Loc 6 **1450 ± 110**

Charcoal (NMC-660) from hearth, S15E0.

S-868. Cape Freels-I site, Loc 9 **1605 ± 65**

Charcoal (NMC-664) from hearth, S70W25.

S-869. Cape Freels-I site, Loc 3 **1045 ± 90**

Charcoal (NMC-665) from hearth, S40E5.

General Comment (PC): site initially believed to be late terminal Archaic, however, dates indicate occupation during and slightly later than Dorset period and may alter previous conceptions of cultural sequences of insular Newfoundland.

S-831. Cape Freels-2 site, Newfoundland 1740 ± 100

Wood charcoal (NMC-661) from Cape Freels-2 site (DhAi-2), Cape Cove beach between S Bill and Cape I., Bonavista Bay (49° 14' 01" N, 53° 29' 07" W). From hearth in single occupation layer underlying peat deposit. Prehistoric Beothuck ca AD 1000 to 1500. Coll 1973 and subm 1974 by P Carignan. *Comment* (PC): date earlier than expected and, if accepted, establishes Beothuck Indian presence during extensive Dorset Eskimo occupation of insular Newfoundland. Further site dates will be required to verify Indian-Eskimo cohabitation of island and possible Beothuck descendants from Maritime Archaic inhabitants.

Cape Freels-3 site series, Newfoundland

Charcoal from Cape Freels-3 site (DhAi-3), on high embankment near Cape I., Bonavista Bay (49° 13' 50" N, 53° 28' 55" W). Terminal Maritime Archaic seasonal encampments ca 1000 to 3000 BC. Coll 1973 and subm 1974 by P Carignan.

S-832. Cape Freels-3 site, Loc II 1205 ± 80

Charcoal (NMC-662) from Archaic hearth, N20E25, below peat deposit.

S-867. Cape Freels-3 site, Loc 7 1255 ± 105

Charcoal (NMC-663) from Archaic hearth, N15E10, below peat deposit.

General Comment (PC): dates later than expected, indicates occupation during late Dorset period.

S-835. Monique site, Quebec 1060 ± 105

Charcoal (NMC-677) from Monique site, in Becancour Industrial Park, 100m from St Lawrence R, Quebec (46° 26' 20" N, 72° 25' 30" W). Site on sand beach broken by knolls and marsh areas at bank of St Lawrence R. From Sec A, N trench, 52cm below surface, assoc with body sherds, some decorated with fingernail impressions, others, thick cord-wrapped stick impressions. Should establish chronologic position of site relative Beaumier and Batiscan sites ca AD 900. Coll 1973 and subm 1974 by R Marois. *Comment* (RM): date between Batiscan and Beaumier sites of Trois-Rivières area.

S-844. DgPh-2 site, Alberta 130 ± 85

Unbutchered bison bone (NMC-627) from DgPh-2 site, W bank St Mary R, E of Atena (49° 07' N, 133° 12' W). From lowest level of bone bed at water edge, 4m overburden soil. Buffalo kill in slump block next to river, badly eroded, located between buried campsites DgPh-1 and DgPh-3. Assoc with quantities of unbutchered axial skeletal remains and a few butchered elements. No lithic material discovered. Coll 1972 and subm 1974 by J M Quigg. *Comment* (JMQ): date suggests assoc with Old Women's phase of Late Prehistoric period. Slump more recent covering bone deposit. Point Beazer site upstream containing camp and processing areas probably related to site.

Majorville Cairn series, Alberta

Bone from Majorville Cairn (EdPc-1), S bank of Bow R, 32km S of Bassano (50° 31' N, 112° 24' W). Cairn 918.4 asl, 9m diam and 1.6m high, encircled by medicine wheel, 28.8m diam, with 26 to 28 spokes. Coll 1971 and subm 1974 by J Calder, Univ Calgary.

S-854. Majorville Cairn, Layer 16 **2090 ± 210**

Bone (NMC-584) from Level 1, excavation Unit 1-7.

S-855. Majorville Cairn, Layer 12 **2655 ± 85**

Bone (NMC-585) from Levels 1 to 3, excavation Unit 1-5.

S-856. Majorville Cairn, Layer 14 **3845 ± 160**

Bone (NMC-586) from Levels 1 to 2, excavation Unit 2 × 1-7.

General Comment (JC): dates verify early antiquity for cairn bldg on NW plains.

Baldwin site series, British Columbia

Charcoal from Baldwin site (GbTo-36), W side Kaien Island, Prince Rupert Harbour (54° 17' 03" N, 130° 21' 22" W). Coast Tsimshian village site, destroyed 1974 by harbour construction. Coll 1973 and 1974 and subm 1974 by R Inglis, Nat Mus Canada.

S-871. Baldwin site, Trench 1 **2655 ± 65**

Charcoal (NMC-691) from Area A, Level 16, 3.63m below surface; lower level of site ca 4000 to 4500 yr BP.

S-872. Baldwin site, Trench 7 **3285 ± 110**

Charcoal (NMC-692) from Area A, N wall of hearth feature excavated into basal sands. Should date 1st occupation ca 4000 to 4500 yr BP.

S-873. Baldwin site, Trench 5 **1830 ± 105**

Charcoal (NMC-693) from Area A, Level 12, SW quad, 2.77m below surface. Will date lower level and significant zoomorphic carving ca 3000 to 3500 yr BP.

S-990. Baldwin site, gravel pit profile **2740 ± 110**

Charcoal (NMC-776) from 1.9cm burnt wood lens in gravel pit profile, extending from edge of pit feature 1.4m towards harbor. From 1.1m below surface, basal layer on band of decomposed rock 3.8cm thick, overlying thin band of clay on sterile matrix.

S-991. Baldwin site, Trench 5 **1525 ± 55**

Charcoal (NMC-777) from Area A, Level 3, 0.97m below surface in hearth feature in matrix of crushed clam and gray gravel. Will date burials and artifacts from upper horizon.

General Comment (RI): site badly disturbed by railroad construction AD 1910, World War II defense encampments and recent small cabins, leaving only back platform area intact. As with other sites in area, inland

area dates later than front probably a result of population pressure forcing expansion inland. Start of this behavior was Middle period, 1500 BC to AD 500; S-872, -871, and -990 acceptable dates. S-873 somewhat later than 500 BC estimate but acceptable. S-991 indicates degree of midden disturbance.

S-874. Flach site, Alberta 3260 ± 320

Charcoal (NMC-447) from Flach site (FjPh-101), on 1 of upper terraces of Old Man Creek, 3.2km from confluence with N Saskatchewan R, NE of Edmonton (53° 30' N, 113° W). From NW corner of NE test block at bottom of fossil *Bison* level. Excavation uncovered remains of at least 2 bison larger than contemporary forms, with many long bones placed in piles. Assoc flake and non-diagnostic triangular point on quartzite flake. Should date terminal phase of terrace construction related to N Saskatchewan R terrace sequence, ca 5000 to 11,000 yr BP. Coll 1970 by R Bonnichsen, Univ Maine, Orono; subm 1974 by R Wilmeth, Nat Mus Canada. *Comment* (RB): charcoal assoc with remains of large bison, horn core spread greater than 91cm, considerably larger than *Bison bison*. Date younger than expected, no reason to doubt validity, probably 1 of youngest dated *Bison occidentalis* skeletons yet recovered in N Plains.

Bird's Eye Cove Shelter series, British Columbia

Charcoal from Bird's Eye Cove Shelter (DeRu-15), 1.2km S of Bird's Eye Cove, Range 5, Sec 17, Vancouver I. (48° 46' 50" N, 123° 35' 50" W). Rock shelter 13 by 5m, open N and S ends. Stratigraphy unclear, ash lenses and larger shell midden layers difficult to trace from 1 pit to next. Coll 1971 by D N Abbott; subm 1974 by B Kennedy, Prov Mus British Columbia.

S-875. Bird's Eye Cove Shelter, 3.22m depth 2000 ± 70

Charcoal (NMC-556) from loose shell midden, N8.60, E0-0.10, 3.22m below Datum A, 0.5m below surface. Assoc with bone chisel and 2 shell ornaments.

S-876. Bird's Eye Cove Shelter, 2.75m depth 1310 ± 70

Charcoal (NMC-557) from N4.90-6.00, ca W2.60-2.90, at edge of hearth between dark soil and shell midden, 0.10 to 0.15m below surface. Same assoc as S-875.

S-877. Bird's Eye Cove Shelter, 3.10 to 3.30 depth 1900 ± 75

Charcoal (NMC-558) from loose shell midden with occasional black streaks in excavation unit, N7-9, W1-3, 3.10 to 3.30m below Datum A, 0.45 to 0.65m below surface. Lowest sample recovered; with S-875 and -876, should date range of occupation ca AD 1450.

S-878. Bird's Eye Cove Shelter, 2.88m depth 1205 ± 80

Charcoal (NMC-559) from among fire-cracked rocks, N7-9, E0, 2.88m below Datum A, 0.10 to 0.15m below surface. Same assoc as S-875 and -876.

General Comment (DNA): dates older than estimate, however, material recovered applicable to 300 BC to historic contact. Oldest dates S-875 and -877 from shell midden, 0.5m depth, and youngest dates S-876 and -878, from immediately above complex deposits of soil and ash with less shell, consistent with stratigraphy and implies 2 components of occupation.

S-893. East Sugar Island site, Ontario 2540 ± 130

Bone (NMC-602) from East Sugar Island site, on small plateau, NW corner of East Sugar I. in Rice Lake, 190.5 asl (44° 14' N, 78° 8' W). From pit in Sq A-1, Area 1, depth 35.6 to 73.7cm. Layer of artifact and bone-bearing soil lining pit distinct from sterile fill. Site apparently series of camp sites occupied from late Archaic to historic period. During Archaic village site. Should date manufacture and use of ground slate points ca 4500 to 5000 yr BP. Coll 1972 by J Prideaux; subm 1974 by W A Kenyon, Royal Ontario Mus. *Comment* (WAK): date unexplainably too recent for mid-Archaic in Ontario.

S-894. Hungry Hall Mound 1, Ontario 820 ± 65

Oak charcoal (NMC-603), NW1/4 Sec 16, Atwood Twp, Rainy R Dist (48° 49' 15" N, 94° 41' 15" W). Site 324 asl, 1 of 2 Blackduck burial mounds near mouth of Rainy R, Mound 2, upstream, dated AD 1190 ± 60 (S-109: R, 1962, v 4, p 77). Sample from 0.82m below subsoil surface around center of sub-mound pit and overlying stratum of multiple secondary burials and grave furniture, where sample was thrown with ash, bone fragments from crematorium. Will date construction of feature and assoc colln of 18 complete ceramic vessels and other cultural material ca AD 1000. Coll 1969 and subm 1974 by W A Kenyon. *Comment* (WAK): excellent agreement.

S-918. Lindsay Mammoth site, Montana 11,925 ± 350

Mammoth tibia (NMC-710) from Lindsay Mammoth site, SE Sec 6 and NE Sec 7 Twp 17NR52E Dawson County, 35.4km NE of Glendive (47° 15' N, 105° 08' W). From undisturbed surface in lower member of 1.2m loess unit overlying a Paleocene formation. Asymmetrical distribution of bony elements, suggestions of butchering, rearrangement of certain bony parts to facilitate butchering and presence of 8 angular but irregular shaped sandstone blocks suggest assoc with man. Should indirectly date loess unit and estimate onset of stabilized conditions preceding its accumulation ca 11,000 yr BP. Coll 1967 by L B Davis, Montana State Univ; subm 1974 by R Wilmeth. *Comment* (LBD): 2 previous dates 10,700 ± 290 BP (WSU-652: unpub) and 9490 ± 135 BP (I-7028: unpub).

S-919. Crossing site, Northwest Territories Modern

Calcined bone fragments (NMC-711) from Crossing site (MiRi-2), S shore Horton Lake, N of Great Bear Lake, Dist Mackenzie (67° 27' 30" N, 122° 42' W) at 349m asl. Scattered over excavation units within occupation horizon, 0 to 15cm below turf or exposed at ground surface. Caribou crossing site, yielded assemblage with microblades, microcores, side-

notched points, tine end scrapers and a copper ulo blade. Certain aspects suggest Arctic Small Tool Tradition but burins, tine side-blades and end-blades lacking. Should date occupation, possible diverse occupations represented ca 2000 to 4000 yr BP. Coll 1972 and subm 1974 by D W Clark, Nat Mus Canada. *Comment* (DWC): although campsites around Horton Lake have been occupied within past 100 yr, no evidence of modern occupation observed at site. Date not applicable to implements recovered (Clark, 1975b).

S-920. R1Ig-52 site, Alaska 885 ± 80

Calcined bone, almost exclusively of medium to large mammals (NMC-712) from R1Ig-52 site, shore of small lake 98.7 asl, Batza Tena loc, Indian R/Little Indian R, Koyukuk R region, W interior Alaska (65° 51' N, 154° 11' W). Sample from thin scatter over 1/3 area of small encampment complex based upon points, knives, scrapers made from large obsidian flakes and numerous blade-like flakes. Microblades, burins and ceramics absent. Stone pestle and tabular hide-working stones present. Complex presently unique, possibly early Athapaskin ca 200 to 1200 yr BP, but could be 2500 yr BP. Coll 1971 and subm 1974 by D W Clark. *Comment* (DWC): date compatible with interpretations of Koyukuk R prehistory (Clark, 1974, 1975b) although bone fragments and artifacts recovered from surface and a few cm depth, unsealed context.

S-922. MiRh-5 site, Northwest Territories 1610 ± 110

Calcined bone, predominantly from medium and large mammals (NMC-714) from MiRh-5 site, on glacial moraine on S shore of Horton Lake, Dist Mackenzie (67° 26' N, 122° 37' W). Sample at 359.7 asl, exposed on denuded area, semi-concentrated probably originating in hearth of which no ash or charcoal remain, Area C, assoc with rough quartzite tools. Cultural affiliation uncertain, ca 200 to 5000 yr BP. Coll 1972 and subm 1974 by D W Clark. *Comment* (DWC): site appears to be cobble-quarry flaking sta (Clark, 1975b). Tentative date until regional archaeol sequence established.

Potlatch site series, British Columbia

Charcoal and charred wood from Potlatch site (FcSi-2, formerly FcSi-201), S shore of Little Anahim Lake, 4.8km W of Anahim settlement, central interior British Columbia (52° 29' 30" N, 125° 20' 30" W). Site includes 1 large rectangular surface structure and 4 semi-subterranean circular houses of 2 distinct forms. There appear to be 3 components, prehistoric, protohistoric, and historic; latter 2 attributed to Chilcotin Indians. Coll 1968 by R Wilmeth and B Wilmeth, 1969 by J Andelson; subm 1974, 1975 by R Wilmeth.

S-923. Potlatch site, Potlatch House 130 ± 80

Charred wood (NMC-725) from Sq N19W18, E wall trench, 49cm depth. House known to have been abandoned between AD 1865 and 1875, but contains trade items dated to 1st half of 18th century; construction possible ca AD 1700.

S-945. Potlatch site, Spalyan Bat'o House 1695 ± 90

Charcoal (NMC-308) from floor of NE quad of Spalyan Bat'o House, traditional Chilcotin winter lodge. One European item, copper bead, recovered ca AD 1750 to 1860.

S-1036. Potlatch site, Midden 4 Modern

Charcoal (NMC-793) from ash-filled depression at base of Midden 4, trash accumulation of historic period partially overlapping prehistoric house pit. Sample assumed to predate midden and assoc with house.

General Comment (RW): dates acceptable, Potlatch House could be as early as AD 1740, thus overlapping with age of some European material. Midden 4 historic, not related to adjacent house pit. Early date for Spalyan Bat'o House difficult to explain, clearly not assoc with house structure, presence of microblade suggests disturbance of earlier occupation; evidence of disturbance in other units of site. Previous dates, AD 80 and AD 335 bracket S-945 (S-501 & -500: R, 1973, v 15, p 204).

Arnarnitung site, Northwest Territories 930 ± 95

Seal bone (NMC-708) from Arnarnitung site (MbDj-1), island located 0.8km SE Bon Accord, Cumberland Sound, Baffin I. (66° 16' N, 67° 07' W). From Test Area 1, Sq ID, 50 to 55cm depth. Comparatively large Thule culture winter site on small island, almost completely destroyed but originally contained 15 large sod-stone and whale bone houses. Should date earliest major Thule period occupation in Sound. Coll 1973 and subm 1974 by P Schledermann, Univ Calgary. *Comment (PS):* analysis of assoc harpoon head material suggests AD 1220.

S-929. Niutang site, Northwest Territories 510 ± 65

Seal bone (NMC-709) from Niutang site (MbDc-1), SE shore of Kingnait Fjord, 56km from fjord entrance into Cumberland Sound, Baffin I., Dist Franklin (66° 12' N, 64° 42' W). From Test Sq W, 45cm level. Large Thule winter site and caribou hunting sta, now badly destroyed. Contained 16 house ruins, tent rings, several quarmats, caches and large burial ground. Sample from proximity of eroding bank suggesting earlier occupation than test of house structure. Coll 1973 and subm 1974 by P Schledermann. *Comment (PS):* harpoon head typology indicate ringed seal bone dates should be more recent by ca 200 yr.

S-934. Council site, British Columbia 1425 ± 70

Wood charcoal (NMC-731) from Council site (GaUb-7), SE of Mission Hill in village of Haida, on E shore of Masset Harbour, Queen Charlotte I. (54° 02' 05" N, 132° 10' 30" W) ca 5.29m above high tide. From Unit C, Level 3, 60cm below surface, in shell midden. Deposit to 100cm depth. Prehistoric to protohistoric, now destroyed. Coll 1973 and subm 1974 by P Severs, Univ Alberta. *Comment (PS):* site elev slightly above 2 historic sites of Ut-te-was and Ka-Yung, seems too old, 10m sites date ca 2000 to 3000 yr BP. Four non-diagnostic artifacts recovered.

Blue Jackets Creek site series, British Columbia

Wood charcoal from Blue Jackets Creek site (FIUa-4), S of Skaga Point on E shore of Masset Sound, Queen Charlotte I. (53° 59' 35" N, 132° 08' 22" W), 3.5m above high tide. Prehistoric shell midden deposits to 270cm depth. Multicomponent, some artifact assemblages similar to those of Skoglund's Landing site (FIUa-1). Graham tradition defined by K Fladmark also present. Coll 1972, 1973 and subm 1974 by P Severs.

S-935. Blue Jackets Creek site, Level VII 3815 ± 115

Wood charcoal (NMC-732) from N1W2, 125cm depth, NE quad Feature 16, possible hearth. Undisturbed burials at this level ca 3000 yr BP.

S-936. Blue Jackets Creek site, Level XI 4150 ± 90

Wood charcoal (NMC-732) from S2E2, 200cm depth, SW quad, lens of charcoal and fire-cracked rock in midden ca 4500 yr BP.

General Comment (PS): earliest site date, Level XIV, 3310 BC (Gak-5093: unpub) and most recent date, Level 14, 320 BC (Gak-4883: unpub). Level IX dated 2340 BC (GSC-1554: unpub). Dates agree with previous dates.

Manyfingers site series, Alberta

Charcoal and bone from Manyfingers site (DhPj-31), 1st and 2nd terrace of E side Belly \$, S Alberta (49° 16' 40" N, 113° 33' 15" W). Stratified processing and campsite, with 3 occupation levels (Quigg, 1973; 1974). Coll 1973 by J T Thompson, P Perry, and J M Quigg; subm 1974 by J M Quigg.

S-947. Manyfingers site, 2S4E 465 ± 70

Charcoal (NMC-645) from Level 6, 56 to 66cm below datum, in ash lens. Level contains fire-cracked rock, bone, flakeage, and ceramics assoc with Old Women's phase of Late Prehistoric ca AD 900.

S-864. Manyfingers site, 6S6E 640 ± 105

Butchered bison bone (NMC-646) from Level 4, 42 to 44cm below datum. Old Women's phase assoc with ceramics, flakeage, fire-cracked rock, bone and side-notched points ca AD 1400.

S-865. Manyfingers site, 6S10E 1100 ± 85

Bison bone (NMC-647) from Level 6, 62 to 66cm below datum. Avonlea phase, assoc points lithics, choppers, bone, fire-cracked rock and ceramics ca AD 400.

S-866. Manyfingers site, 2S4E 1075 ± 90

Bone (NMC-648) from Level 7, 74 to 81cm below datum, in dense processing area. Avonlea phase containing butchered bone, lithics, fire-cracked rock and ceramics.

General Comment (JMQ): dates correlate with known age range of the 2 cultural phases as indicated by projectile points and ceramics. 2nd terrace dates Avonlea pottery in S Alberta.

S-971. Crawford site, Ontario 515 ± 75

Charcoal (NMC-743) from Crawford site (AgHa-23), Six Nations Reserve, Grand R, near Brantford, Ontario (43° 08' N, 80° 10' W). From Sq C-3, 20.3cm below surface. Transitional Middleport-Pound site ca AD 1450. Coll 1974 by D Stothers; subm 1974 by D L Keenlyside, Nat Mus Canada. *Comment* (DLK): date agrees with previous date, AD 1370 ± 40 (DIC-258: unpub) from same excavation, 20.3 to 40.6cm below surface. Average of these dates, AD 1400, closely agrees with seriation estimate, AD 1450, and clarifies terminal placement of Middleport substage of Ontario Iroquois tradition and subsequent Pound phase.

S-972. Schaeffer site, Ontario 450 ± 55

Human bone (NMC-744) from Schaeffer site (Peele Island-4), SW corner Pelee I., Essex Co (41° 45' 30" N, 82° 38' W). From Test Excavation I, 30cm below surface, assoc with artifactual remains. Bone fragmented by plow disturbance but burial context reliable. Single component site several hundred m from lake shore, probably heavy vegetation in prehistory. Evidence of cultural relation to McGraw site, S Ohio, late Hopewellian manifestation. Mounds similar to site observed on other islands in W basin, Lake Erie probably related, ca AD 200 to 500. Coll 1969 and subm 1974 by D L Keenlyside. *Comment* (DLK): cultural context of human bone and assoc diagnostic lithics clearly not related to such a late date.

S-973. McDonald Farm site, Nova Scotia 180 ± 55

Moose bone (NMC-745) from McDonald Farm site (BjCo-5) on shoreline SW end of Olding I., Pictou Co (45° 38' N, 62° 29' W). From Area D, shell midden 30.5 by 15.3m, max depth 43.2cm, along beach S bay of island. Single component, Maritime, adapted culture, possible antecedents of ethno-historic Micmac ca AD 800 to 1000. Coll 1913 by H I Smith and W J Wintemberg, Nat Mus Canada; subm 1974 by D L Keenlyside. *Comment* (DLK): date too recent, possible historic intrusion.

S-974. Eisenhauer Shell Heap, Nova Scotia 610 ± 95

Charcoal (NMC-746) from Eisenhauer Shell Heap, shore of Mahone Bay, Lunenburg Co, 2.4km W of Indian Point (44° 29' N, 64° 40' W). Shell Heap 24.4 by 7.6m on small knoll on narrow beach, Andrew Cove. Sample from 4.6 by 1.5m area beneath undisturbed shell accumulation underlain by black soil and ash 5 to 15cm depth. Single component, possible antecedents of ethnohistoric Micmac (Smith & Wintemberg, 1929). Coll 1913 by J I Smith and W J Wintemberg; subm 1974 by D L Keenlyside. *Comment* (DLK): date acceptable to present understanding of prehistory of coastal Nova Scotia. Assoc ceramics and lithic assemblages show parallels to coastal New Brunswick with sites dating approx same period.

S-976. RkIh-36 site, Alaska 1324 ± 260

Calcined bone (NMC-748) from RkIh-36 site, E bank of Koyukuk R, Batza Tena loc, Batztega sublocality, NW interior Alaska (65° 04' 30" N,

154° 27' W) 79.2m asl. From 40-50N, 4.5-7W, concentration of calcined bone, soil and obsidian flakes occurring in frost starting at base of organic litter but mostly under brown soil layer and above green-brown soil horizon. Assemblage included end-scrapers, side-notched points, sparse microblade assemblage, copper awl, notched cobbles, rough bifaces, somewhat comparable to Tuktuk complex. Should date complex although possibly more than 1 component ca 3000 to 6500 yr BP. Coll 1971 and subm 1974 by D W Clark. *Comment* (DWC): date unacceptable compared to W Alaska dates for assemblages with side-notched points including Tuktuk site type. However, date may apply for central and E Alaska to assemblages characterized by both side-notched points and microblades as well as certain other attributes of Tuktuk complex.

Boardwalk site series, British Columbia

Shell from Boardwalk site (GbTo-31), NW side of Elizabeth Point, Digby I., Prince Rupert Harbour (54° 17' 20" N, 130° 22' 46" W). Pre-historic winter village of Gispakloats tribe of Tsimshian shell midden containing ca 310,000 cu m cultural material. Coll and subm 1974 by R I Inglis.

S-983. Boardwalk site, Area A, E70S20 2735 ± 65

Shell (NMC-769) from E wall, 88.9cm from top of cultural deposit in matrix of intact, fragmented and crushed shells, winkles, barnacle, and mussel. Should date burials from middle horizon ca 1500 yr BP.

S-984. Boardwalk site, Area A, E70S20 2310 ± 60

Shell (NMC-770) from E wall, S end of profile, 63.5cm below surface, in matrix of intact and broken clam, some blue mussel and sea urchin. Should date burials from upper horizon ca 500 to 1000 yr BP.

S-985. Boardwalk site, Area C, N3S3S 2175 ± 65

Shell (NMC-771) from N Wall, 61cm below top of cultural deposit in matrix intact and broken butter clam, mussel and sea urchin. Should date upper horizon burials ca 1000 yr BP.

S-986. Boardwalk site, Area C, N35E5 2385 ± 105

Shell (NMC-772) from N wall in matrix intact and broken clam, mussel and sea urchin. Should date middle horizon burials ca 1500 yr BP.

S-987. Boardwalk site, Area C, Trench B 2230 ± 60

Shell (NMC-773) from N wall, 2.5cm below surface and 91.4 to 101.6cm above black lens in matrix of intact and broken shell, loose organic soil. Should date last occupation of house pits.

General Comment (RII): S-983, -984, and -986 burials on back ridge of shell dump earlier than expected, indicating rear platform no longer used long before village site abandoned. Box burials, some with grave goods such as copper, amber, dentalia, shell beads and sea otter teeth, and a cache of warrior weapons assoc with dates, suggests ranked society was established in Middle Horizon. S-987 from top of a ridge between 2 house

pits in front of S-986 location supports interpretation of abandoned back area for house sites some 2000 yr BP.

Grassy Bay site series, British Columbia

Charcoal from Grassy Bay site (GbTn-1), Fern Passage Indian Reserve No. 3, Metlakatla Band (54° 18' 52" N, 130° 15' 48" W). Coast Tsimshian camp and village. Coll 1968 by B Simonsen for G F MacDonald, Nat Mus Canada; subm 1974 by R I Inglis.

S-992. Grassy Bay site, Pit C, Level 7 1620 ± 55

Charcoal (NMC-778) from 1.45m below datum. From hearth feature in matrix of crushed mussel and clam shells, brown soil and ash.

S-933. Grassy Bay site, Pit C, basal level 1700 ± 60

Charcoal (NMC-779) from 1.78m below datum, in matrix of charcoal-stained soil with decomposed schist, overlying beach gravel.

S-994. Grassy Bay site, Pit A, Level 4 620 ± 55

Charcoal (NMC-780) from 0.58m below datum, in matrix of dark soil, gravel and some crushed shell.

S-995. Grassy Bay site, Pit A, Level 10 1615 ± 60

Charcoal (NMC-781) from 1.88m below datum in matrix of dense shell, intrusive cultural deposit on beach gravel.

General Comment (RII): AD 250 to 1500 acceptable period for seasonal camp for exploitation of fish resources of inner Prince Rupert Harbour area, especially Shawatlans.

Lucy Island site series, British Columbia

Charcoal from Lucy Island site (GbTp-1), SW end of Lucy I. (54° 17' 39" N, 130° 37' 02" W). Coast Tsimshian shellfish processing camp-site. Coll 1968 by B Simonsen for G F MacDonald; subm 1974 by R I Inglis.

S-996. Lucy Island site, 1.83m depth 2070 ± 60

Charcoal (NMC-782) from Test Area 2, Unit A, 1.83m below surface, in matrix of crushed shell assoc with hearth feature.

S-997. Lucy Island site, 2.93m depth 2500 ± 60

Charcoal (NMC-783) from Test Area 2, Unit A, 2.93m below datum, just above base of deposit, in matrix of crushed clam, sand and brown soil.

General Comment (RII): seasonal campsite 16km offshore from Prince Rupert Harbour indicates prehistoric exploitation of outer island shellfish and seabird resources as early as ca 500 BC; dates from base of shellfish deposit.

S-998. Brown's Beach site, Newfoundland 1100 ± 60

Charcoal (NMC-736) from Brown's Beach site (DeAl-2), on terrace 4.6 to 7.1m asl, S shore of Bloody Reach, Bonavista Bay (48° 42' 14" N,

53° 55' 22" W). From concentration in SE corner of Sq S20E25, and NE corner of Sq S25E20. Maritime Archaic site ca 1000 BC. Coll 1974 and subm 1975 by P Carignan. *Comment* (PC): stone tool inventory thought to reflect Late Maritime Archaic occupation, however date indicates Beothuck. If correct, site suggests possible continuity of Maritime Archaic styles till late prehistoric time.

S-999. Bloody Bay Cove site, Newfoundland 1020 ± 55

Charcoal (NMC-737) from Bloody Bay Cove site (DeAl-1), SE side of cove, E side of Bloody Point, Bonavista Bay (48° 44' 58" N, 53° 50' 55" W). From Feature 1, S25W65, hearth assoc with Maritime Archaic tools ca 1000 to 1500 BC. Multicomponent site, Maritime Archaic, Dorset and Beothuck. Coll 1974 by W Oldford; subm 1975 by P Carignan. *Comment* (PC): hearth features of multicomponent sites, Bonavista Bay difficult to identify in spite of close proximity of diagnostic tool forms. Date may apply to Beothuck occupation which is in assemblage.

S-1000. Sailor's site, Newfoundland 375 ± 75

Charcoal (NMC-738) from Sailor's site (DeAj-1), SW edge of gravel pit in Sailor's Harbour, near community of Salvage, Bonavista Bay, (48° 41' 21" N, 53° 40' 27" W). From Feature 1, N35E15, hearth assoc with Beothuck artifacts ca AD 1000. Multicomponent site, Dorset and Beothuck. Coll 1974 by P Lane; subm 1975 by P Carignan. *Comment* (PC): date indicates Beothuck occupation also reflected in artifact inventory.

S-1001. Fox Bar site, Newfoundland 1255 ± 65

Charcoal (NMC-739) from Fox Bar site (DeAk-3), low lying bar near Beaches Head, Bonavista Bay, Newfoundland (48° 48' 55" N, 53° 48' 50" W). From Feature 1, S10W0, hearth probably assoc with Maritime Archaic tools. Stratified site, multicomponent, Maritime Archaic, Dorset and Beothuck, upper cultural level mixed. Coll 1974 and subm 1975 by P Carignan. *Comment* (PC): multicomponent upper cultural level made positive id of hearth impossible, appeared more closely assoc with Maritime Archaic tools. Date indicates late Dorset or Beothuck occupation, both represented in assemblage.

Moosehide site series, Yukon

Charcoal and bone from Moosehide site (LaVk-2), Moosehide village, on highest bench 21.3m, at junction of Yukon R and Moosehide Creek, W central Yukon (64° 05' N, 139° 26' W). Seasonal campsite with post-1900 historic material in humus layer and separate underlying Little Arm component (MacNeish, 1964) containing wedge-shaped cores, transverse burins, microblades, and other artifacts ca 5000 to 7000 yr BP. Coll 1974 and subm 1975 by J R Hunston, Univ Calgary.

S-1002. Moosehide site, Pit 4, Level 2 5625 ± 80

Charcoal (NMC-740) from 4N4W, assoc with microblades and flakes in brown loess soil matrix.

S-1003. Moosehide site, Pit 6, Level 2 1405 ± 60

Charcoal (NMC-741) from 6N4W, 15 to 20cm below surface, assoc with fragmented bone and flakes.

S-1004. Moosehide site, Pit 6, 7N4W, Level 2 Modern

Bone (NMC-742) from 6N4W, assoc with microblades and a wedge-shaped microcore.

General Comment (JRH): S-1002 agrees with dated Little Arm manifestations SW Yukon at Otter Falls and Canyon sites and stratigraphic position of this component at Gladstone site. S-1003 and -1004 too recent; possible disturbance of site SW portion Pit 6.

S-1014. See-Everywhere site, Alberta 160 ± 60

Bison bone (NMC-787) from See-Everywhere site (EcOr-34), SE Sec 21 Twp 16 R7W4 (50° 21' 47" N, 110° 54' W). Found near base of Cairn 1 in Sq 0N1W and 1N1W, medium size cairn on commanding view knoll along edge of large coulee. Large quantity of stone debitage and a few lost or discarded tools present in vicinity of cairn. Excavation of cairn yielded cultural material characteristic of Middle and Late Prehistoric and Historic periods. Coll 1972 by R Heitzman; subm 1975 by J Brumley, Univ Calgary. *Comment* (JB): definite date for construction of cairn as bison vertebrae at base of cairn, no other bases for evaluating date.

Ramillies site series, Alberta

Bison bone from Ramillies site (EcOr-35), N side of W end of Chaisson Ridge, SE Sec 21 Twp 16 R7W4 (50° 21' 03" N, 110° 54' 10" W). Multicomponent kill-camp site composed of trap-kill area, XV-3 on top edge of coulee, large natural hollow with manmade earth stone wall, 2nd kill area, XV-2 jump or snow-bank type below XV-3 on upper slope of coulee. Campsite related to 1 or both kill areas, 2 components id, Avonlea and Old Women's phase. Coll 1974 by V Maltin; subm 1975 by J Brumley.

S-1015. Ramillies site, Feature A1 965 ± 65

Bison bone (NMC-788) from SE 4S2W, XV-3, Level 12 at 134.5cm below datum. Assoc with Feature A1, stone construction forming part of bison trap. Bone on original ground surface of cultural layer upon which wall built, found under collapsed wall.

S-1016. Ramillies site, Feature A2 660 ± 115

Bison bone (NMC-789) from NE 6S0W, XV-3 at 80cm below surface, assoc with man-made buried rock alignment, apparently part of drive line. Bone from original ground surface upon which rock alignment built, from a few cm S of base rocks. Should give max age of feature and post-date trap-kill situation S-1015, ca AD 800 to 1200.

General Comment (JB): acceptable dates.

S-1017. Shaw Burial site, Alberta 1390 ± 90

Bison bone (NMC-790) from Shaw Burial site (EdOn-7), E Sec 10, Twp 19 R2W4 (50° 35' 47" N, 110° 11' 20" W). Assoc with single burial, body located within or beneath medium-sized stone cairn constructed on ground surface now 45cm below present surface. Site discovered and destroyed during gas pipeline construction. Few stone tools, bison and human bone coll. Coll 1974 by B Shaw; subm 1975 by J Brumley. *Comment* (JB): no basis for evaluating date, probably Besant or Avonlea phase.

S-1018. Horne site, Nova Scotia 540 ± 55

Charcoal (NMC-735) from Horne site (BfCv-3), N side Shubenacadie R, 1.2km NE from Grand Lake outlet (44° 66' N, 63° 31' W). From Unit D2, Quad I 2.8m and Quad IV 3.5m, depth below datum 0.88m. Disturbed multicomponent site, spring to fall occupation assoc with aceramic to ceramic assemblages. Should date small hearth, Feature 5, late ceramic period with broad corner-notched projectile points ca 1000 yr BP. Coll 1974 and subm 1975 by S Davis, St Mary's Univ, Halifax. *Comment* (SD): date too recent for projectile points, possible contamination by recent brush burning of area.

S-1028. McIntyre site, Ontario 4715 ± 270

Carbonized wood from McIntyre site, N shore Rice Lake, Otonabee Twp, Peterborough Co, Ontario (44° 11' 55" N, 78° 11' 11" W). From Feature 1, hearth pit, assoc with broken deer mandible bone, bear, canine bone, and chert fragments. Coll 1974 and subm 1975 by R B Johnston. *Comment* (RBJ): date ca 100 yr older than 5 other dates that cluster around 3670 yr (I-9068, -9312-9315: unpub) on material from other pits.

Goose Point site series, British Columbia

Charcoal from Goose Point site (FeSi-1), W bank Dean R between Little Bay and Big Anahim Lakes (52° 29' 40" N, 125° 20' 30" W). Site includes 2 semi-subterranean houses, one historic Chilcotin winter lodge, the other a prehistoric type dated AD 1240 ± 80 (S-502: R, 1973, v 15, p 205). Coll 1969 by P F Donahue, J Hall, and R Wilmeth; subm 1975 by R Wilmeth.

S-1037. Goose Point site, Bes Ico House, Zone II 170 ± 55

Charcoal (NMC-794) from Bes Ico House, SE quad 1.78N1.25E, 57cm below datum, ca 14cm below surface, assoc with heavy bone concentration in Zone II ca AD 1600 to 1800.

S-1038. Goose Point site, Bes Ico House floor 245 ± 75

Charcoal (NMC-795) from Bes Ico House, SE quad N 2.00 to 3.20, E 0.24 to 1.00, 86 to 88cm below datum, 28 to 30cm below surface, floor level, ca AD 1600 to 1800.

S-1039. Goose Point site, Bes Ico House Posthole 790 ± 205

Charcoal (NMC-796) from Bes Ico House Posthole 3; should date house construction AD 1600 to 1800.

General Comment (RW): dates S-1037 and -1038 agree with age estimate of house form and presence of European trade item. S-1039 earlier than house construction, may be derived from earlier component. Posthole contained charcoal, but may not be from post used in construction. Date close to that of nearby Suzchet House (S-502: R, 1973, v 15, p 205).

Radiant Lake—3 site series, Ontario

Charcoal from Radiant Lake—3 site (CaGn-I), at exit of North R into Radiant Lake (46° 00' 07" N, 78° 17' 58" W). Multicomponent site. Coll 1966 and 1967 and subm 1975 and 1976 by B M Mitchel, Deep River, Ontario.

S-1044. Radiant Lake—3 site, Sq L21 2165 ± 75

Charcoal (NMC-286) from 45.7cm depth in roasting pit containing thick coiled potsherds decorated with dragged dentate or pseudo-scallop shell at 17.8 to 33cm. Probably oldest pottery producing component at site ca 2000 yr BP.

S-1045. Radiant Lake—3 site, Sq K24 1520 ± 60

Charcoal (NMC-288) from 15.2 to 22.9cm depth among rims and body sherds with external punctations and internal nodes above horizontal rows of cord-wrapped stick. Most sherds occurred at 15.2 to 16.5cm. Sample believed to be Middle Woodland and should date use of cord-wrapped paddle edge ca 1800 yr BP.

S-1161. Radiant Lake—3 site, Sq I22 Modern

Charcoal (NMC-814) from 43.2cm below surface on hilltop 13m above lake level, should date Archaic component with ground slate points ca 3000 yr.

S-1162. Radiant Lake—3 site, Sq L24 4815 ± 45

Charcoal (NMC-815) from 41 to 48cm below surface, assoc with slate chips at 28 to 41cm and ground slate point at 37cm. Should date Archaic component.

S-1163. Radiant Lake—3 site, Sq E22 4150 ± 135

Charcoal (NMC-816) from 43 to 56cm below surface, assoc with massive quartz chips at 46 to 48cm. Should date Archaic component.

General Comment (BMM): S-1044 dates occupation using Vinette 2 techniques (Ritchie & MacNeish, 1949) particularly pseudo-scallop shell and banded rocker or drag stamped zones. Date fits range 490 BC to AD 90 (GaK-1891, -1892: R, 1973, v 15, p 57) for similar components along Petawawa R (Mitchell, 1969) and equates with range between lower Ottawa R site, 490 BC (S-578: R, 1975, v 17, p 334) (Watson, 1972) and middle Ottawa R site, 80 BC to AD 130 (I-2084, -2083: R, 1968, v 10, p 283-

284) (Wilmeth, 1969). Stratigraphically S-1045 follows peak Middle Woodland zone, 215 BC (S-1044) and precedes cord malleated exterior punctated pottery zone, AD 710 (GSC-1351: unpub). Date for ceramic manifestation of late Middle Woodland in E central Ontario and confirms temporal position indicated by stratigraphy. S-1161-1163 expected to date Archaic component, median date of S-1162 and -1163 compares to Whitson Lake—2 site (Hurley *et al*, 1972) dated 2590 BC (GSC-2181: unpub), Petawawa R site 50km E where much quartz was used.

S-1053. Near site, Yukon 615 ± 85

Charcoal and charred wood from single timber (NMC-641) from Near site (JeVq-2), E shore Kluane Lake, midway between Gladstone Bay and entrance to Talbot Arm (61° 21' N, 138° 42' W) at 793m asl. From 010, Level 4 in 1st reddish buried soil in Neoglacial loess, 3rd or 4th buried soil in unit, 1st one widely burned. 2nd burned soil ca 5cm below 1st soil, contact with top of White R ash. Only 1st burned soil horizon produced cultural material. Sparse, small site with limited evidence of small component stratigraphically above one assoc with sample. Neither component clearly id but possibly related to Aishikik complex. Should date component and one of several cessations of loess deposition that have occurred since eruption of White R ash ca 1000 yr BP. Coll 1973 and subm 1975 by R E Morlan, Nat Mus Canada. *Comment* (REM): satisfactory date.

S-1061. Hind site, Ontario 2875 ± 75

Human bones, 11 ribs, 3 vertebrae and sternum, copper-stained (NMC-813) from Hind site (AdHk-1), lower Thames Valley, Mosa Twp, Middlesex County (42° 32' N, 81° 35' W). From Burial 15, complete except foot bones disturbed by burrowing animal. Red Ochre, Glacial Kame site, although other components may be present. Previous dates using 3 techniques range from 4570 ± 120 to 1790 ± 100 yr BP. Age of burial of interest because of preserved soft tissue of neck area; preservation possibly aided by copper impregnation and dry sandy soil. Coll 1970 by S Wortner and W Donaldson; subm 1975 by H Savage, Univ Toronto. *Comment* (HS): microscopic sects of black organic material from cranial cavity and at foramen magnum of skull showed preserved collagen fibers and nerve tissue. Stylolid process of base of skull showed preserved osteocytes in Haversian systems. Archaeol context and date would indicate earliest preserved human tissue in N America (Gak-3794a, -3794b, -3944c: unpub).

S-1067. Katepwa Beach site, Saskatchewan 4780 ± 195

Comminuted bison bones from cottage well, Katepwa Beach site (EaMv-1) (50° 41' 52" N, 103° 37' 30" W). Coll *in situ* from occupation layer 5 to 15cm thick at 2.3m below surface. Assoc with chipped stone flakes and a biface. Coll and subm 1975 by I G Dyck. *Comment* (IGD): dates bison butchering site.

JjNd-1 site series, Northwest Territories

Charcoal from JjNd-1 site, central N shore of large i., NE bay of Firedrake Lake, Mackenzie Dist (61° 33' 40" N, 104° 34' 00" W). Surface material Middle Taltheilei, included small chert point, 2 chert scrapers, quartz scraper, hammerstone, chi-tho fragment, retouched and unmodified chert flakes. 4 sq m test pit in area of surface material exposed 2 charcoal lenses separated by charcoal-streaked white sand. Coll 1975 by H von Krogh; subm 1975 by B C Gordon.

S-1136. JjNd-1 site, upper charcoal band 715 ± 60

Charcoal (NMC-820) from upper charcoal band beneath 100cm sand, 200cm inward from bank exposure. Should post-date occupation and, with S-1137, bracket this occupation ca post-AD 400.

S-1137. JjNd-2 site, lower charcoal band 1740 ± 110

Charcoal (NMC-821) from lower charcoal band below 100cm sand, 200cm inward from bank, assoc with pentagonal and fishtailed points, ca pre-AD 400.

General Comment (BCG): dates bracket Middle Taltheilei period, AD 0 to 600, more closely related to lower charcoal date.

S-1138. KaNp-1 site, Northwest Territories 1775 ± 60

Charcoal (NMC-822) from KaNp-1 site, E ridge of i., N arm of upper Nonache Lake, 16km NE of Sparrow Bay, SE Mackenzie Dist (62° 06' 30" N, 109° 17' 00" W). Small sand blowout, 1931 asl, shallow single buried component containing Taltheilei Chipewyan material ca AD 1200 to 1700. Coll 1975 by M Wright; subm 1975 by B C Gordon. *Comment* (BCG): estimated age based on 2 shallow side-notched projectile points similar to Late Taltheilei points. If date correct, it represents previous unknown emanation of shallow notching in Great Slave Lake region, possible Plains affiliations.

JkNf-1 site series, Northwest Territories

Charcoal from JkNf-1 site, NE Jarvis Lake, SE Mackenzie Dist, NWT (61° 42' 00" N, 104° 51' 00" W). Favorable camp location E narrows, 2092 asl, 65 by 110m site almost totally destroyed by wind erosion. Two cultural levels below 40 to 50cm of sterile overburden, separated by brown sand layer. Below a pink-white layer yielding a few flakes possibly related to Shield Archaic material found on surface. Arctic Small Tool and Taltheilei tradition materials also represented. Coll 1975 by H von Krogh; subm 1975 by B C Gordon.

S-1139. JkNf-1 site, upper level 535 ± 60

Charcoal (NMC-823) from upper level, Test Pit 2, probably Early to Middle Taltheilei as reflected by surface materials ca 300 BC to AD 600.

S-1140. JkNf-1 site, lower level 1340 ± 50

Charcoal (NMC-824) from lower level, Test Pit 2, assoc with chert microblade attributed to Arctic Small Tool tradition ca 700 to 1000 BC.

General Comment (BCG): buried material single component of Middle to Late Taltheilei rather than Shield Archaic or Arctic Small Tool, latter found only on surface. Buried chert microblade, only Arctic Small Tool artifact in horizon probably intrusive.

S-1141. JiNf-7 site, Northwest Territories 1030 ± 65

Charcoal in sand (NMC-825) from JiNf-7 site, on peninsula, N shore of Firedrake Lake, SE Mackenzie Dist (61° 28' 40" N, 104° 51' 30" W). From single buried component, quartzite artifacts in deposit and on surface, including stemmed and unstemmed pentagonal projectile points. Coll 1975 by H von Krogh; subm 1975 by B C Gordon. *Comment (BCG)*: lanceolate stemmed points common in Middle Taltheilei AD 150 to 600, date places pentagonal points in early phase of Late Taltheilei, probable evolution out of Middle Taltheilei.

S-1142. JiNe-3 site, Northwest Territories 940 ± 50

Charcoal in sand (NMC-826) from JiNe-3 site, E end of E bay of Firedrake Lake, E of main caribou crossing, SE Mackenzie Dist (61° 26' 30" N, 104° 24' 50" W). From buried burned soil, 40cm below surface. Cultural material in white sand zone below burned soil, included quartzite concave-based ground-notched point. Surface material largely historic with thin veneer of prehistoric remains. Coll 1975 by H von Krogh; subm 1975 by B C Gordon. *Comment (BCG)*: date acceptable for projectile point, similar to other Late Taltheilei specimens dated AD 800 to 1750.

S-1143. JjNe-6 site, Northwest Territories 1390 ± 50

Charcoal in sand (NMC-827) from JjNe-6 site, SW shore of narrows of Jarvis Lake, at caribou crossing, SE Mackenzie Dist (61° 39' 20" N, 103° 48' 30" W). From Area B2 in charcoal band just below layer containing Middle Taltheilei artifacts. Should pre-date occupation, AD 1 to 600. Coll 1975 by H von Krogh; subm 1975 by B C Gordon. *Comment (BCG)*: acceptable date.

Réal site series, Quebec

Charcoal from Réal site, (DdGt-9) ca 2km from mouth of Duparquet R, Palmarolle Twp, Abitibi (48° 39' 10" N, 70° 19' 30" W). From Sector B, 0.25km NW of Bérubé site (DdGt-5), on point relative to Bérubé, closes bay which separates sites. Occupation zone rested directly on bed-rock, cultural affiliation to be determined. Coll 1975 by N d'Entremont and D Turgeon; subm 1975 by R Marois.

S-1149. Réal site, Pit S2E1 1635 ± 150

Charcoal (NMC-839) from Zone 2, SE quad, 9cm below surface. Level 2 represents occupation zone which varies from 8 to 15cm in thickness.

S-1150. Réal site, Pit S3E4 2760 ± 70

Charcoal (NMC-840) from Level 3, Zones 5 and 6, NW quad, 25 to 35cm below surface. Level 3 is below occupation zone and composed of fine compact brown soil. From charcoal pocket 10cm thick over almost all NW quad, 15 to 25cm below top of Level 3 and 25 to 36cm below surface. Should determine if artifacts of Level 3 at DdGt-9 and DdGt-5 belong to an occupation earlier than that of Level 2, ca 1 bc.

General Comment (RM): S-1149 indicates at least 2 occupations that are not stratigraphically distinguishable and are represented and probably overlap in deposit of Level 2. Both scraper and gun flint recovered from zone above Level 2. Many artifacts recovered from surface probably Archaic, supported by S-1150 date.

S-1153. DdGt-4 site, Quebec 465 ± 115

Charcoal (NMC-843) from DdGt-4 site, E shore of Lake Abitibi on 6m cliff, Palmarolle Municipality (48° 39' 30" N, 79° 19' 45" W). From Pit S1, Level 2, Zone A, SE quad, 7cm depth. Occupation zone 2 to 7cm thick, produced flakes only, other pits yielded some crudely made stone artifacts and a glass bead. Coll 1974 by R Dubois; subm 1973 by R Marois. *Comment* (RM): site appears to be seasonal camp, dates younger than artifacts suggest, bead regarded as intrusive.

JjNk-2 site series, Northwest Territories

Charcoal from JjNk-2 site, extreme NW bay of Rennie Lake, S shore, SE Mackenzie Dist (61° 34' 45" N, 105° 45' 40" W). 405 asl on sandy ridge next to spruce grove, blowout exposure. 2 charcoal bands in sand below which a bone layer, possibly 3 occupations, variety of projectile points and other artifacts were recovered. Coll 1975 by M Wright; subm 1975 by B C Gordon.

S-1155. JjNk-2 site, upper level 390 ± 65

Charcoal (NMC-828) from upper band with bone, ca AD 1200 to 1600.

S-1156. JjNk-2 site, lower level 1320 ± 90

Charcoal (NMC-829) from lower level band overlying sand containing bone and 10.2 to 15.2cm below upper charcoal band.

General Comment (BCG): S-1155 correlated with Late Taltheilei tools in surface of blowout, excavation produced only stone flakes. S-1156 dates between Middle and Late Taltheilei, between stemmed and side-notched points recovered from site surface.

S-1160. Midge's Tent Ring site, Northwest Territories Modern

Charcoal in sand (NMC-833) from Midge's Tent Ring site (KkLn-14), N end of Grant Lake, Dubawnt R, Keewatin Dist (63° 43' 20" N, 100° 26' 15" W). Three large tent rings 15.2m above lake. From shallow excavation just below surface vegetation, probably recent Eskimo. Few artifacts but considerable butchered caribou bone. Coll 1974 by M Gordon; subm 1975 by B C Gordon. *Comment* (BCG): modern date ac-

ceptable, site early historic occupation of barrenland interior by Caribou Inuit, represents one of deepest penetrations.

Cartier site series, Quebec

Charcoal from Cartier site, Payne Lake, Ungava Peninsula, on terrace 3.2km W of lake outlet, S shore, Quebec (59° 17' N, 73° 24' W). Site 152m long, 4.6 to 36.6m wide, 2.1m above lake at 122 asl. Cultural features confined to several stone foundations, cache piles, tent rings, a dam and causeway, include European, Thule and modern Eskimo in varying degrees. Cover mainly lichens and moss, limited grass. Coll 1974 by P Bidard and M Jacques; subm 1976 by T E Lee, Centre D'Etudes Nordique.

S-1200. Cartier site, House Foundation 2 555 ± 80

Charcoal (NMC-860) from 3.8m E 1m N, Level 1, 0 to 2.5cm below sod on house floor. Should date House 2 or Thule occupation unknown as yet for interior region.

S-1201. Cartier site, Tent Ring 1 220 ± 60

Charcoal (NMC-861) from central fireplace, 4.3m W 3m N, 0 to 5cm below sod. Should date early appearance of historic Eskimo inland and place large oval tent ring in early time as indicated by wrought iron.

General Comment (TEL): S-1200, if Thule, is remarkably early for area, alternately date with deviation within 47 yr of expected European occupation of house. S-1201 is early date, since trade goods in general from Fort Chimo, AD 1832. If date is correct, it implies trading contact with St Lawrence or James Bay. Nails appear English, but this is not certain.

S-1208. Arnakadlak site, Northwest Territories 1830 ± 80

Caribou bone (NMC-851) from Arnakadlak site (PgHb-3), W coast of Navy Board Inlet, Borden Peninsula, Baffin I. (73° N, 80° 38' W). From old tent ring, 6.5m asl. Site of a few Thule houses and several tent rings, one of which yielded early Dorset or late pre-Dorset assemblage with high proportion of burins. Previous date on marine bone, 775 BC (S-591: R, 1975, v 17, p 337). Coll 1975 and subm 1976 by Fr G Mary-Rousseliere. *Comment* (GM-R): date too recent.

S-1211. EbOp-14 site, Alberta 4245 ± 125

Charcoal (NMC-854) from face of R bank, W side of S Saskatchewan R (50° 13' 56" N, 110° 36' 23" W). From small surface hearth, Sq 4S0W, 1.75m below surface. Single occupation, cultural affiliation unknown. Coll 1973 by R Freeman; subm 1976 by J Brumley. *Comment* (JB): date suggests contemporary occupation with McKean phase occupation of nearby Cactus Flower site (EbOp-16).

S-1212. EbOp-42 site, Alberta 2030 ± 100

Bone (NMC-855) from slope of S Saskatchewan R valley (50° 18' 58" N, 110° 37' 58" W). Unidentifiable bone fragment from XU-1, Sq 6S4W. Cultural material recovered from buried campsite indicate single occupa-

tion related to Besant phase ca AD 200 to 750. Coll 1975 by L Bitz; subm 1976 by J Brumley. *Comment* (JB): date acceptable and with date for occupation II of nearby EbOp-44, 60 BC (S-1213) suggests contemporary Besant components.

EbOp-44 site series, Alberta

Bone from EbOp-44 site, small knoll on slope of S Saskatchewan R valley (50° 18' 59" N, 110° 38' 03" W). Probable camp and primary processing area for bison kills. 3 occupations: Occupation I—Old Women's phase, Occupation II—Besant phase, and Occupation III—Pelican Lake phase. Coll 1975 by C Meyer; subm 1976 by J Brumley.

S-1213. EbOp-14 site, Occupation II 2010 ± 55

Bone (NMC-856) from XU-1, Sq 18S16W, and 18S18W. Unidentifiable bone fragment, should give 1st Besant component date for SE Alberta ca AD 200 to 750.

S-1214. EbOp-14 site, Occupation I 210 ± 110

Bone (NMC-857) from all Sq's XU-1, Old Women's phase ca AD 1400 to 1700.

General Comment (JB): dates acceptable, contemporary with nearby EbOp-42 site.

Trade Lake site series, Saskatchewan

Bone from Trade Lake site (GiMw-18), SW corner of Trade Lake (55° 21' N, 103° 49' W). Appears to be single component temporary campsite with late prehistoric Selkirk or Clearwater Lake phase cultural affiliation. Coll 1974 by J Light and S J Smailes; subm 1976 by S J Smailes, Saskatchewan Mus Nat Hist.

S-1215. Trade Lake site, Sq 4S0E Modern

Bone (NMC-858) from Level 1, 64N10E, 6cm below datum and from Levels 2 and 3, B horizon of podzolic soil.

S-1216. Trade Lake site, Sq 4S3E 265 ± 65

Bone (NMC-859) from 25-33N 57-66E, 5.7 to 8.3cm below datum, in B horizon of podzolic soil, a few cm under moss.

General Comment (SJS): S-1216 1st positive date for Clearwater Lake phase in N Saskatchewan.

S-1220. Blumenhof site, Saskatchewan 4235 ± 100

Human bone (NMC-554) from Blumenhof site (EaNw-1), 4.8km NE of Blumenhof village (50° 10' N, 107° 40' W). Skeleton discovered at 2.4m depth in tertiary sands beneath ca 1.2m of boulder clay. No evidence of intrusion through clay till. Bison skull of modern size found in back-hoe pit at about same level. If not intrusive, would predate last glacial advance in area. Coll 1961 by T F Kehoe and B McCorquodale; subm 1976 by A L Bryan, Univ Alberta. *Comment* (ALB): date proves skeleton in-

trusive, skull in excellent condition, one of oldest known for Plains Indian. Racemization date on skeletal sample less than 6000 yr (J Bada, pers commun, 1976) (Bryan & Steels, 1976).

S-1241. Moose Mountain Medicine Wheel, Saskatchewan 2650 ± 245

Charcoal (NMC-880) from Moose Mountain Medicine Wheel (DkMq-2), 12.9km N of Kisbey (49° 46' N, 102° 42' W) from highest dome-shaped hill of area at 785m asl. Combined sample from W of center of central cairn from datum to 30cm above datum. Site stone configuration in form of medicine wheel consisting of central cairn, 9.1m diam, surrounded by stone circle, 15.2 to 18.3m diam, with 5 lines of stones extending in several directions terminating in stone cairns, 0.9m diam. Cultural affiliation unknown. Charcoal in black earth indicates site burned over before central cairn and rock feature built. Astronomy interpretation estimates age 2000 yr BP, Prairie side-notched points suggest 1000 to 1300 yr BP. Coll and subm 1976 by T F Kehoe. *Comment* (TFK): date acceptable to astronomy implications (J A Eddy, pers commun). Prairie side-notched points lay directly above basal rocks of central cairn and may date later than basal configuration.

S-1257. KbNg-6 site, Northwest Territories 2020 ± 110

Charcoal in sand (NMC-882) from 366m asl and 10.4m above Lynx Lake, SE Mackenzie Dist (62° 19' 30" N, 106° 03' 00" W). From lower of 2 levels. Site on exposed W island in beaded esker chain running E to W across S lobe of Lynx Lake. Surface artifacts Middle Taltheilei, AD 150 to 600, excavated tools diagnostic of Taltheilei tradition but not of specific period. Coll 1976 by R Blacklaws; subm 1976 by B C Gordon. *Comment* (BCG): date indicates Early Taltheilei occupation, 500 to 100 BC or initial stage of Middle Taltheilei, 100 BC to AD 500 (Gordon, 1976).

S-1258. KjNb-7 site, Northwest Territories 6120 ± 110

Charcoal in sand (NMC-883) from KjNb-7 site, on right bank of Upper Thelon R, 9.7km downstream from Hanbury R, Mackenzie Dist (63° 39' 34" N, 104° 28' 30" W). From bottom level, sub 56 Sq 39, of main excavation. Esker remnant site at prominent caribou crossing. Multicomponent with Arctic Small Tool and Taltheilei traditions above bottom level of Shield Archaic, ca 2500 to 3500 BC. Coll 1976 by M Barlow; subm 1976 by B C Gordon. *Comment* (BCG): previous dates for Shield Archaic from KjNb-7 and close adjacent KjNb-6 span period 2800 to 3200 BC. Oldest date for this tradition in Canada, predating by 600 yr Migod site dates on Dubaunt R, 210km E. Supports hypotheses by J V Wright that this tradition developed from Northern Plano Agate Basin, dated Migod site 5200 to 6000 BC. High percentage of plano-convex cross-section, uniface knives and a large triangular well-finished end scraper resemble Northern Plano. Oldest date on upper Thelon R.

KeNi-4 site series, Northwest Territories

Charcoal from KeNi-4 site, NW bay of Whitefish Lake close to Snow-drift R, headwaters to Sandy Lake, SE Mackenzie Dist (62° 46' 25" N, 106° 58' 00" W). Large blowout site 0.8km in length, 366 asl and 10.4m above Whitefish Lake, adjacent to caribou water-crossing of Beverly population. 3 distinct levels visible, probably all Taltheilei Chipewyan. 4 basal levels found 0.4km NE but not tested, surface materials Arctic Small Tool and Taltheilei traditions. Coll 1976 by R Blacklaws; subm 1976 by B C Gordon.

S-1259. KeNi-4 site, top level 405 ± 40

Charcoal in sand (NMC-884) from top level, test bank SW end of site adjacent to water-crossing and combined with charcoal from upper level of 2nd test bank across gully, assoc flakes. Should date late Indian hunter occupation of buried horizon ca AD 1200 to 1600.

S-1260. KeNi-4 site, middle level 2545 ± 160

Charcoal in sand (NMC-885) from middle level of 2 test banks described S-1259. Should date occupation containing chi-tho, quartzite biface knife and flakes ca AD 800 to 1400.

S-1261. KeNi-4 site, lowest level 3620 ± 125

Charcoal in sand (NMC-886) from lowest of 3 buried occupation floors, assoc with quartzite biface knife and flakes ca AD 1 to 800.

General Comment (BCG): S-1259 late Taltheilei period, S-1260 suggests earliest Taltheilei occupation despite Early and Middle Taltheilei artifacts on surface but not found in buried horizons. S-1261 may represent early pre-Dorset or Late Shield Archaic, pre-Dorset artifacts on surface. Site appears to be hunting area for a considerable period.

S-1307. Walter Moser site, Saskatchewan 1710 ± 90

Powdered charcoal from fire pit, Walter Moser site (EeOk-1) (50° 40' 19" N, 109° 47' 34" W). From 30cm below surface, assoc with dwelling floors, cache pits, and other habitation features in 2nd of possible 4 cultural zones. Coll 1976 by O L Malory, Paleo Sci Integrated, Winnipeg; subm 1977 by I G Dyck. *Comment (OLM):* dates 2nd occupation layer. Evidence site occupied from Oxbow and McKean periods to historic.

Meliadine—1 site, Northwest Territories

Bone from Meliadine—1 site (KfJm-3), W coast Hudson Bay (62° 53' N, 92° 09' W). Thule occupation ca AD 1200 to 1600. Coll 1975 and subm 1976 by U Linnamae, Univ Saskatchewan.

S-1309. Interior House 2 410 ± 55

Bone (caribou) from floor level.

S-1310. Interior House 1 570 ± 55

Bone mostly caribou from occupation layer under E wall.

General Comment (UL): acceptable dates for Late Thule.

S-1317. Meliadine—2 site, Northwest Territories 675 ± 65

Caribou bone from Meliadine—2 site (KfJm-3), W coast Hudson Bay (62° 53' N, 92° 09' W). From floor level of entrance passage, House 2, Thule occupation. Coll 1975 by B Clark; subm 1976 by U Linnamae. *Comment* (UL): acceptable Thule date.

Daylight site series, Northwest Territories

Caribou bone from Daylight site (KgJm-7), W coast Hudson Bay (63° 03' N, 92° 15' W). Thule occupation. Coll and subm 1976 by U Linnamae.

S-1311. Interior House 3 345 ± 85

Bone from occupation layer.

S-1312. Interior House 3 425 ± 225

Bone from above occupation layer.

General Comment (UL): acceptable dates for Late Thule.

Ahmai site series, Northwest Territories

Caribou bone, some burned, from Ahmai site (KgJm-8), W coast Hudson Bay (63° 03' N, 92° 15' W). Thule occupation. Coll and subm 1976 by U Linnamae.

S-1313. Interior House 1 825 ± 100

Bone from occupation layer.

S-1314. Exterior House 1 745 ± 90

Bone from below sod, beside entrance passage.

General Comment (UL): acceptable dates for Thule.

Rainbow site series, Northwest Territories

Caribou bone from Rainbow site (KgJm-9), W coast Hudson Bay, NWT (63° 03' N, 92° 15' W). Thule occupation. Coll and subm 1976 by U Linnamae.

S-1315. Interior House 1 285 ± 100

Bone from occupation layer at floor level.

S-1316. Interior House 1 345 ± 85

Bone from below floor flags.

General Comment (UL): acceptable dates for Thule.

S-1329. Woodlawn site, Saskatchewan 875 ± 70

Bone fragments from Woodlawn site (DgMn-6) (49° 07' 00" N, 102° 58' 45" W). From burial pit, 12cm depth, on top of prominent hill, N of Souris R. Remains of 3 individuals assoc with large conch columella (*Busycon*) pendant. Coll 1976 by P C P Hartney and E G Walker; subm 1977 by I G Dyck. *Comment* (EGW): date consistent with Woodland affiliation.

S-1330. Eastcott Flat site, Saskatchewan 2490 ± 90

Bone fragments from Eastcott Flat site (FhNa-69) (53° 18' 30" N, 104° 06' W). Prehistoric occupation level at 80cm depth, deepest site of area. Coll 1976 and subm 1977 by D Meyer, Saskatchewan Research Council. *Comment* (DM): appears to be acceptable date for such a deeply buried site.

S-1331. Bushfield East site, Saskatchewan 335 ± 60

Bone fragments from Bushfield East site (FhNa-13), near Nipawin (53° 19' N, 104° 03' W). From occupation level 38 to 48cm below surface. Material id as Clearwater Lake phase, widespread archaeol entity in boreal forest, N Manitoba and Saskatchewan. Coll 1976 and subm 1977 by D Meyer. *Comment* (DM): date within range of previous Clearwater Lake Phase dates of region.

III. TROPOSPHERIC RADIOCARBON SAMPLES

The ¹⁴C content of wheat grown since those previously reported (R, 1962, v 4, p 78-79) and (R, 1965, v 7, p 234-235) have been determined, covering period AD 1952 to 1977. Samples grown at (1) Research Branch, Dominion Experimental Farm, Scott, Saskatchewan (52° 23' N, 108° 50' W) and (2) Crop Sci Dept, Univ Saskatchewan, Saskatoon (52° 27' N, 106° 38' W). Due to similar results, samples from Scott location discontinued after 1968 season. Changes in ¹⁴C content are expressed in terms of quantity Δ (Broecker & Olson, 1961) assuming the δC¹³ value to be -25‰.

Sample no.	Year	Location	Δ
S-323	1964	Saskatoon	981 ± 10
S-324	1964	Scott	968 ± 10
S-325	1965	Saskatoon	776 ± 13
S-326	1965	Scott	796 ± 9
S-327	1966	Saskatoon	747 ± 9
S-328	1966	Scott	730 ± 9
S-329	1967	Saskatoon	657 ± 9
S-331	1967	Scott	713 ± 10
S-330	1968	Saskatoon	604 ± 10
S-332	1968	Scott	593 ± 11
S-333	1969	Saskatoon	543 ± 11
S-334	1970	Saskatoon	545 ± 12
S-335	1971	Saskatoon	530 ± 12
S-336	1972	Saskatoon	480 ± 12
S-337	1973	Saskatoon	455 ± 13
S-338	1974	Saskatoon	427 ± 12
S-339	1975	Saskatoon	384 ± 11
S-340	1976	Saskatoon	381 ± 6
S-341	1977	Saskatoon	341 ± 6

Comment (AR): continued decline in tropospheric ¹⁴C following peak yr 1963-64 induced by nuclear tests, indicates more uniform mixing toward an equilibrium level.

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