

C¹⁴ dating of Survey material carried out in 1976

General compilation by Anker Weidick

Twenty-two radiocarbon age determinations of shell samples (18), wood (3) and gyttja (1) from North and East Greenland are summarised below. All the material was collected during GGU field work.

The samples have been dated at the Geological Survey of Canada, Ottawa (marked GSC); Isotopes Inc., Westwood, New Jersey, USA (marked I) and at the Carbon-14 Dating Laboratory of the Geological Survey of Denmark and the National Museum, Copenhagen (marked K).

The samples in East Greenland are located by coordinates taken from the Danish Geodetic Institute 1:250 000 map series; in North Greenland from the U.S.A.F. World Aeronautical Chart 1:1 000 000, 5th edition.

Samples collected in southern Peary Land, North Greenland by Anker Weidick

GGU 215301: I-9119. Jørgen Brønlund Fjord **3450±90 B.P.**

Driftwood from beach ridge of pebbles and rounded boulders, 11–12 m above sea level. Kap Harald Moltke, 82° 08'N, 31° 21'W.

GGU 215302: I-9129. Jørgen Brønlund Fjord **3585±100 B.P.**

Driftwood from beach ridge of pebbles and rounded boulders, 11–12 m above sea level. Kap Harald Moltke, 82°08'N, 31° 21'W.

GGU 215304: I-9117. Jørgen Brønlund Fjord **5600±110 B.P.**

Shells of *Mya truncata* from the muddy embayment north of Kap Harald Moltke, 82°09.5'N, 31° 21'W.

GGU 215305: I-9116. Jørgen Brønlund Fjord **5680±110 B.P.**

Shells of *Astarte borealis* from sandy dust-like silt 17 m above sea level. Kap Harald Moltke, 82° 08'N, 31° 21'W.

GGU 215306: I-9118. Jørgen Brønlund Fjord **6235±110 B.P.**

Shells of *Mya truncata* in marine silt 12 m above sea level. Kap Harald Moltke, 82° 08'N, 31° 21'W.

GGU 215307: I-9115. Jørgen Brønlund Fjord **7420±120 B.P.**

Shells of *Hiatella arctica* and *Mya truncata* from fine grey sands under a thin veneer of pebbles at 45±5 m above sea level. Trehøje, Kap Harald Moltke, 83° 07'N, 31° 18'W.

GGU 215308: I-9130. J. P. Koch Fjord **Age < 220 B.P.**

Twigs in outermost neoglacial moraines, on the east side of Adams Gletscher, at the head of J. P. Koch Fjord, 82° 21.2'N, 40° 51'W.

GGU 215308: GSC-2279. J. P. Koch Fjord **4190±140 B.P.**
 Shells of *Mya truncata* and *Hiatella arctica* from distal side of outermost silty neoglacial moraine, at the east side of Adams Gletscher, head of J. P. Koch Fjord, 82° 21.2'N, 40° 51'W.

Samples collected in southern Washington Land, North Greenland by Niels Henriksen

GGU 212858: GSC-2370. Benton Bugt **6370±100 B.P.**
 Shells of *Mya truncata* from silt and pebbles at highest marine level at 55 m above sea level. Benton Bugt, 2 km north of Humboldt Gletscher, 79° 54'N, 63° 58'W.

GGU 212973: GSC-2334. Cass Fjord **5950±70 B.P.**
 Shells of *Hiatella arctica* from marine clay terrace 46 m above sea level connected to terrace level of about 50 m above sea level. Eastern inner branch of Cass Fjord, 81° 07.5'N, 63° 35'W.

Samples collected in northern and central East Greenland by Sven Funder

GGU 134018 C: K-2637. Milne Land **1050±50 B.P. C¹³ = -19.3‰**
 Clay gyttja from core of lake sediment. The sample represents the interval 33–47 cm below the surface in a 200 cm thick gyttja deposit. Bramgåssø, western Milne Land, 70° 31'N, 28° 02'W.

GGU 148349: K-2571. Hudson Land **6890±115 B.P. C¹³ = 0.0‰**
 Shells of *Mya truncata* found *in situ* 11–12 m above sea level in deltaic sediment exposed in coastal cliff. Loch Fyne, eastern Hudson Land, 73° 55'N, 21° 58'W.

GGU 148355: K-2572. Hudson Land **7770±120 B.P. C¹³ = +1.3‰**
 Shells of *Mya truncata*, *Hiatella arctica*, *Macoma calcarea* and *Tridonta* (= *Astarte*) *borealis* found *in situ* 8 m above sea level in coastal cliff. Loch Fyne, eastern Hudson Land, 73° 55'N, 21° 58'W.

GGU 148377: K-2573. Hudson Land **8070±120 B.P. C¹³ = -0.1‰**
 Shells of *Mya truncata* found *in situ* in silt 9 m above sea level in coastal cliff. Loch Fyne, eastern Hudson Land, 73° 53'N, 21° 52'W.

GGU 203301: I-9102. Gauss Halvø **9205±250 B.P.**
 Shells and fragments of *Mya truncata* and *Hiatella arctica* from surface of silt deposit 35 m above sea level. Vestersletten, Foster Bugt, 73° 27'N, 21° 47'W.

GGU 203302: I-9103. Gauss Halvø **> 40 000 B.P.**
 Shells and fragments of *Mya truncata* and *Hiatella arctica* from surface of sand deposit 45–50 m above sea level. Vestersletten, Foster Bugt, 73° 25'N, 21° 48'W.

- GGU 203308: I-9131. Wordies Bugt **8075±130 B.P.**
Shells of *Mya truncata* from surface of silt deposit 25–30 m above sea level near present terminus of Wordies Gletscher. North coast of Wordies Bugt, 74° 05'N, 22° 19'W.
- GGU 203310: I-9132. Payers Land **8120±130 B.P.**
Shells and fragments of *Mya truncata* from surface of silt deposit 20–24 m above sea level. South of Revet hunting station, Payers Land, 74° 19'N, 22° 03'W.
- GGU 203318: I-9133. Wollaston Forland **8835±130 B.P.**
Shells of *Mya truncata* from surface of silt deposit 31 m above sea level. Mouth of Permdal, western Wollaston Forland, 74° 24'N, 20° 15'W.
- GGU 203328: I-9134. Wollaston Forland **> 38800 B.P.**
Shell fragments of *Mya truncata*, *Hiatella arctica*, *Macoma calcarea*, *Tridonta* (= *Astarte borealis*, *T. elliptica* and *Serripes groenlandica*, from surface of dislocated silt deposit 82 m above sea level. Kap Herschell, southern Wollaston Forland, 74° 14'N, 19° 40'W.
- GGU 203331: I-9139. Clavering Ø **9255±140 B.P.**
Shells of *Mya truncata* from silt deposit 37–40 m above sea level. Eskimonæs, southern Clavering Ø, 74° 06'N, 21° 16'W.
- GGU 203340: I-9104. Andrée Land **7360±115 B.P.**
Shell fragments of *Mya truncata* and *Hiatella arctica* from surface of silt deposit 16–17 m above sea level. Renbugten, Isfjord, 73° 21'N, 26° 28'W.

Laboratory error in C¹⁴ dating of East Greenland shell material

Svend Funder

Nine samples of subfossil, Holocene bivalve shells from scattered localities in the East Greenland fjord zone (70° 30'–74°N) were submitted for C¹⁴ dating at the Teledyne Isotopes Laboratories, New Jersey, U.S.A., in 1975. The ages obtained seemed to be much too young compared with earlier datings from the region and consequently the laboratory offered to re-date the samples. Thus, the results were not released in the annual compilation of C¹⁴ dating of GGU material (Weidick, 1976). Material was selected again from the same sample bags and submitted. The only obvious difference between the two sets of samples was that the best preserved shells had been disposed of in the first dating.

The second set of datings showed radical differences and some samples gave ages 5000 years older than in the previous dating. In only one case was an earlier age confirmed (Table