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 C^{14} 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 C^{14} 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 C^{14} 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

Table 5. C^{14} datings on bivalve shells from East Greenland

GGU No.	LOCALITY	FIRST DATING			SECOND DATING			DIFFERENCE years
		Lab. No.	Age, years BP	Removed by acid washing, % of weight	Lab. No.	Age, years BP	Removed by acid washing, % of weight	
106509	Milne Land	I-8890	8160 ±130	10	Not sufficient material for re-dating			
106511	Jameson Land	I-8891	7900 ±130	29	I-9490	8900 ±135	52	-1000
106517	Jameson Land	I-8892	7885 ±130	26	I-9491	7940 ±135	30	- 55
134014	Danmarks Ø	I-8893	6890 ±110	27	I-9492	8525 ±140	33	-1635
148344	Hudson Land	I-8796	6220 ±110	48	I-9282	8620 ±140	14	-2400
148386	Gauss Halvø	I-8797	3560 ±90	55	I-9283	8690 ±140	9	-5130
148395	Bontekoe Ø	I-8798	6875 ±110	42	I-9354	8810 ±140	29	-1935
148397	Gauss Halvø	(see 148398)			I-9353	8570 ±140	30	
148398	Gauss Halvø	I-8799	2730 ±80	50	Not sufficient material for re-dating. Sample geologically identical with 148397			(-5840)
148722	Strindberg Land	I-8800	4980 ±100	29	I-9352	8010 ±130	18	-3030

5). The tendency shown is that all ages are older in the second dating but the magnitude of the deviation varies unsystematically. Generally the deviation is so large that the datings are without value unless one set can be definitively discarded.

Unfortunately, Teledyne Isotopes Laboratories have not been able to provide any explanation of the errors (J. Buckley, personal communication) and so only geological considerations remain. Although the geological control of the dates in some parts of the region is not very good, it is clear that the second set of dates agree reasonably well with those obtained previously, whereas the acceptance of the first set conflicts with isostatic uplift and deglaciation theories for the region. For this reason, but with some hesitation and caution, the second set of datings will be favoured.

Sample descriptions

GGU 106509: I-8890. Milne Land

Shells and fragments of *Hiatella arctica* from cliff exposure 65–72 m above sea level. Spurvebugt, southern Milne Land, 70° 32′N, 26° 02′W.

GGU 106511: I-8891/9490. Jameson Land

Well preserved whole shells of *Hiatella arctica* from surface of silt deposit 50 m above sea level. Mouth of Lodins Elv, Jameson Land, 71° 10′N, 24° 30′W.

GGU 106517: I-8892/9491. Jameson Land

Shells of *Tridonta* (= *Astarte*) *elliptica*. Sample for first dating consisted of only well preserved whole shells; sample for second dating contained fragmented shells. From surface of cliff in silt deposit 25–29 m above sea level. Mouth of Fegins Elv, Jameson Land, 71° 09′N, 24° 25′W.

GGU 134014: I-8893/9492. Danmarks Ø

Whole shells of *Mya truncata*, some with remains of periostracum. From cliff in silt deposit 44–46 m above sea level. Danmarks Ø at Rensund, 70° 30′N, 26° 11′W.

GGU 148344: I-8796/9282. Hudson Land

Shells of *Mya truncata* and *Hiatella arctica*. First sample consisted of mainly whole, well preserved shells; second sample contained mainly fragments. From polygons at surface of silt deposit 35 m above sea level. Loch Fyne, eastern Hudson Land, 73° 53′N, 21° 52′W.

GGU 148386: I-8797/9283. Gauss Halvø

Shells and fragments of *Mya truncata* and *Hiatella arctica* from polygons at surface of silt deposit 28 m above sea level. Mouth of Vildal, Gauss Halvø, 73° 18′N, 22° 05′W.

GGU 148395: I-8798/9354. Bontekoe Ø

Whole, well preserved shells of *Mya truncata* and *Hiatella arctica* from surface of cliff in silt deposit 18–19 m above sea level. Western Bontekoe Ø, 73° 08′N, 21° 28′W.

GGU 148397: I-9353. Gauss Halvø

Whole, well preserved shells of *Mya truncata* from surface of cliff in silt deposit 38–46 m above sea level, believed to be same age as 148398. Sydvestpynten, Gauss Halvø, 73° 34′N, 23° 55′W.

GGU 148398: I-8799. Gauss Halvø

Shells and fragments of *Mya truncata* and *Hiatella arctica* from surface of silt deposit 45–47 m above sea level, believed to be same age as 148397. Sydvestpynten, Gauss Halvø, 73° 36′N, 24° 00′W.

GGU 148722: I-8800/9352. Strindberg Land

Shells of *Mya truncata* and *Hiatella arctica*. Sample for first dating consisted of only well preserved, whole shells; sample for second dating contained mainly fragments. From surface of cliff in silt deposit 29 m above sea level. Brogetdal, Strindberg Land, 73° 44′N, 24° 39′W.

Reference

Weidick, A. 1976: C^{14} dating of Survey material carried out in 1975. *Rapp. Grønlands geol. Unders.* **80,** 136–144.

Geologisk Museum,
Øster Voldgade 5–7,
1350 Copenhagen K.