Radiocarbon Date List XI:

Radiocarbon Dates from Marine Sediment Cores of the Iceland, Greenland, and Northeast Canadian Arctic Shelves and Nares Strait

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Abstract

Radiocarbon Date List XI contains an annotated listing of 178 AMS radiocarbon dates on samples from marine (169 samples) and lake (9 samples) sediment cores. Marine sediment cores, from which the samples for dating were taken, were collected on the Greenland Shelf, Baffin Bay, and the Eastern Canadian Arctic shelf. About 80% of the marine samples for dating were collected on the SW to N Icelandic shelf. The lake sediment cores were collected in northwestern Iceland. For dating of the marine samples, we submitted molluscs (117 samples), benthic and planktic foraminifera (45 samples), plant macrofauna (3 samples), and one serpulid worm. For dating of the lake cores, we submitted wood (8 samples) and one peat sample. The Conventional Radiocarbon Ages range from 294±91 ^{14}C yr BP to 34,600±640 ^{14}C yr BP. The dates have been used to address a variety of research questions. The dates constrain the timing of high northern latitude late Quaternary environmental fluctuations, which include glacier extent, sea level history, isostatic rebound, sediment input, and ocean circulation. The dates also allowed assessment of the accuracy of commonly used reservoir correction. The samples were submitted by INSTAAR and affiliated researchers.

Acknowledgments

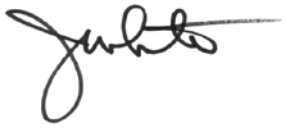
The National Science Foundation funded the majority of the radiocarbon dates. Dates were provided primarily from National Science grants NSF-ATM-0502515**,** ATM-9531397, OCE-9809001, NSF-0713755, and NSF-0823535. Some additional radiocarbon dates were funded through student grants, including the Geological Survey of America, the Department of Geological Sciences at the University of Colorado at Boulder, and Beverly Sears Student Grants. We also appreciate the support of Dr. Timothy Jull of the University of Arizona AMS Facility and Drs. Scott Lehman and Jocelyn Turnbull in the INSTAAR Radiocarbon Laboratory (NSRL). Larry Bowlds, the editor of the *Arctic, Antarctic, and Alpine Research* (AAAR) journal at INSTAAR, contributed to the editing, layout, and printing of this publication.

Preface

Occasional Paper 59 is the latest in a series of radiocarbon date publications compiled by INSTAAR for the Arctic and Antarctic regions. This is Date List XI and contains dates from marine sediments of the Greenland Shelf regions, the Baffin area, the Nares Strait, and the Icelandic Shelf, as well as some lake sediments. The dates help to constrain environmental changes in the Arctic, a key region currently undergoing rapid change. Placing the present changes into the context of the past is critical for our understanding of the future. Cold regions contain the largest, and arguably least understood feedbacks in the climate system, and thus improving our understanding of environmental change in cold regions, particularly the timing of events, is of immediate and great concern.

The date list follows protocols established by the National Science Foundation for data archiving. This date list is available in paper form, and at http://instaar.colorado.edu.

The dates were compiled by Ursula Quillmann. John Andrews and Anne Jennings supervised the Micropaleontology Lab. INSTAAR congratulates them all, their colleagues, students, and collaborators on a job well done.



James W. C. White
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Introduction

This Radiocarbon Date List is the eleventh in a series that reports radiocarbon analyses obtained by researchers at the University of Colorado at Boulder, Institute of Arctic and Alpine Research (INSTAAR). The samples were submitted for dating by Drs. John T. Andrews and Anne E. Jennings, their students, and colleagues.

The radiocarbon dates in this Date List reflect a concentration on marine sediments (97%) (Fig. 1). The remaining 3%, terrestrial radiocarbon dates, come from Iceland. The majority of the samples are from the Icelandic Shelf (72%), followed by Labrador Shelf (12%), and Greenland Shelf (10%). The locations are shown in Figures 2, 3, and 4.

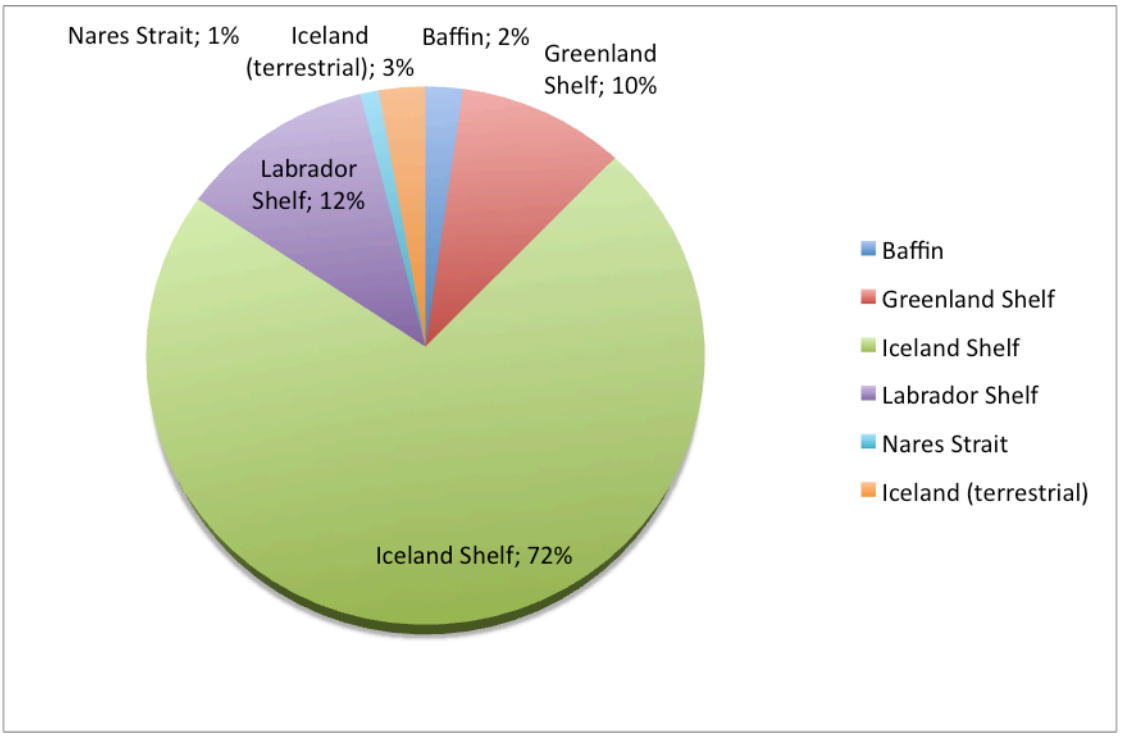

Figure 1. Regional distribution of core locations in this Date List.

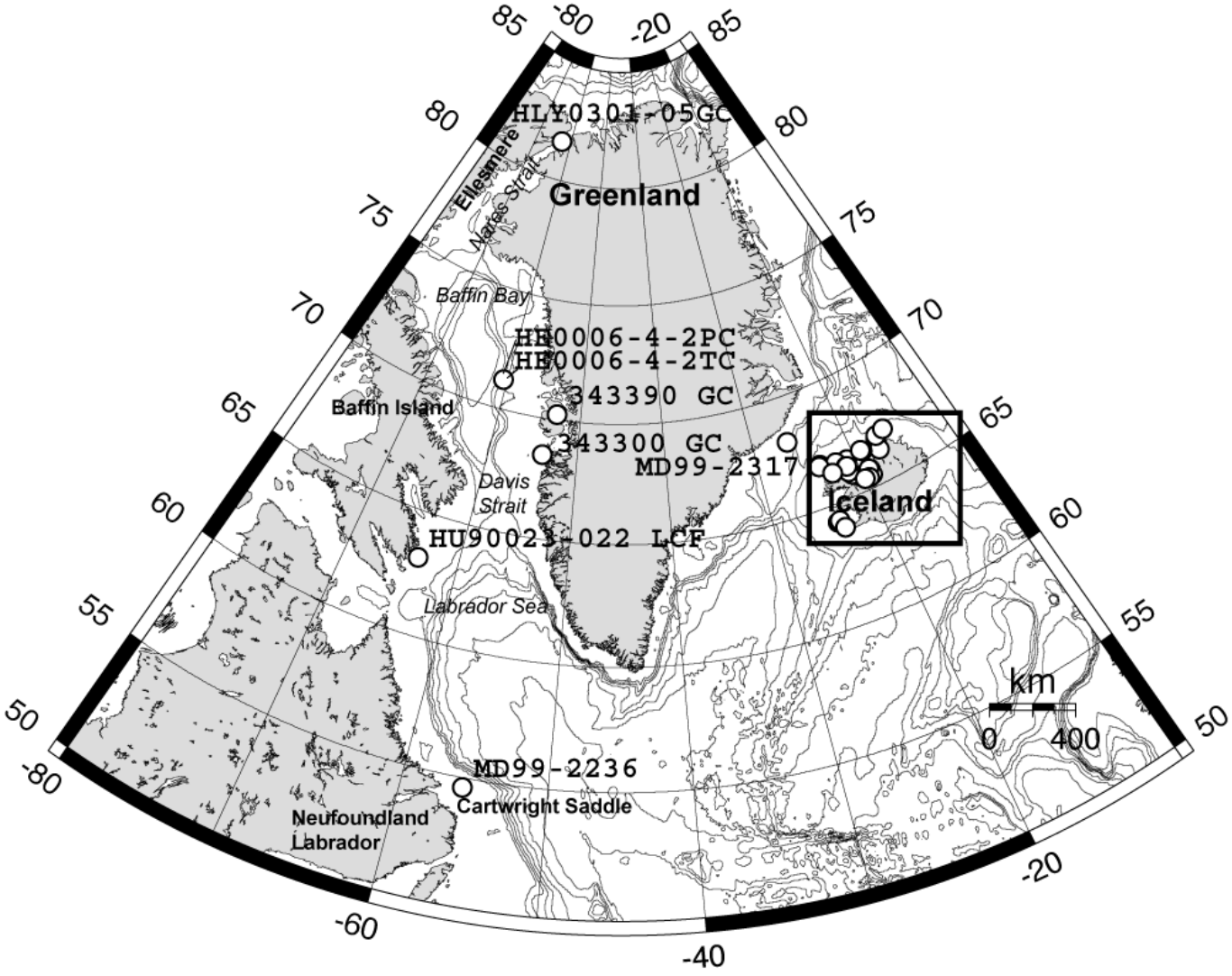

Figure 2. Core locations in the Labrador Shelf, Greenland shelf, Baffin Bay, and Nares Strait. Close-up views of the Iceland shelf core locations (in black square) are shown in Figures 3 and 4.

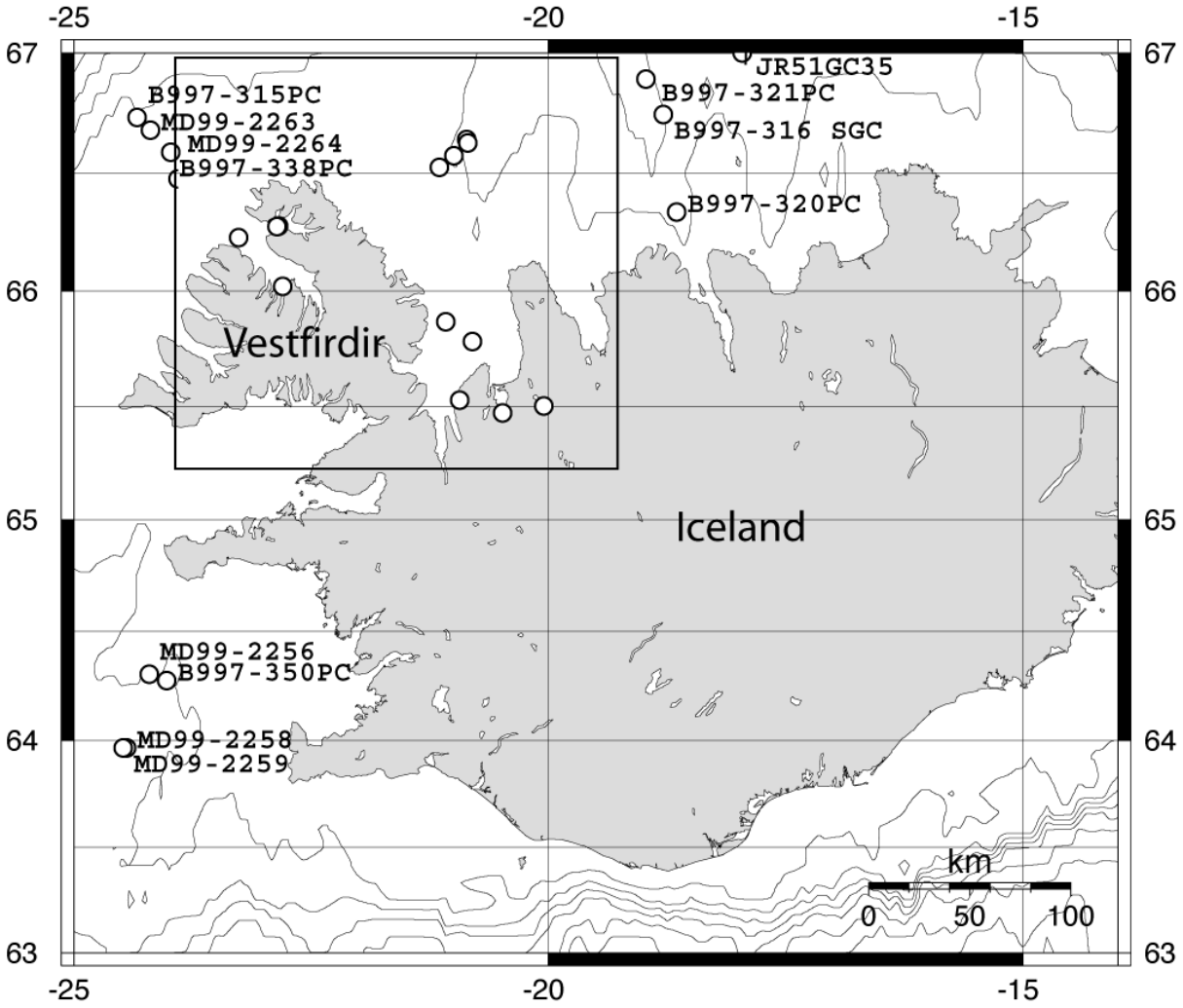

Figure 3 Core locations on the Icelandic shelf. The Northwest Icelandic marine and terrestrial core locations (in black square) are shown in detail in Figure 4.

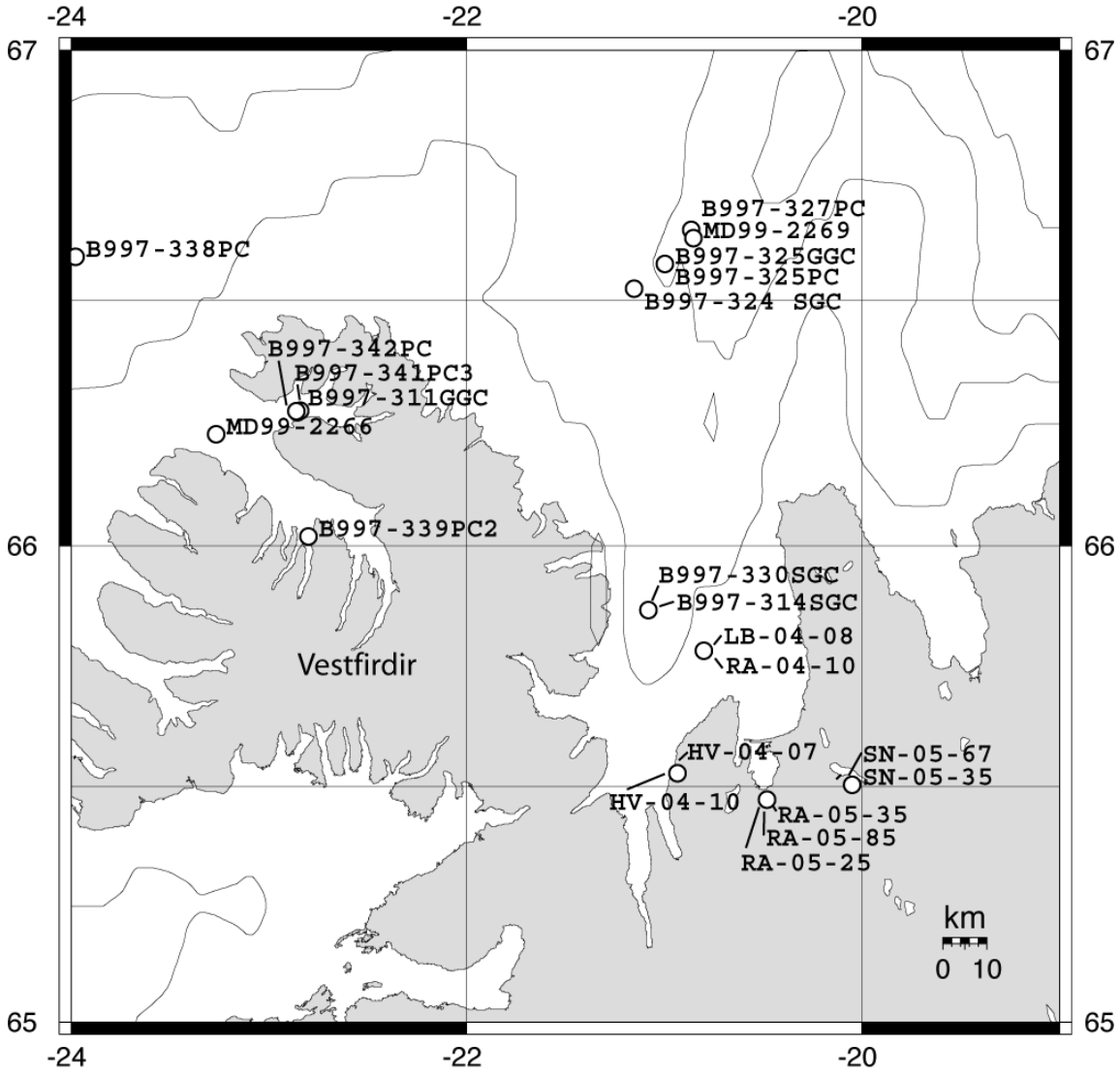

Figure 4. Northwest Icelandic marine and terrestrial core locations.

The focus on Holocene paleoclimate records by the Marine Paleoclimate group at INSTAAR is reflected in the distribution of radiocarbon ages in this current Date List. Only 8 of the 178 dates reported are older than Holocene age. Figure 5 summarizes the materials submitted for radiocarbon dating. The majority of samples were mollusc, followed by foraminifera. In the latter case we strove to date single species of planktic or benthic foraminifera at abundance peaks. Mixed species samples were submitted only if single species dates were not possible. For the terrestrial samples wood samples were submitted.

As in previous date lists, this Date List presents two types of radiocarbon ages—reported and ocean reservoir corrected ages. The radiocarbon laboratories report radiocarbon ages following the approach by Stuiver and Pollach (1977). In this approach the samples are run with standards to correct for background contamination. The $\delta^{13}C$ fractionation is measured in all samples and is normalized to –25‰ PBD, the mean value of terrestrial wood.

The reported radiocarbon age does not correct for marine-reservoir effects. In this Date List, we present the reported radiocarbon age by subtracting the estimated marine reservoir effect from the conventional radiocarbon age. The marine reservoir effect varies regionally and temporally.

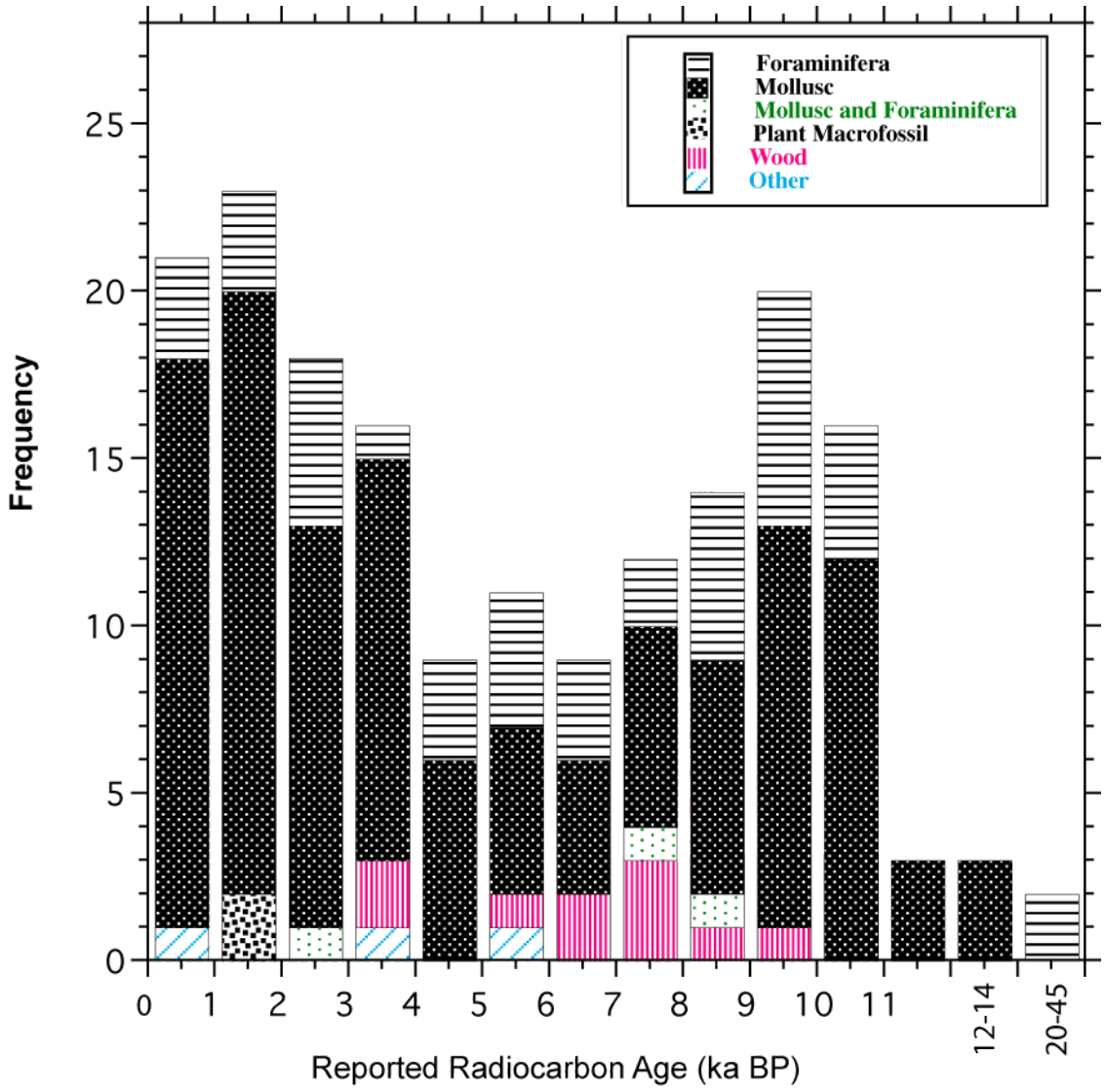

Figure 5. Distribution of reported radiocarbon ages and material dated as reported in this Date List.

Organization and Guide to Date List

Part 1 presents radiocarbon dates from marine sediment cores and **Part 2** from terrestrial sediment cores. Within each part, the dates are arranged as follows:

1. By region and area, generally from southwest to northeast.

2. Within the region with the dates listed by core number or site name.
3. Location information presented only once for each core or site, including latitude and longitude (Universe Transverse Mercator Grid) and water depth for marine sites, and site elevation for terrestrial sites.
4. By depth from top to bottom if more than one core was collected at the same site.

We present abbreviated date lists in three appendices, sorted by (1) laboratory number, (2) region, and (3) reported radiocarbon age.

Marine Core Names

Most marine core identifications contain the abbreviation for the cruise, including the name of the research vessel, the year the core was collected, and the type of corer used. The prefix usually identifies the cruise and the research vessel. For example, core identification names starting with HU90 were collected onboard the CCGS *Hudson* in 1990 and HE006 on the USCGS *Healy* in 2006. The suffix contained in most marine core names describes the coring methods, which Table 1 summarizes.

Table 1. Suffixes in most marine core names describe the coring methods. In this radiocarbon date list the following types of cores were used:

BC	box core
GC	gravity core
GGC	giant gravity core
SGC	short gravity core (B997-cruise)
LCF	large-diameter long covering facility piston core
PC	piston core
TC	trigger weight core

Cores collected in the MD114/IMAGES V cruise onboard the R/V *Marion Dusfresne* in 1999 have no core suffixes; all but two of the cores were cored by the Calypso giant corer. Cores MD99-2263 and MD99-2258 are box cores.

Presentation of Radiocarbon Dates in Parts 1 and 2

For each date, we report the following, if applicable (Fig. 6):

- Reported radiocarbon date and analytical uncertainty (in radiocarbon years BP)
- Radiocarbon laboratory number (Table 2)
- Corrected radiocarbon age
- GRL numbers assigned by the Sedimentology Laboratory at INSTAAR
- Field ID number provided by contributor
- Collection type
- The researcher(s) who provided the sample for dating and contributed it to the Radiocarbon Date List XI
- Sample depth in core
- Type of material dated
- Species and genus
- Sample weight, in mg
- Whether the $\delta^{13}C$ was measured or assumed
- Measured $\delta^{13}C$ value, where applicable
- Sample notes and pretreatment, including a detailed list for foraminifera samples, description of sample preservation, and preparation. Foraminiferal samples, unless otherwise noted, were freeze-dried, washed over a 63 µm sieve, and picked from air-dried >106 µm fraction.
- Stratigraphic relations (geologic context)
- Significance of sample
- Core summary (any interpretative discussion)
- References

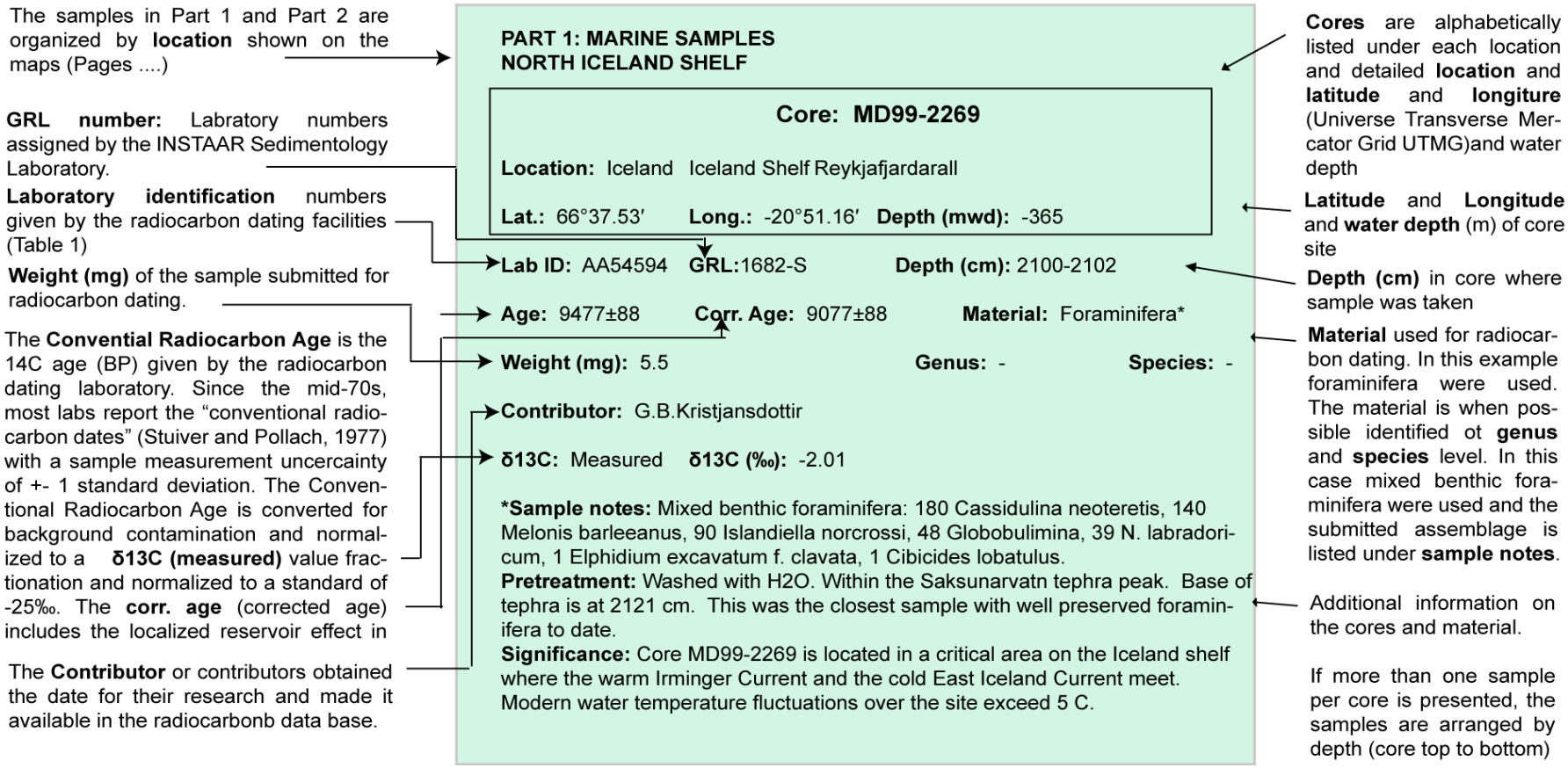

Figure 6. Guide to Radiocarbon Date List XI.

Table 2. Abbreviations of radiocarbon dating laboratories.

AA	NSF-University of Arizona AMS Facility
AAR	University of Aarhus, Denmark
BETA	Beta Analytical Inc.
CAMS	Center for AMS at Lawrence Livermore National Laboratory
CURL	INSTAAR Laboratory for AMS Radiocarbon Preparation and Research, samples run at University of California (UC) Irvine
KCCAMS	Keck-Carbon Cycle AMS Facility at the UC, Irvine
NSRL	INSTAAR Laboratory for AMS Radiocarbon Preparation and Research, samples run at the UC Irvine or Woods Hole Oceanographic Institution

Part I: Marine

Greenland and Canadian Arctic

East Greenland Shelf

Core: MD99-2317

Location: East Greenland Greenland Shelf East Greenland Shelf Basin
Lat.: 68°6.18′ **Long.:** -27°51.69′ **Depth (mwd):** -536

Lab ID: AA57064 **GRL-**1699-S **Depth (cm):** 391-397
Age: 4,840±120 **Corr. Age:** 4,290±120 **Material:** Foraminifera
Weight (mg): 2.9 mg **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.92
Contributor: Anne E. Jennings

Lab ID: AA57062 **GRL-**1697-S **Depth (cm):** 453-457
Age: 5,986±70 **Corr. Age:** 5,346±70 **Material:** Foraminifera
Weight (mg): 3.0 mg **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.77
Contributor: Anne E. Jennings
Sample notes: Mixed planktic and benthic species.

Lab ID: AA57063 **GRL-**1698-S **Depth (cm):** 453-457
Age: 5,795±40 **Corr. Age:** 5,245±40 **Material:** Mollusc
Weight (mg): 6.4 mg **Genus:** **Species:**
$\delta^{13}C$ (‰): 2.8
Contributor: Anne E. Jennings

Lab ID: AA **GRL-**1702-S **Depth (cm):** 453-457
Age: 5,630±100 **Corr. Age:** 5,080±100 **Material:** Foraminifera
Weight (mg): 1.2 mg **Genus:** *Cibicides* **Species:** *lobatulus*
$\delta^{13}C$ (‰): 1.33
Contributor: Anne E. Jennings

Lab ID: AA61215 **GRL-**1745-S **Depth (cm):** 1293-1295
Age: 10,090±110 **Corr. Age:** 9,540±110 **Material:** Foraminifera
Weight (mg): 2.8 **Genus:** **Species:**
$\delta^{13}C$ (‰): -8.02
Contributor: Anne E. Jennings

Sample notes: Mixed benthic forams: 1265 *S. feylingi*, 51 *C. reniforme*, 5 *S. concava*, 11 *M. barleeanus*, 5 *Bolivina pseudopunctata*, 60 *I. norcrossi*. Sample washed over sieve with distilled water and air-dried.

COMMENTS (AEJ): This core is from the Grivel Basin of the East Greenland shelf on the north side of the Denmark Strait. It is near the site of JM96-1205 (Smith and Licht, 2000). Many of the dates from this core have been published in the previous date list (Dunhill et al., 2004) and in Jennings et al. (2006). This core extends to basal till on the East Greenland shelf and contains a full deglaciation through Holocene sediment sequence. The dates reported here augment the dating control on the Holocene section of the core.

West Greenland Shelf

Core: 343300 GC

Location: SW entrance to Disko Bugt
Lat.: 68°28.311′ **Long.:** 54°0.118′ **Depth (mwd):** -518

Lab ID: AA81304 **GRL-**1811-S **Depth (cm):** 190-192
Age: 3,248±44 **Corr. Age:** 2,848±44 **Material:** Mollusc
Weight (mg): 20.4 **Genus:** *Yoldia* **Species:** *limatula*?
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.7
Contributor: Anne E. Jennings
Sample notes: Paired shells, excellent condition.

Lab ID: AA81307 **GRL-**1822-S **Depth (cm):** 340-342
Age: 5,822±57 **Corr. Age:** 5,422±57 **Material:** Foraminifera
Weight (mg): 5 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.8
Contributor: Anne E. Jennings
Sample notes: Benthic species: 63 *Globobulimina auriculata*, 82 *Nonionellina labradorica*

Lab ID: AA81305 **GRL-**1812-S **Depth (cm):** 655-657
Age: 9,473±57 **Corr. Age:** 9,073±57 **Material:** Mollusc
Weight (mg): 25.7 **Genus:** *Yoldia* **Species:** ?
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.5
Contributor: Anne E. Jennings
Sample notes: Paired valves (seen on X-radiographs) that broke when probed for sampling. Somewhat chalky.

Lab ID: AA81306 **GRL-**1813-S **Depth (cm):** 775-777
Age: 9,593±58 **Corr. Age:** 9,193±58 **Material:** Mollusc

Weight (mg): 31.2 **Genus:** *Yoldia* **Species:** *limatula*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.5
Contributor: Anne E. Jennings
Sample notes: Paired valves (seen on X-radiographs) in good condition.

Lab ID: AA81308 **GRL-**1814-S **Depth (cm):** 940-942
Age: 9,706±65 **Corr. Age:** 9,306 ±65 **Material:** Mollusc
Weight (mg): 46.2 **Genus:** *Yoldia* **Species:** *myalis*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.3
Contributor: Anne E. Jennings
Sample notes: Paired valves (seen on X-radiographs) in good condition.

Lab ID: Beta234922 **GRL-**NA **Depth (cm):** 1,019-1,021
Age: 10,090±60 **Corr. Age:** 9,690±60 **Material:** Mollusc
Weight (mg): 46.2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0
Contributor: Jerry Lloyd
Sample notes: Bivalve collected on board ship.

COMMENTS (AEJ): This 11.4-m-long core was collected in 2007 on cruise MSM 05/03 of the R/V *Maria S. Merian*. The core is from a deep elongated basin named Egedesminde Dyb at the SW entrance to Disko Bugt. The core contains a full Holocene sediment sequence. It is being studied to gain an understanding of the West Greenland Current and its role in the climate and glacial history of Disko Bugt and Jakosbshavns Isbrae.

Core: 343390 GC

Location: Greenland Greenland Shelf SW Disko Bugt
Lat.: 70°13.176′ **Long.:** 53°3.194′ **Depth (mwd):** -537.6

Lab ID: AA82362 **GRL-**1833-S **Depth (cm):** 250
Age: 1,308±36 **Corr. Age:** 908±38 **Material:** Mollusc
Weight (mg): 67.7 **Genus:** *Yoldia* **Species:** *angularis*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.3
Contributor: Anne E. Jennings
Sample notes: Hinge only

Lab ID: AA82361 **GRL-**1832-S **Depth (cm):** 281-283
Age: 1,447±38 **Corr. Age:** 1,047±38 **Material:** Mollusc
Weight (mg): 20 **Genus:** *Nucula* **Species:** *lenticula*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.7
Contributor: Anne E. Jennings
Sample notes: Paired shells, excellent condition. 1 valve sent for dating.

Lab ID: AA82363 **GRL-**1834-S **Depth (cm):** 498-500

Age: 2,352±37 **Corr. Age:** 1,952±37 **Material:** Mollusc
Weight (mg): 71.5 **Genus:** *Turritella* **Species:** *polaris*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.7
Contributor: Anne E. Jennings
Sample notes: Chalky on exterior, but solid beneath surface. Small gastropod in sandy lens of sediment.

COMMENTS (AEJ): This 5.05-m-long core was collected in 2007 on cruise MSM 05/03 of the R/V *Maria S. Merian*. The core was raised from the NW-SE trending channel of the Vaigat, a major export route for icebergs leaving Disko Bay. The core contains IRD throughout. The dates are concentrated near the base. They suggest rapid sedimentation and IRD in the Vaigat over the last 2,000 ^{14}C years.

Labrador Shelf

Core: MD99-2236

Location: Canada Cartwright Saddle
Lat.: 54°37′ **Long.:** -56°10.57′ **Depth (mwd):** -520

Lab ID: AA70937 **GRL-**1777-S **Depth (cm):** 17-19
Age: 1,057±36 **Corr. Age:** 607±36 **Material:** Foraminifera
Weight (mg): 4.4 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.3
Contributor: Anne E. Jennings
Sample notes: Mixed benthic species: *N. labradorica*, *Melonis barleeanus*, *Buccella frigida*, *Islandiella islandica*, *Globobulimina*. Freeze-dried sediment was sieved with distilled water on a 63 µm screen. The forams were picked with a brush.

Lab ID: AA59572 **GRL-**1735-S **Depth (cm):** 118
Age: 1,775±35 **Corr. Age:** 1,375±35 **Material:** Mollusc
Weight (mg): 42 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: Anne E. Jennings
Sample notes: Shell fragments, thin but chalky.

Lab ID: AA70938 **GRL-**1778-S **Depth (cm):** 133-136
Age: 2,370±40 **Corr. Age:** 1,920±40 **Material:** Foraminifera
Weight (mg): 6.7 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.1
Contributor: Anne E. Jennings
Sample notes: Mixed benthic species: *Globobulimina auricula arctica*, *Islandiella islandica*, *Buccella* spp., *Melonis barleeanus*, *Nonionellina labradorica* from three

adjacent samples. Freeze-dried sediment was sieved with distilled water on a 63 µm screen. The forams were picked with a brush.

Lab ID: AA59573 **GRL-**1736-S **Depth (cm):** 249.5
Age: 6,577±42 **Corr. Age:** 6,177±42 **Material:** Mollusc
Weight (mg): 91 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1
Contributor: Anne E. Jennings
Sample notes: Large umbo fragment with well-developed teeth—photograph available.

Lab ID: AA59574 **GRL-**1737-S **Depth (cm):** 431.5
Age: 7,700±200 **Corr. Age:** 7,250±200 **Material:** Mollusc
Weight (mg): 7 **Genus:** *Nuculana* **Species:** *minuta*?
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.22
Contributor: Anne E. Jennings
Sample notes: Small intact valve—photo available.

Lab ID: AA59575 **GRL-**1738-S **Depth (cm):** 467.5
Age: 7,816±63 **Corr. Age:** 7,366±63 **Material:** Mollusc
Weight (mg): 40 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.54
Contributor: Anne E. Jennings
Sample notes: Large fragment, lustrous interior—photo available.

Lab ID: AA70935 **GRL-**1775-S **Depth (cm):** 1-4
Age: 845±48 **Corr. Age:** 395±48 **Material:** Foraminifera
Weight (mg): 3.9 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.6
Contributor: Anne E. Jennings
Sample notes: Mixed benthic foraminifers: *N. labradorica*, *Melonis barleeanus*, *Buccella frigida*, *Lagena* sp, *Angulogerina angulosa*, *Globobulumina auriculata arctica*. Freeze-dried sediment was sieved with distilled water on a 63 µm screen. The forams were picked with a brush.

Lab ID: AA70936 **GRL-**1776-S **Depth (cm):** 10-13
Age: 1,082±37 **Corr. Age:** 632±48 **Material:** Foraminifera
Weight (mg): 5.7 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0
Contributor: Anne E. Jennings
Sample notes: Mixed benthic species: *N. labradorica*, *Melonis barleeanus*, *Buccella frigida*, *Islandiella islandica*, *Globobulimina*. Freeze-dried sediment was sieved with distilled water on a 63 µm screen. The forams were picked with a brush.

Lab ID: AA58959 **GRL-**1721-S **Depth (cm):** 890
Age: 8,769±48 **Corr. Age:** 8,319±48 **Material:** Mollusc

Weight (mg): 62.4 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.85
Contributor: Anne E. Jennings
Sample notes: Gastropod.

Lab ID: AA58960 **GRL-**1722-S **Depth (cm):** 902
Age: 8,858±49 **Corr. Age:** 8,408±49 **Material:** Mollusc
Weight (mg): 205 **Genus:** *Bathyarca* **Species:** *glacialis*

$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.89
Contributor: Anne E. Jennings

Lab ID: AA58961 **GRL-**1723-S **Depth (cm):** 1,142
Age: 8,941±47 **Corr. Age:** 8,491 ± 47 **Material:** Mollusc
Weight (mg): 10.7 **Genus:** *Nucula*? **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.9
Contributor: Anne E. Jennings
Sample notes: Single well preserved valve.

Lab ID: AA82359 **GRL-**1836-S **Depth (cm):** 1,143-1,145
Age: 9,385±52 **Corr. Age:** 8,935±52 **Material:** Mollusc
Weight (mg): 30.4 **Genus:** *Nucula* **Species:** *lenticula*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 2
Contributor: Anne E. Jennings
Sample notes: Paired shells in bed of life position shells seen on x-radiographs. Freeze-dried sediment , sieved with distilled water, sieved at 63 µm, air dried.
Significance: This sample is submitted to check whether the age model defined by the surrounding dates is valid.

Lab ID: AA58962 **GRL-**1724-S **Depth (cm):** 1,181
Age: 9,728±86 **Corr. Age:** 9,278±86 **Material:** Mollusc
Weight (mg): 16.2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.4
Contributor: Anne E. Jennings
Sample notes: Lustrous sharp angular fragments. Photo available. Another date obtained on 9686±90.

Lab ID: AA81303 **GRL-**1810-S **Depth (cm):** 1,183-1,184
Age: 9,626±80 **Corr. Age:** 9,176±80 **Material:** Foraminifera
Weight (mg): 4.5 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.8
Contributor: Anne E. Jennings
Sample notes: Mixed benthic species: *Islandiella helenae* and *norcrossi*—276; *C. reniforme*—197; *Buccella frigida*—24; *E. excavatum clavata*—165; *C. lobatulus*—15; *Stainforthia feylingi*—8. Freeze-dried sediment, sieved with distilled water, sieved at 63 µm, forams picked with brush.

Significance: This sample is submitted to check whether the age model defined by the surrounding dates is valid.

Lab ID: AA82360 **GRL-**1837-S **Depth (cm):** 1,351-1,352
Age: 9,777±54 **Corr. Age:** 9,327±54 **Material:** Foraminifera
Weight (mg): 7 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.6
Contributor: Anne E. Jennings
Sample notes: *Islandiella helenae* and *norcrossi*—365; *Cibicides lobatulus*—18; *Buccella frigida*—18; *Buccella tenerrima*—13; *Haynesina orbiculare*—8. Freeze-dried sediment , sieved with distilled water, sieved at 63 µm, forams picked with brush.
Significance: Sample chosen to constrain the onset age of a detrital carbonate event.

Lab ID: AA58963 **GRL-**1725-S **Depth (cm):** 1,513
Age: 10,025±67 **Corr. Age:** 9,575±67 **Material:** Mollusc
Weight (mg): 90 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.3
Contributor: Anne E. Jennings
Sample notes: Shell fragments but shells thin and delicate and fragments are angular suggesting breaking during coring and/or extraction.

Lab ID: AA58964 **GRL-**1726-S **Depth (cm):** 1,708
Age: 10,379±58 **Corr. Age:** 9,929±58 **Material:** Mollusc
Weight (mg): 9.2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.3
Contributor: Anne E. Jennings
Sample notes: Fragments of umbo areas—photo available.

Lab ID: AA58965 **GRL-**1727-S **Depth (cm):** 1,839
Age: 10,473±50 **Corr. Age:** 10,023±50 **Material:** Mollusc
Weight (mg): 39.2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.5
Contributor: Anne E. Jennings
Sample notes: Sharp angular fragments of thin shells. Periostracum still attached. Another date obtained of 10481±52.

Lab ID: AA58966 **GRL-**1728-S **Depth (cm):** 1,868
Age: 10,769±51 **Corr. Age:** 10,319±51 **Material:** Mollusc
Weight (mg): 183 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.7
Contributor: Anne E. Jennings
Sample notes: Sharp angular thin fragments. Periostracum attached. Another date obtained of 10769±49.

Lab ID: AA58967 **GRL-**1729-S **Depth (cm):** 1,894
Age: 10,828±71 **Corr. Age:** 10,378±71 **Material:** Mollusc
Weight (mg): 16.7 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0
Contributor: Anne E. Jennings
Sample notes: Sharp angular fragments of thin shells.

Lab ID: AA58968 **GRL-**1730-S **Depth (cm):** 1,950
Age: 11,625±58 **Corr. Age:** 11,125±58 **Material:** Mollusc
Weight (mg): 102 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.7
Contributor: Anne E. Jennings
Sample notes: Fresh large fragments of thin-walled shells. Periostracum attached.

Lab ID: AA58969 **GRL-**1731-S **Depth (cm):** 2,019.5
Age: 12,060±63 **Corr. Age:** 11,610±63 **Material:** Mollusc
Weight (mg): 439 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.7
Contributor: Anne E. Jennings
Sample notes: Large fragments with some evidence of wear/dissolution. Fragments of periostracum.

COMMENTS (AEJ): This 20.96-m-long Calypso core was collected during leg 2 of the IMAGES IV cruise which had the objective of obtaining high resolution Holocene records from the North Atlantic. The core lies in Cartwright Saddle on the Labrador Shelf. It contains a very detailed record of ice discharge events and associated hydrographic impacts during the Laurentide Ice Sheet deglaciation in Hudson Bay and Hudson Strait. The core extends beyond the Holocene into sediments associated with deglaciation of Labrador.

Baffin Island Shelf

Core: HU90023-022 LCF

Location: Baffin Island Shelf Brevoort Basin
Lat.: 63°6.54′ **Long.:** 64°20.22′ **Depth (mwd):** -396

Lab ID: NSRL16096 **GRL-**1835-S **Depth (cm):** 56-57
Age: 3,650±29 **Corr. Age:** 3,200±29 **Material:** Mollusc
Weight (mg): 100 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.8
Contributor: J. T. Andrews
Sample notes: Shell fragments—lustrous.

Lab ID: AA | **GRL-NA** | **Depth (cm):** 159
Age: 5,230±60 | **Corr. Age:** 4,780±60 | Material
Weight (mg): | **Genus:** | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):**
Contributor: J. Stravers
Sample notes: Paired *Yoldia*.

Lab ID: AA | **GRL-NA** | **Depth (cm):** 357
Age: 8,195±65 | **Corr. Age:** 7,745±65 | Material
Weight (mg): | **Genus:** | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):**
Contributor: J. Stravers
Sample notes: Paired *Clinocardium ciliatum*.

Lab ID: AA | **GRL-NA** | **Depth (cm):** 673
Age: 9,890±85 | **Corr. Age:** 9,440±85 | Material
Weight (mg): | **Genus:** | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):**
Contributor: J. Stravers
Sample notes: Paired *Yoldia*.

COMMENTS (JTA): This core was worked on initially by Dr J. Stravers and graduates at the University of Northern Illinois. More recently it is being studied for changes in the non-clay and clay mineralogy.

Baffin Bay

Core: HE0006-4-2PC

Location: Greenland | West Greenland | West Greenland Slope
Lat.: 71°13.163′ | **Long.:** -61°29.526′ | **Depth (mwd):** -1829

Lab ID: KCCAMS50860 | **GRL-**1829-S | **Depth (cm):** 25-27
Age: 9,730±550 | **Corr. Age:** 9,280±550 | **Material:** Foraminifera
Weight (mg): 0.4 mg | **Genus:** *Neogloboquadrina* | **Species:** *pachyderma*
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** 0.30
Contributor: Anne E. Jennings
Sample notes: 167 *Neogloboquadrina pachyderma (sin)*
Significance: This small sample was part of a project to develop a technique for dating 100 microgram samples at UC Irvine. Maurine Davis prepared and analyzed the sample. This date from glacial marine mud overlying a thick sequence of hemipelagic mud and sediment gravity flows gives a minimum age of deglaciation of the adjacent West Greenland shelf.

Lab ID: AA82697 **GRL-**1831-S **Depth (cm):** 315-317
Age: 21,440±140 **Corr. Age:** 20,990±140 **Material:** Foraminifera
Weight (mg): 7.6 mg **Genus:** *Neogloboquadrina* **Species:** *pachyderma*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.28
Contributor: Anne E. Jennings
Sample notes: Only two levels in this piston core had enough NPS for a date.
Significance: This sample from 316 cm was the deeper of the two levels. The sediments are hemipelagic mud that is associated with sediment gravity flow deposits interpreted to record glacier ice on the continental shelf during the last glaciation.

Core: HE0006-4-2TC

Location: Greenland West Greenland West Greenland Slope
Lat.: 71°13.163′ **Long.:** -61°29.526′ **Depth (mwd):** -1829

Lab ID: AA82698 **GRL-**1828-S **Depth (cm):** 35-37
Age: 10,102±56 **Corr. Age:** 9,652±56 **Material:** Foraminifera
Weight (mg): 4.1 mg **Genus:** *Neogloboquadrina* **Species:** *pachyderma*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.9
Contributor: Anne E. Jennings
Sample notes: 899 *Neogloboquadrina pachyderma* sinistral

Lab ID: KCCAMS50859 **GRL-**1830-S **Depth (cm):** 45-47
Age: 10,240±250 **Corr. Age:** 9,790±250 **Material:** Foraminifera
Weight (mg): 1 mg **Genus:** *Neogloboquadrina* **Species:** *pachyderma*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.28
Contributor: Anne E. Jennings
Sample notes: 227 *Neogloboquadrina pachyderma* sinistral
Significance: This small sample was part of a project to develop a technique for dating 100 microgram samples at UC Irvine. Maurine Davis prepared and analyzed the sample.

Nares Strait

Core: HLY0301-05GC

Location: Nares Strait Nares Strait
Lat.: 81°37.286′ **Long.:** 63°15.467′ **Depth (mwd):** -797

Lab ID: AA81309 **GRL-**1823-S **Depth (cm):** 0-2
Age: 530±52 **Corr. Age:** 80±52 **Material:** Mollusc
Weight (mg): 3.2 **Genus:** *Arca* **Species:** *glacialis*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: Anne E. Jennings
Sample notes: Small mollusc found in core top.

Lab ID: AA81310 **GRL-**1824-S **Depth (cm):** 68-70
Age: 7,302±61 **Corr. Age:** 6,852±61 **Material:** Foraminifera
Weight (mg): 4.8 **Genus:** **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** 0
Contributor: Anne E. Jennings
Sample notes: 686 *Neogloboquadrina pachyderma* sinistral and 518 *Cassidulina neoteretis* in excellent condition. Sample replacing original submission from 58 to 60 cm, which was not run.

COMMENTS (AEJ): This core was collected from Hall Basin at the northern end of Nares Strait during a 2003 cruise of the USCGC *Healy* (Kelly Falkner, Chief Scientist). We are studying the foraminifers, mineralogy, stable isotopes, Mg/Ca paleotemperatures of this core to learn about the deglaciation of Nares Strait and the timing of the opening of its connection between Baffin Bay and the Arctic Ocean.

Iceland

Southwest Iceland Shelf

Core: MD99-2258

Location: Iceland Iceland Shelf Jokuldjup
Lat.: 63°57.83′ **Long.:** -24°26.58′ **Depth (mwd):** 355

Lab ID: NSRL15950 **GRL-**1825-S **Depth (cm):** 27.5
Age: 725±15 **Corr. Age:** 325±15 **Material:** Mollusc
Weight (mg): 15 **Genus:** *Astarte* **Species:** *borealis*
δ^{13}C: Measured **δ^{13}C (‰):** 1.8
Contributor: John T. Andrews
Sample notes: Articulated.

Lab ID: NSRL15951 **GRL-**1826-S **Depth (cm):** 40
Age: 2,655±15 **Corr. Age:** 2,265±15 **Material:** Mollusc
Weight (mg): 20 **Genus:** *Astarte* **Species:** *borealis*
δ^{13}C: Measured **δ^{13}C (‰):** 2.9
Contributor: John T. Andrews
Sample notes: Articulated.

Lab ID: NSRL15952 **GRL-**1827-S **Depth (cm):** 69-72
Age: 3,180±20 **Corr. Age:** 2,780±20 **Material:** Mollusc
Weight (mg): 20 **Genus:** *Dentalia* **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** 1.1
Contributor: John T. Andrews

COMMENTS (JTA): This 72-cm-long box core is being studied in detail as part of an ongoing investigation into late Holocene conditions in an area generally not influenced by sea ice. It will also form part of an investigation into Holocene conditions where it will be combined with data from MD99-2259 (see below).

Core: MD99-2259

Location: Iceland | Iceland Shelf | Jokuldjup
Lat.: 63°57.79′ | **Long.:** -24°28.98′ | **Depth (mwd):** -385

Lab ID: AA81065 | **GRL-**1817-S | **Depth (cm):** 22-23
Age: 766±43 | **Corr. Age:** 366±43 | **Material:** Mollusc
Weight (mg): 13.3 | **Genus:** scaphopod | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** 2.6
Contributor: Ursula Quillmann
Sample notes: Whole scaphopod, broke in two halves when taken out of the core. Both halves were submitted.
Stratigraphic context: Shell in Holocene mud.

Lab ID: AA81066 | **GRL-**1818-S | **Depth (cm):** 44-45
Age: 2,535±45 | **Corr. Age:** 2,135±45 | **Material:** Mollusc
Weight (mg): 0.109 | **Genus:** *Astarte* | **Species:** *undulatum*
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** 3.1
Contributor: Ursula Quillmann
Sample notes: Articulated shell. We are breaking shell and sending 1/2 for ^{14}C dating and storing the second half.
Stratigraphic context: Shell in Holocene mud.

Lab ID: AA81067 | **GRL-**1819-S | **Depth (cm):** 84-85
Age: 4,950±57 | **Corr. Age:** 4,550±57 | **Material:** Mollusc
Weight (mg): 0.907 | **Genus:** *Astarte* | **Species:** *undulatum*
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** 2.6
Contributor: Ursula Quillmann
Sample notes: 2 halves of the shell were found, half at 84-85 cm (submitted) and other half at 85-86 cm. In the 84-85 cm section we also found 1 scaphopod plus scaphopod fragments.
Stratigraphic context: Shell in Holocene Mud.

Lab ID: AA81068 | **GRL-**1820-S | **Depth (cm):** 130-131
Age: 1,287±44 | **Corr. Age:** 887±44 | **Material:** Mollusc
Weight (mg): 0.049 | **Genus:** scaphopod | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** 2.6
Contributor: Ursula Quillmann
Stratigraphic context: Shell in Holocene mud.

Significance: This age is much younger than expected (expected ~9000 yrs). (1) We checked x-radiographs and saw the shell that we submitted at the correct depth (12/16/08) (2) We are now logging the core and comparing record to MD99-2256 to see if there are any disturbances in the core.

Lab ID: AA81069 **GRL-**1821-S **Depth (cm):** 461-462
Age: 2,869±54 **Corr. Age:** 2,469±54 **Material:** Mollusc
Weight (mg): 0.13 **Genus:** scaphopod **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 2.6
Contributor: Ursula Quillmann
Stratigraphic context: Shell in Holocene mud.
Significance: This age is much younger than expected (expected ~10,000-11,000 yrs). (1) We checked x-radiographs and saw the shell that we submitted at the correct depth. (2) We are now logging the core and comparing record to MD99-2256 to see if there are any disturbances in the core.

COMMENTS (UQ): Core MD99-2259 represents the deglacial and Holocene environments on the SW Iceland shelf. The core top is assumed to be 1000 cal yr BP based on a preliminary age model. The basal reservoir-corrected radiocarbon age is 12,390 yrs (15,100±440 cal yr BP). Two tephra layers have been identified so far, the Saksunarvarn tephra at 412-418 cm (10,200 cal yr BP) and the Vedde tephra at 603 cm (11,500 cal yr BP). Sedimentation rate between the core top and 178 cm (10,100±160 cal yr BP) is 1 cm in 45 years and between 178 cm and core base 1 cm in ~2.5 years.

Core: B997-350PC

Location: Iceland Iceland Shelf Jokuldjup, W Iceland
Lat.: 64°16.479′ **Long.:** -24°1.389′ **Depth (mwd):** -239

Lab ID: AA66845 **GRL-NA** **Depth (cm):** 0-1
Age: 2,818±39 **Corr. Age:** 2,418±39 **Material:** Foraminifera
Weight (mg): 10 **Genus:** mixed benthic **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.3
Contributor: James Bendle
Reference: Bendle (2003, p. 113, Table 4.2).

Lab ID: AA55120 **GRL-NA** **Depth (cm):** 5
Age: 645±36 **Corr. Age:** 245±36 **Material:** Serpulid worm tube
Weight (mg): 55 **Genus:** *Ditrupa* **Species:** *arietina*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.9
Contributor: James Bendle
Reference: Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53100 **GRL-NA** **Depth (cm):** 42
Age: 9,713±60 **Corr. Age:** 9,313±60 **Material:** bivalve

Weight (mg): 58.7 **Genus:** *Acanthocardia* **Species:** cf. *aculeate*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.3
Contributor: James Bendle
Sample notes: Outer 20% removed by HCL.
Reference: Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53101 **GRL-NA** **Depth (cm):** 88
Age: 10,698±75 **Corr. Age:** 10,298±75 **Material:** Fragments of bivalve
Weight (mg): 22.6 **Genus:** *Yordiella* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.1
Contributor: James Bendle
Reference: Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53103 **GRL-NA** **Depth (cm):** 196
Age: 10,916±63 **Corr. Age:** 10,596±63 **Material:** Gastropod fragment
Weight (mg): 22.5 **Genus:** *Opisthobranch* **Species:** *atys*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.1
Contributor: James Bendle
Reference: Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53104 **GRL-NA** **Depth (cm):** 249-250
Age: 11,537±66 **Corr. Age:** 11,137±66 **Material:** Scaphopod
Weight (mg): 162.2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.2
Contributor: James Bendle
Sample notes: Outer 20% removed by HCL.
Reference: Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53105 **GRL-NA** **Depth (cm):** 324
Age: 11,966±87 **Corr. Age:** 11,566±87 **Material:** bivalve
Weight (mg): 106.3 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.8
Contributor: James Bendle
Sample notes: Outer 20% removed by HCL.
Reference: Bendle (2003, p. 113, Table 4.2).

Core: MD99-2256

Location: Iceland Iceland Shelf Jokuldjup
Lat.: 64°18.19′ **Long.:** -24°12.4′ **Depth (mwd):** -246

Lab ID: AA58402 **GRL-**1709-S **Depth (cm):** 6-7
Age: 652±36 **Corr. Age:** 252±36 **Material:** Mollusc
Weight (mg): 73 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.8
Contributor: John T. Andrews

Sample notes: Tooth shell. Well-preserved.
References: Principato et al. (2005).

Lab ID: AA58403 **GRL-**1710-S **Depth (cm):** 37-38
Age: 1,466±38 **Corr. Age:** 1,066±38 **Material:** Mollusc
Weight (mg): 108 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.9
Contributor: John T. Andrews
Sample notes: Tooth shell--well preserved.

Lab ID: AA58404 **GRL-**1711-S **Depth (cm):** 47-48
Age: 2,154±38 **Corr. Age:** 1,754±38 **Material:** Mollusc
Weight (mg): 35 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 2.1
Contributor: John T. Andrews
Sample notes: Well preserved.

Lab ID: AA70939 **GRL-**1779-S **Depth (cm):** 80-82
Age: 2,910±40 **Corr. Age:** 2,510±40 **Material:** benthic forams
Weight (mg): 6.3 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.6
Contributor: Anne E. Jennings
Sample notes: *Uvigerina mediterranea*. 134 specimens picked from >106 µm fraction washed with distilled water and air dried. Boreal benthic species.

Lab ID: AA65331 **GRL-**1761-S **Depth (cm):** 113-114
Age: 3,840±39 **Corr. Age:** **Material:** Foraminifera
Weight (mg): 4.7 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.3
Contributor: Anne E. Jennings
Sample notes: 262—*Hyalinea balthica* and 70—*Uvigerina mediterranea*.

Lab ID: AA58405 **GRL-**1712-S **Depth (cm):** 123-124
Age: 3,624±41 **Corr. Age:** 3,224±41 **Material:** Mollusc
Weight (mg): 107 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 2
Contributor: John T. Andrews
Sample notes: Tooth shell—well preserved.

Lab ID: AA70940 **GRL-**1780-S **Depth (cm):** 140-142
Age: 4,568±44 **Corr. Age:** 4,168±44 **Material:** benthic forams
Weight (mg): 4.1 **Genus:** - **Species:** -
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.3
Contributor: Anne E. Jennings

Sample notes: 2 benthic foraminiferal species: *Uvigerina mediterranea* and *Globobulimina auriculata arctica*. 2 benthic species picked from >106 µm fraction washed with distilled water and air dried.

Lab ID: AA65331 **GRL-**1762-S **Depth (cm):** 163-164
Age: 5,636±39 **Corr. Age:** 5,336±39 **Material:** Foraminifera
Weight (mg): 3 **Genus:** - **Species:** -
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0
Contributor: Anne E. Jennings
Sample notes: Planktic foraminifers. 230 *Globigerina bulloides* & 176 *neogloboquadrina pachyderma* (dextral).

Lab ID: AA70941 **GRL-**1781-S **Depth (cm):** 180-182
Age: 6,200±56 **Corr. Age:** 5,800±56 **Material:** benthic forams
Weight (mg): 5 **Genus:** - **Species:** -
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.1
Contributor: Anne E. Jennings
Sample notes: 2 benthic foraminiferal species: *Uvigerina mediterranea* and *Globobulimina auriculata arctic*. 2 benthic species picked from >106 µm fraction washed with distilled water and air dried.

Lab ID: CURL7757 **GRL-**1763-S **Depth (cm):** 197-198
Age: 7,095±25 **Corr. Age:** 6,695±25 **Material:** Foraminifera
Weight (mg): 6.8 **Genus:** - **Species:** -
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 4.2
Contributor: Anne E. Jennings
Sample notes: 140 *Melonis barleeanus* and 74 *Uvigerina mediterranea*.

Lab ID: AA70942 **GRL-**1782-S **Depth (cm):** 240-242
Age: 8,379±51 **Corr. Age:** 7,979±51 **Material:** benthic forams
Weight (mg): 8.1 **Genus:** *Melonis* **Species:** *barleeanus*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.3
Contributor: Anne E. Jennings
Sample notes: Single benthic species—247 specimens. 1 benthic species picked from >106 µm fraction, washed with distilled water and air dried.
Significance: Likely early Holocene.

Lab ID: AA70943 **GRL-**1783-S **Depth (cm):** 280-282
Age: 8,978±53 **Corr. Age:** 8,573±53 **Material:** benthic forams
Weight (mg): 8 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0
Contributor: Anne E. Jennings
Sample notes: 3 benthic species: *Bulimina marginata*, *Uvigerina mediterranea* and *Melonis barleanus*, 3 benthic species picked from >106 µm fraction, washed with distilled water and air dried.

Lab ID: AA58406 **GRL-**1713-S **Depth (cm):** 315-316
Age: 9,393±66 **Corr. Age:** 8,939±66 **Material:** Mollusc
Weight (mg): 38 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.8
Contributor: John T. Andrews
Sample notes: Well preserved.

Lab ID: AA58407 **GRL-**1714-S **Depth (cm):** 343-344
Age: 9,424±48 **Corr. Age:** 9,024±48 **Material:** Mollusc
Weight (mg): 30 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0
Contributor: John T. Andrews
Sample notes: Identification not 100%. A number of small, intact, well preserved valves.

Lab ID: AA58408 **GRL-**1715-S **Depth (cm):** 389-390
Age: 9,555±74 **Corr. Age:** 9,155±74 **Material:** Mollusc
Weight (mg): 31 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.49
Contributor: John T. Andrews
Sample notes: Number of small, fragile valves that are difficult to identify.

Lab ID: AA58409 **GRL-**1716-S **Depth (cm):** 413-414
Age: 9,734±50 **Corr. Age:** 9,334±50 **Material:** Mollusc
Weight (mg): 14 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.3
Contributor: John T. Andrews
Sample notes: Well preserved valve.

Lab ID: AA58970 **GRL-**1732-S **Depth (cm):** 448
Age: 9,735±51 **Corr. Age:** **Material:** Mollusc
Weight (mg): 35 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0
Contributor: John T. Andrews
Sample notes: Well preserved gastropod.

Lab ID: AA58410 **GRL-**1717-S **Depth (cm):** 529-530
Age: 10,075±57 **Corr. Age:** 9,675±57 **Material:** Mollusc
Weight (mg): 16 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0
Contributor: John T. Andrews
Sample notes: Well preserved valve.

COMMENTS (AEJ): Core MD99-2256 is located close to core 93030-006 LCF (Jennings et al., 2000). The difference between the two cores is that MD99-2256 penetrates into glacial diamicton but 93030-006 ends just above the diamicton (Principato et al., 2005). A date of 13,790±80 BP was obtained just above the diamicton in core MD99-2256, giving a minimum date for the deglaciation of the SW Iceland shelf. As a whole, the core provides a record of the late glacial transition through the Holocene.
References: Jennings et al. (2000); Principato et al. (2005).

Northwest Iceland Shelf

Core: MD99-2266

Location: Iceland | Iceland Shelf | Isafjardardjup
Lat.: 66°13.7′ | **Long.:** -23°15.93′ | **Depth (mwd):** -106

Lab ID: AA67746 | **GRL-**1770-S | **Depth (cm):** 9.5-10.5
Age: 822±67 | **Corr. Age:** 422±67 | **Material:** Mollusc
Weight (mg): | **Genus:** *Macoma* | **Species:** *calcarea*
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** 1
Contributor: J. T. Andrews
Sample notes: This shell was pulverized and milled in Patterson's lab at the University of Alberta in Canada. The left-over sample is submitted for radiocarbon dating and is pulverized.
Stratigraphic context: in Holocene mud
Reference: Quillmann (2003); Quillmann (2006); Andrews et al. (2008).

Lab ID: CURL8022 | **GRL-**1765-s | **Depth (cm):** 22-23
Age: 830±15 | **Corr. Age:** 430±15 | **Material:** Mollusc
Weight (mg): | **Genus:** | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** 2.9
Contributor:
Sample notes: Unidentified mollusc fragment.
Stratigraphic context: in Holocene mud
References: Andrews et al. (2002); Quillmann (2003, 2006).

Lab ID: AA67747 | **GRL-**1771-S | **Depth (cm):** 24-25
Age: 746±61 | **Corr. Age:** 346±61 | **Material:** Mollusc
Weight (mg): | **Genus:** *Thyasira* | **Species:** flexuosa
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** -1.4
Contributor:
Sample notes: This sample was milled and pulverized by Bill Patterson at the University of Alberta in Canada. The left-over sample (pulverized) is submitted for radiocarbon dating.
Stratigraphic context: in Holocene mud.

Lab ID: AA58537 **GRL-**1718-S **Depth (cm):** 34.5-35.5
Age: 809±30 **Corr. Age:** 409±30 **Material:** Mollusc
Weight (mg): 50.6 **Genus:** *Nuculana* **Species:** *tenuisulcata*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.01
Contributor: John T. Andrews, Ursula Quillmann
Stratigraphic context: in Holocene mud
Sample notes: Photo available. Soaked in water, brushed off.
Reference: Quillmann (2006).

Lab ID: CURL7633 **GRL-**1755-S **Depth (cm):** 113
Age: 1,450±2015 **Corr. Age:** 1,050±15 **Material:** Mollusc
Weight (mg): 13 **Genus:** *Dentalium* **Species:** -
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: One intact valve, species in the *Yoldia* family--might be *Portlandia arctica*.
Stratigraphic context: In Holocene mud.
Reference: Quillmann (2003, 2006).

Lab ID: AA58536 **GRL-**1720-S **Depth (cm):** 139-141
Age: 1,640±33 **Corr. Age:** 1,240±33 **Material:** Mollusc
Weight (mg): 130.5 mg **Genus:** *Dentalium* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Photo available. Soaked in water, brushed off.
Stratigraphic context: in Holocene mud
Reference: Quillmann (2006).

Lab ID: AA58538 **GRL-**1719-S **Depth (cm):** 195-196
Age: 2,126±34 **Corr. Age:** 1,726±34 **Material:** Mollusc
Weight (mg): 112.1 mg **Genus:** *Thyasira* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -2.68
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Photo available, articulated shell, 1/2 uncut left in sample. Soaked in water, brushed off.
Stratigraphic context: in Holocene mud
Reference: Quillmann (2006).

Lab ID: AA58971 **GRL-**1733-S **Depth (cm):** 240
Age: 2,664±33 **Corr. Age:** 2,264±33 **Material:** Mollusc
Weight (mg): 500 mg **Genus:** *Yoldi*?? **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.2
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Photo available. Large valve. Piece broken off for ^{14}C dating. Soaked in water, brushed off. The original depth of 90 cm probably refers to the depth in a u-channel.

Stratigraphic context: in Holocene mud
Reference: Quillmann (2006).

Lab ID: AA58972 **GRL-**1734-S **Depth (cm):** 372
Age: 3,424±35 **Corr. Age:** 3,024±35 **Material:** Mollusc
Weight (mg): 320 **Genus:** *Thyasira* **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** -4.4
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Photo available. One valve sent to W. Patterson for isotopes. Soaked in water, brushed off. The original depth of 222 m probably refers to depth in a u-channel. The sample has been corrected by adding 150 cm.
Stratigraphic context: in Holocene mud
Reference: Quillmann (2006).

Lab ID: CURL7613 **GRL-**1754-S **Depth (cm):** 1,398.5
Age: 6,790±20 **Corr. Age:** 6,379±20 **Material:** Mollusc
Weight (mg): **Genus:** **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** 0.5
Contributor: Ursula Quillmann
Significance: GSA graduate student grant (uq): Detecting the 8.2 event using foraminiferal Mg/Ca and δ^{18}O.
Stratigraphic context: in Holocene mud
Reference: Quillmann (2006).

Lab ID: CURL7903 **GRL-**1759-S **Depth (cm):** 1,736.5
Age: 7,640±30 **Corr. Age:** 7,240±30 **Material:** Mollusc
Weight (mg): **Genus:** *Nucluna* **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** 8.8
Contributor: Ursula Quillmann
Sample notes: Half of bivalve intact, other half archived.
Significance: GSA graduate student grant: Detecting the 8.2 event using foraminiferal Mg/Ca and δ^{18}O.
Stratigraphic context: in Holocene mud
Reference: Quillmann (2006).

Lab ID: CURL7756 **GRL-**1760-S **Depth (cm):** 1,784.5
Age: 7,780±25 **Corr. Age:** 7,380±25 **Material:** Mollusc
Weight (mg): **Genus:** **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** 5
Contributor: Ursula Quillmann
Sample notes: Mollusc fragment.
Stratigraphic context: in Holocene mud
Significance: GSA graduate student grant: Detecting the 8.2 event using foraminiferal Mg/Ca and δ^{18}O.
Reference: Quillmann (2006).

Lab ID: NSRL13920 **GRL-**1754-S **Depth (cm):** 1,790
Age: 7,755±20 **Corr. Age:** 7,355±20 **Material:** Mollusc
Weight (mg): 13 **Genus:** *Dentalium* **Species:** -
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: John T. Andrews
Sample notes: One intact valve, species in the *Yoldia* family--might be *Portlandia arctica*. **Stratigraphic context:** In Holocene mud.
Reference: Quillmann (2006).

Lab ID: CURL7903 **GRL-**1764-S **Depth (cm):** 2,236.5-2,238.5
Age: 8,285±15 **Corr. Age:** 7,825±15 **Material:** mollusk
Weight (mg): **Genus:** Gastropod **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 3
Contributor:
Sample notes: Well-preserved Gastropod, photographed. GSA graduate student grant: Detecting the 8.2 event using foraminiferal Mg/Ca and $\delta^{18}O$.
Stratigraphic context: in Holocene mud.

COMMENTS (UQ): Rock and paleomagnetic data from this core are reported in Andrews et al. (2008). Core MD99-2266 contains over 38 m of Holocene sediment. Sediment accumulation rates are highest between 10,180 and 5,500 cal yrs BP. The sediment is mainly silty clay with faint to prominent laminations and a near basal date of 9,804 ± 70 BP. MD99-2266 contains an abundance of foraminifera and articulated bivalves.
References: Quillmann (2003, 2006); Andrews et al. (2008); Quillmann et al. (in press).

Core: B997-338PC

Location: NW Iceland Iceland Shelf Djupall
Lat.: 66°35.3′ **Long.:** -23°58.6′ **Depth (mwd):** -209

Lab ID: AA57068 **GRL-**1701-S **Depth (cm):** 193-195
Age: 13,507±78 **Corr. Age:** 13,107±78 **Material:** Mollusc
Weight (mg): 10.3 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -12.72
Contributor: John T. Andrews

Lab ID: AA57067 **GRL-**1700-S **Depth (cm):** 209-211
Age: 13,235±62 **Corr. Age:** 12,835±62 **Material:** Mollusc
Weight (mg): 3.2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.52
Contributor: John T. Andrews
Sample notes: See video pictures. Well preserved.

Lab ID: AA32968 **GRL-**1496-S **Depth (cm):** 412
Age: 34,600±640 **Corr. Age:** 34,200±640 **Material:** Foraminifera

Weight (mg): 7.4 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.6
Contributor: John T. Andrews

Comments (JTA): This site was selected on the basis of 3.5 kHz data taken in 1996 (JM96- cruise) and the B997 cruise. The site is close to JM96-1234. The seismic data suggests that this site would recover "old" sediments as it stratigraphically lies beneath sediments recovered at sites B997-335 and 336 (Helgadóttir, 1997). The dates from this site and JM96-1234 confirm this hypothesis. New data (Chesley, 2005) suggests that the "old" dates are probably reworked. Two silica-rich tephras have been noted in the interval ca 13 ka BP (Chesley, 2005).
References: Helgadóttir (1997); Andrews et al. (2002); Geirsdóttir et al. (2002); Chesley (2005).

Core: B997-339PC2

Location: Iceland Iceland Shelf Skotufjordur, NW Iceland
Lat.: 66°1.1056′ **Long.:** -22°48.038′ **Depth (mwd):** -104

Lab ID: AA60140 **GRL-**1740-S **Depth (cm):** 35-36.25
Age: 3,600±38 **Corr. Age:** 3,200±38 **Material:** Mollusc
Weight (mg): 21 **Genus:** *Thyasira* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -2.2
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Soaked in water, brushed off and dried at room temperature. Photograph available.
Stratigraphic context: in Holocene mud.
Reference: Quillmann (2006); Andrews et al. (2008).

Lab ID: AA60141 **GRL-**1741-S **Depth (cm):** 101.25-102.5
Age: 6,583±41 **Corr. Age:** 6,183±41 **Material:** Mollusc
Weight (mg): 10.5 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.1
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Fragment, 3*1.45 cm, sharp edges, periostracum intact. Soaked in water, brushed off and dried at room temperature. Photograph available.
Stratigraphic context: in Holocene mud.

Lab ID: AA60139 **GRL-**1739-S **Depth (cm):** 263.75-265
Age: 9,876±50 **Corr. Age:** 9,476±50 **Material:** Mollusc
Weight (mg): 80 **Genus:** *Nuculana* **Species:** *tenuisulcata*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.77
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Soaked in water, brushed off and dried at room temperature. Photograph available.

Lab ID: AA60142 **GRL-**1742-S **Depth (cm):** 348.75-350
Age: 10,021±51 **Corr. Age:** 9,621±51 **Material:** Mollusc fragment
Weight (mg): 83 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.09
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Fragment, 1.5*1.5 cm, sharp edges, periostracum intact. Soaked in water, brushed off and dried at room temperature. Photograph available.

Lab ID: AA60143 **GRL-**1743-S **Depth (cm):** 418.75-420
Age: 10,313±52 **Corr. Age:** 9,913±52 **Material:** Mollusc
Weight (mg): 21.9 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.49
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Fragment, 2*2 cm, sharp edges, periostracum intact. Soaked in water, brushed off and dried at room temperature. Photograph available.
Stratigraphic context: ???below the Saksunarvatn tephra found at 170 cm depth with a calibrated age of 10,180±120 ~9,000±80 conventional radiocarbon age.

Comments (UQ): Glacial marine conditions existed around ~10,200 cal yr BP, coinciding with the deposition of the Saksunarvatn tephra layer (at 170 cm), as recorded at the inner fjord site in relatively heavy and variable stable oxygen isotopes and in the foraminiferal assemblages, in which ~80% is composed of arctic species, *Elphidium excavatum* forma *clavata* and *Cassidulina reniforme*, and high mass accumulation rates. Ice-rafted debris is present and mass magnetic susceptibility is high. The site records a lowering of the relative sea level in its foraminiferal assemblage, when *Cibicides lobatulus*, *Astronion gallowayi*, and *Elphidium albiumbilicatum*, species interpreted as high bottom current indicators, represent over 50% of the species present. The change in energy is also recorded in the X-radiographs. The early Holocene warming was terminated ~9,000 cal yr BP, which suggests that fjord water overturning had set in. Despite the inflow of warm Atlantic water, the foraminiferal assemblages consist of arctic fauna. Environmental magnetic data reported in Andrews et al. (2008).
References: Quillmann (2003, 2006); Andrews et al. (2008); Quillmann et al. (in press).

Core: B997-311GGC

Location: Iceland Iceland Shelf Jokulfirdir
Lat.: 66°16.4′ **Long.:** -22°51.4′ **Depth (mwd):** -100

Lab ID: AA56740 **GRL-**1694-S **Depth (cm):** 0-2.5
Age: 1,286±32 **Corr. Age:** 886±32 **Material:** Mollusc
Weight (mg): 69 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.13
Contributor: John T. Andrews
Sample notes: Large thin-walled fragment—periostracum intact

Lab ID: AA56741 **GRL-**1695-S **Depth (cm):** 61-63.5
Age: 2,418±45 **Corr. Age:** 2,018±45 **Material:** Mollusc
Weight (mg): 143 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.57
Contributor: John T. Andrews
Sample notes: Large fragment—periostracum intact.

Core: B997-341PC3

Location: Iceland Iceland Shelf Jokulfirdir, NW Iceland
Lat.: 66°16.62′ **Long.:** -22°50.528′ **Depth (mwd):** -96

Lab ID: CURL7634 **GRL-**1756-S **Depth (cm):** 66.25
Age: 1,620±15 **Corr. Age:** 1,220±15 **Material:** Mollusc
Weight (mg): 27 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 2.3
Contributor: John T. Andrews
Sample notes: Large shell fragment with periostracum, species unclear.
Significance: The sediment accumulation rate averages 85 cm/1,000 yr
Stratigraphic context: In Holocene mud.
Reference: Richter and Andrews (2003); Quillmann (2006); Andrews et al. (2008).

Core: B997-342PC

Location: Iceland Iceland Shelf Jokulfirdir, NW Iceland
Lat.: 66°16.51′ **Long.:** -22°51.67′ **Depth (mwd):** 94

Lab ID: AA56295 **GRL-**1684-S **Depth (cm):** 10-12
Age: 1,857±33 **Corr. Age:** 1,457±33 **Material:** Mollusc
Weight (mg): 52 **Genus:** *Nuculana* **Species:** *minuta*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -4.49
Contributor: John T. Andrews
Sample notes: Date will check correlation between this core and MD99-2265 from the same fjord.

Lab ID: AA56294 **GRL-**1683-S **Depth (cm):** 184-186
Age: 5,408±40 **Corr. Age:** 5,008±40 **Material:** Mollusc
Weight (mg): 23 **Genus:** *Thyasira* ?? **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.18
Contributor: John T. Andrews
Sample notes: Date will check correlation with MD99-2265 (Ólafsdóttir, in prep.) from the same fjord.

Core: B997-314SGC

Location: Iceland Iceland Shelf Djupall
Lat.: 66°41.1′ **Long.:** -24°10.8′ **Depth (mwd):** -243

Lab ID: AA56299 **GRL-**1688-S **Depth (cm):** 0-1.5
Age: 1,130±120 **Corr. Age:** 730±120 **Material:** Mollusc
Weight (mg): 5 **Genus:** **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** -2.05
Contributor: John T. Andrews
Sample notes: Small bivalves with stained periostracum. Check on the age at ca 20 cm based on foraminifera.

Lab ID: AA56300 **GRL-**1689-S **Depth (cm):** 0-1.5
Age: 2,015±65 **Corr. Age:** 1,615±65 **Material:** Sea weed and Foraminifera
Weight (mg): n/a **Genus:** **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** 0.47
Contributor: John T. Andrews
Sample notes: Organic matt with some foraminifera.

Lab ID: AA56300 **GRL-**1689-S **Depth (cm):** 0-1.5
Age: 818±85 **Corr. Age:** 418 ±85 **Material:** **Sea weed**
Weight (mg): 49 **Genus:** **Species:**
δ^{13}C: Measured **δ^{13}C (‰):**
Contributor: John T. Andrews

Lab ID: AA56298 **GRL-**1687-S **Depth (cm):** 18.5-19
Age: 1,465±39 **Corr. Age:** 1,065±39 **Material:** Mollusc
Weight (mg): 5 **Genus:** **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** 1.42
Contributor: John T. Andrews
Sample notes: Small articulated bivalves and *Dentalium*. Check on the age at ca 20 cm based on foraminifera.

Lab ID: AA56527A **GRL-**1693-S **Depth (cm):** 19-20
Age: 1,026±32 **Corr. Age:** 826±32 **Material:** Plant Macrofossils
Weight (mg): 12 **Genus:** **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** -19.6
Contributor: John T. Andrews
Sample notes: (A) seaweed?? and (B) embedded foraminifera and sponge spicules.

Lab ID: AA56527B **GRL-**1693-S **Depth (cm):** 19-20
Age: 1,005±57 **Corr. Age:** 805±57 **Material:** Plant Macrofossils
Weight (mg): 10 **Genus:** **Species:**
δ^{13}C: Measured **δ^{13}C (‰):** -0.02
Contributor: John T. Andrews
Sample notes: (A) seaweed and (B) embedded foraminifera and sponge spicules.

Core: B997-315PC

Location: Iceland Shelf Djupall
Lat.: 66°43.96′ **Long.:** -24°20.13′ **Depth (mwd):** -220

Lab ID: NSRL15187 **GRL-**1784-S **Depth (cm):** 0-2
Age: 2,985±20 **Corr. Age:** 2,585±20 **Material:** foraminifera
Weight (mg): **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 3.8
Contributors: John T. Andrews, Ursula Quillmann
Sample notes: Mixed foraminifera.

Lab ID: NSRL15290 **GRL-**1807-S **Depth (cm):** 30-32
Age: 4,895±15 **Corr. Age:** 4,495±15 **Material:** Mollusc
Weight (mg): 187 **Genus:** *Macoma* **Species:** *calcarea*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 2.4
Contributor: John T. Andrews
Sample notes: Intact paired bivalve, although only about 2/3rds of the specimen was recovered from the core. Fresh appearance.

Lab ID: NSRL15289 **GRL-**1806-S **Depth (cm):** 75
Age: 10,675±20 **Corr. Age:** 10,265±20 **Material:** Mollusc
Weight (mg): 90 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 3.2
Contributor: John T. Andrews
Sample notes: Fairly large fragment of a bivalve. Sharp fractures and no sign of major reworking. Some periostracum intact.

Lab ID: NSR15290 **GRL-**1808-S **Depth (cm):** 196.5
Age: **Corr. Age:** **Material:** Mollusc
Weight (mg): **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor:
Sample notes: Scattered angular fragments in the interval ±2 cm on either side of the depth. Shell may have been fractured during coring or splitting.

COMMENT (JTA): This core is the outermost site within the Djpuall trough. Variations in the weight% of quartz and potassium feldspar are reported in Andrews et al. (2009b) and Andrews (in press).
References: Andrews et al. (2009b); Andrews (in press).

Core: MD99-2264

Location: Iceland Shelf Djupall
Lat.: 66°40.74′ **Long.:** 24°11.76′ **Depth (mwd):** 235

Lab ID: AA67417 **GRL-**1767-S **Depth (cm):** 82-83
Age: 3,466±48 **Corr. Age:** 3,066±48 **Material:** Mollusc
Weight (mg): 300 **Genus:** *Dentalia* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1
Contributor: John T. Andrews, S. Ólafsdóttir
Sample notes: Tooth shell recovered from the u-channel in preparing sediments for XRD analyses. Sample lies between available dates as of 10/20/05.
Reference: Ólafsdóttir (2004).

Lab ID: AA67416 **GRL-**1766-S **Depth (cm):** 108-109
Age: 4,406±49 **Corr. Age:** 4,006±49 **Material:** Mollusc
Weight (mg): 400 **Genus:** *Astarte* **Species:** *striata*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 2
Contributor: John T. Andrews, S. Ólafsdóttir
Sample notes: Whole valve recovered from the u-channel in preparing sediments for XRD analyses. Sample lies between available dates as of 10/20/05.
Reference: Ólafsdóttir (2004).

Lab ID: AA68075 **GRL-**1772-S **Depth (cm):** 134-136
Age: 5,435±41 **Corr. Age:** 5,035±41 **Material:** Mollusc
Weight (mg): 91 **Genus:** *Dentalia* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 2.1
Contributor: John T. Andrews, S. Ólafsdóttir
Sample notes: Tooth shell recovered from the u-channel in preparing sediments for XRD analyses. Sample lies between available dates as of 10/20/05.
Reference: Ólafsdóttir (2004).

Lab ID: AA68076 **GRL-**1773-S **Depth (cm):** 195-196
Age: 7,775±46 **Corr. Age:** 7,375±46 **Material:** Mollusc
Weight (mg): 51 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.6
Contributor: John T. Andrews, S. Ólafsdóttir
Sample notes: Intact and well preserved small gastropod. Sample lies between available dates as of 10/20/05.

COMMENT (JTA): Quartz and potassium feldspar data from this core are reported in Andrews et al (2009a) and Andrews (in press). Foraminifera and stable isotope values from foraminifera are part of Ólafsdóttir (in prep.) PhD dissertation at the University of Iceland. Box core MD99-2263 (see this Date List) is from the same site.
Reference: Ólafsdóttir (2004); Andrews et al. (2009a); Andrews (in press); Ólafsdóttir (in prep.).

Core: MD99-2263

Location: Iceland Shelf Djupall
Lat.: 66°40.74′ **Long.:** 24°11.76′ **Depth (mwd):**

Lab ID: NSRL15928 **GRL-**1815-S **Depth (cm):** 7
Age: 595±15 **Corr. Age:** 195 ± 15 **Material:** Mollusc
Weight (mg): 30 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: John T. Andrews
Sample notes: Small intact spiral gastropod.

Lab ID: NSRL15287 **GRL-**1805-S **Depth (cm):** 10
Age: 600±15 **Corr. Age:** 200±15 **Material:** Mollusc
Weight (mg): 14 **Genus:** *Axinopsis* **Species:** spp?
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -3.7
Contributor: John T. Andrews
Sample notes: Whole bivalve recovered from the box core. One valve submitted. Sample lies between available dates as of 10/20/05.
Reference: Andrews et al. (in press).

Lab ID: NSRL15929 **GRL-**1816-S **Depth (cm):** 12
Age: 690±15 **Corr. Age:** 290±15 **Material:** Mollusc
Weight (mg): 30 **Genus:** *Chlamys* **Species:** *islandicus*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: John T. Andrews
Sample notes: Whole intact valve of *Chlamys islandicus*—ca 2 cm dia.

Lab ID: NSRL-15189 **GRL-**1802-S **Depth (cm):** 17
Age: 680±20 **Corr. Age:** 280±20 **Material:** Mollusc
Weight (mg): **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 4.3
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Whole valve recovered from the box core. Sample lies between available dates as of 10/20/05.
Reference: Andrews et al. (in press).

Lab ID: NSRL15190 **GRL-**1803-S **Depth (cm):** 25
Age: 850±15 **Corr. Age:** 450±15 **Material:** Mollusc
Weight (mg): **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -3.7
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Whole valve recovered from the box core. Sample lies between available dates as of 10/20/05.
Reference: Andrews et al. (in press).

Lab ID: NSRL15288 **GRL-**1809-S **Depth (cm):** 38.5
Age: 1,620±15 **Corr. Age:** 1,220±15 **Material:** Mollusc
Weight (mg): 100 **Genus:** *Macoma* **Species:** *calcarea*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.4

Contributor: John T. Andrews
Sample notes: Whole bivalve recovered from the box core. One valve submitted. Sample lies between available dates as of 10/20/05.
Reference: Andrews et al. (in press).

Lab ID: NSRL15191 **GRL-**1804-S **Depth (cm):** 45
Age: 2,165±15 **Corr. Age:** 1,765±15 **Material:** Mollusc
Weight (mg): **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 6.5
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Whole valve recovered from the box core. Sample lies between available dates as of 10/20/05.
Reference: Andrews et al. (in press).

COMMENTS (JTA): This box core is from the same site as MD99-2264 (see above). Data from the box core will be published in Andrews et al. (in press), which includes data on the sea ice biomarker IP25, foraminifera, and quartz weight%. The foraminifera from the box core will be merged with those from the piston core MD99-2264 as part of the PhD of Ólafsdóttir, University of Iceland.

North Iceland Shelf

Core: B997-330SGC

Location: Iceland Iceland Shelf Sveinbjarnargrunn
Lat.: 65°52′ **Long.:** -21°4.9′ **Depth (mwd):** -165

Lab ID: AA46531 **GRL-**1383-S **Depth (cm):** 19-20
Age: 610±60 **Corr. Age:** 210±60 **Material:** Mollusc
Weight (mg): 2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: John T. Andrews
Sample notes: Foraminifera
Significance: This small gravity corer was raised from the same site as 330PC (this date list) to ensure that we have captured the uppermost part of the sediment column. The radiocarbon date suggests a rate of sediment accumulation of ~1 cm/10 yr.

Core: B997-324 SGC

Location: Iceland Iceland Shelf Reykjafjardarall
Lat.: 66°31.426′ **Long.:** -21°9.1325′ **Depth (mwd):** -282

Lab ID: AA56296 **GRL-**1685-S **Depth (cm):** 10-12
Age: 572±76 **Corr. Age:** 172±76 **Material:** Mollusc
Weight (mg): 2 **Genus:** **Species:** l

$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -5.88
Contributor: John T. Andrews
Sample Notes: Small molluscs and fragments.

Lab ID: AA56297 **GRL-**1686-S **Depth (cm):** 10-12
Age: 1,453±25 **Corr. Age:** 1,053 ±25 **Material:** Plant Macrofossils
Weight (mg): 424 mg **Genus:** **Species:** l
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: John T. Andrews
Sample Notes: Mat of organic fragments (seaweed) and foraminifera, plus sponge spicules.
Significance: ???The short gravity core from site B997-324 should have recovered the uppermost sediments from the seafloor. Overlap of the short gravity core and the upper date from B997-324 PC1 (AA-32975) indicate that both cores should have recovered the uppermost sediments from the seafloor. Sediment accumulation rates for the most recent sediments are on the order of 13 cm/1,000 yrs.

Core: B997-325GGC

Location: Iceland Iceland Shelf Reykjafjardarall
Lat.: 66°34.4′ **Long.:** -20°59.8′ **Depth (mwd):** -3450

Lab ID: AA46846 **GRL-** **Depth (cm):** 0-1
Age: 1,247±56 **Corr. Age:** 847±56 **Material:** Foraminifera
Weight (mg): 10 **Genus:** mixed benthic **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.3
Contributor: James Bendle
Sample Notes: From foraminifera extracted from sediment retained in the core catcher.
Reference: Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53121 **GRL-** **Depth (cm):** 9-10
Age: 2,783±39 **Corr. Age:** 2,383±39 **Material:** bivalve fr & Foraminifera
Weight (mg): 14.9 **Genus:** mixed benthic **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.5
Contributor: James Bendle

Lab ID: AA53106 **GRL-** **Depth (cm):** 31
Age: 4,470±47 **Corr. Age:** 4,070±47 **Material:** Gastropod mollusc
Weight (mg): 24.5 **Genus:** *Lunatia* **Species:** *groenlandia*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.4
Contributor: James Bendle
Sample Notes: From foraminifera extracted from sediment retained in the core catcher.
Significance: This date indicates that the rate of sediment accumulation in the mid-section of Reykjafjardarall has averaged ca. 30 cm/ky over the last 9,000 years. This site is close to HU93030-006LCF (Jennings et al., 2000).

Reference: Jennings et al. (2000)

Core: B997-325PC

Location: Iceland | Iceland Shelf | Reykjafjardarall
Lat.: 66°34.4′ | **Long.:** -20°59.8′ | **Depth (mwd):** -3450

Lab ID: NSRL15188 | **GRL-**1788-S | **Depth (cm):** 0-5
Age: 385±15 | **Corr. Age:** -15±15 | **Material:** Foraminifera
Weight (mg): | **Genus:** | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):**
Contributors: John T. Andrews, Ursula Quillmann
Sample notes: Mixed foraminifera. From foraminifera extracted from sediment retained in the core catcher.
Reference: See Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53107 | **GRL-** | **Depth (cm):** 87-88
Age: 6,921±72 | **Corr. Age:** 6,521±72 | **Material:** Foraminifera
Weight (mg): -1.5 | **Genus:** mixed benthic | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):**
Contributor: James Bendle
Sample Notes: Outer 20% removed by HCL. From foraminifera extracted from sediment retained in the core catcher.
Reference: See Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53108 | **GRL-NA** | **Depth (cm):** 99-101
Age: 7,347±66 | **Corr. Age:** 6,947±66 | **Material:** Foram & bivalves
Weight (mg): 15.6 | **Genus:** *Thyasira* | **Species:** cf *sarsi*
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** -1.6
Contributor: James Bendle
Sample Notes: Mixed benthic foraminifera and small bivalves *Thysira* cf *sarsi*.
Reference: See Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53109 | **GRL-NA** | **Depth (cm):** 139-141
Age: 8,759±67 | **Corr. Age:** 8,359±67 | **Material:** Foram & bivalves
Weight (mg): 23 | **Genus:** *Thysira* | **Species:** cf *sarsi*
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** -2
Contributor: James Bendle
Sample Notes: Table 4.2. Mixed benthic foraminifera and small bivalves *Thysira* cf *sarsi*. From foraminifera extracted from sediment retained in the core catcher.
Reference: See Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53110 | **GRL-NA** | **Depth (cm):** 171-173
Age: 9,252±70 | **Corr. Age:** 8,852±70 | **Material:** Foraminifera
Weight (mg): 17.4 | **Genus:** mixed benthic | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** -3

Contributor: James Bendle
Sample Notes: From foraminifera extracted from sediment retained in the core catcher.
Reference: See Bendle (2003, p. 113, Table 4.2).

Lab ID: AA53111 **GRL-NA** **Depth (cm):** 211-213
Age: 10,400±150 **Corr. Age:** 10,000±150 **Material:** see sample notes
Weight (mg): 23 **Genus:** see sample notes **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -2.6
Contributor: James Bendle
Sample notes: Scaphopod mollusc *entalis*. mixed benthic foraminifera and bivalve fragments. From foraminifera extracted from sediment retained in the core catcher.
Reference: See Bendle (2003, p. 113, Table 4.2).

Core: B997-327PC

Location: Iceland Iceland Shelf Reykjafjardarall
Lat.: 66°38.485′ **Long.:** -20°51.793′ **Depth (mwd):** -373

Lab ID: AA64125 **GRL-**1752-S **Depth (cm):** 95
Age: 1,329±34 **Corr. Age:** 929±34 **Material:** Mollusc
Weight (mg): 11 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: John T. Andrews
Sample notes: Small (>2 mm) intact bivalves. Shells obtained from the >2 mm sieved fraction of **GRL-**15788.
References: Andrews et al. (2001); Andrews and Giraudeau (2003); Smith (2004).

Core: MD99-2269

Location: Iceland Iceland Shelf Reykjafjardarall
Lat.: 66°37.53′ **Long.:** -20°51.16′ **Depth (mwd):** -365

Lab ID: AA57895 **GRL-**1703-S **Depth (cm):** 351
Age: 1,978±35 **Corr. Age:** 1,578±35 **Material:** Mollusc
Weight (mg): 67.3 **Genus:** cf. *Yoldia* **Species:** *glacialis*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.12
Contributor: John T. Andrews, Greta B. Kristjánsdóttir
Sample notes: Shells still have organic coating. Good looking shell fragments that can be pieced together into one shell.
Stratigraphic context: In Holocene mud.

Lab ID: AA57896 **GRL-**1704-S **Depth (cm):** 562-564
Age: 3,017±39 **Corr. Age:** 2,617±39 **Material:** Mollusc
Weight (mg): 19.1 **Genus:** *Yoldia* **Species:** sp.
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.98
Contributor: John T. Andrews, Greta B. Kristjánsdóttir

Sample notes: Nice looking articulated mollusk. Organic coating. Both halves sent since they are small. Another articulated shell left in sample.
Stratigraphic context: In Holocene mud.

Lab ID: AA57897a **GRL-**1705-S **Depth (cm):** 707-708
Age: 3,751±44 **Corr. Age:** 3,351±44 **Material:** Mollusc
Weight (mg): 79 **Genus:** *Arca* **Species:** *glacialis*
δ^{13}C: Measured **δ^{13}C (‰):**
Contributor: John T. Andrews, Greta B. Kristjánsdóttir
Sample notes: 2 pieces of *Arca glacialis*. 1.5 cm long. A piece of broken half sent off.
Stratigraphic context: In Holocene mud.
Significance: According to Arizona these duplicate dates for 707-708 cm were calculated with an assumed δ^{13}C value rather than the measured one because at the time they didn't have the measured δ^{13}C. Age 3840±33 should be used for this sample, not 3751±44.

Lab ID: AA57897b **GRL-**1705-S **Depth (cm):** 707-708
Age: 3,840*±33 **Corr. Age:** 3,440±33 **Material:** Mollusc
Weight (mg): 79 **Genus:** *Arca* **Species:** *glacialis*
δ^{13}C: Measured **δ^{13}C (‰):** 2.07
Contributor: John T. Andrews, Greta B. Kristjánsdóttir
Sample notes: 2 pieces of *Arca glacialis*. 1.5 cm long. A piece of broken half sent off.
Stratigraphic context: In Holocene mud. For some reason Arizona came back with duplicate analysis of this sample, here designated as 57897a and b. May 2004; according to Arizona these duplicate dates for 707-708 cm were calculated with an assumed δ^{13}C value rather than the measured one because at the time they didn't have the measured δ^{13}C. *Age 3840±33 should be used for this sample, not 3751±44.

Lab ID: AA57898 **GRL-**1706-S **Depth (cm):** 815
Age: 3,949±39 **Corr. Age:** 3,549±39 **Material:** Mollusc
Weight (mg): 23.3 **Genus:** *Yoldia* **Species:** sp.
δ^{13}C: Measured **δ^{13}C (‰):** 0.6
Contributor: John T. Andrews, Greta B. Kristjánsdóttir
Sample notes: Nice looking shell half. 2 broken pieces left in sample.
Stratigraphic context: In Holocene mud.

Lab ID: AA57899 **GRL-**1707-S **Depth (cm):** 1,280-1,282
Age: 5,826±51 **Corr. Age:** 5,426±51 **Material:** Mollusc
Weight (mg): 4.1 **Genus:** *Yoldia* **Species:** sp.
δ^{13}C: Measured **δ^{13}C (‰):** 0.74
Contributor: John T. Andrews, Greta B. Kristjánsdóttir
Sample notes: Two shell halves, probably from the same individual. Slightly etched on the outer surface (like partially bored).
Stratigraphic context: In Holocene mud.

Lab ID: AA61217 **GRL-**1747-S **Depth (cm):** 1,410-1,412

Age: 6,833±81 **Corr. Age:** 6,433±81 **Material:** Foraminifera
Weight (mg): 3.9 **Genus:** - **Species:** -
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -2
Contributor: Anne E. Jennings
Sample notes: Mixed benthic species: 23 *Globobulimina auriculata arctica*, 103 *Nonioniella labradorica*, 59 *Melonis barleeanus*. Sediment washed over sieve with distilled water. Air dried.
Stratigraphic context: In Holocene mud.
Significance: Planktic and benthic forams dated from the same level for analysis of marine reservoir and water-column stratification.

Lab ID: AA61218 **GRL-**1748-S **Depth (cm):** 1,410-1,412
Age: LOST **Corr. Age:** **Material:** Foraminifera
Weight (mg): 2.7 **Genus:** - **Species:** -
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: Anne E. Jennings
Sample notes: Planktic forams, 472 from > 150 µm and 265 from 106-150 µm. See assemblage data from this level for species composition. Washed over sieves in distilled water. Air dried.
Stratigraphic context: In Holocene mud**.**
Significance: Planktic and benthic forams dated from the same level for analysis of marine reservoir and water-column stratification.

Lab ID: AA61219 **GRL-**1749-S **Depth (cm):** 1,740-1,742
Age: 8,950±120 **Corr. Age:** 8,550 ± 120 **Material:** Foraminifera
Weight (mg): 2.3 **Genus:** - **Species:** -
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.99
Contributor: Anne E. Jennings
Sample notes: Planktic forams, >150 µm: 140 NPS, 111 NPD, 48 *G. bulloides*, 228 *G. quinqueloba*, 7 *G. glutinata*. Sediment washed over sieve with distilled water. Air dried.
Stratigraphic context: In Holocene mud.
Significance: Part of a 3-part comparison between benthic and planktic dates from the same level in MD99-2269.
References: Andrews et al. (2002); Andersen et al. (2004).

Lab ID: AA61220 **GRL-**1750-S **Depth (cm):** 1,740-1,742
Age: 8,572±78 **Corr. Age:** 8,172±78 **Material:** Foraminifera
Weight (mg): 2.5 **Genus:** *Nonionellina* **Species:** *labradorica*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -2.5
Contributor: Anne E. Jennings
Sample notes: 129 specimens. Sediment washed over sieve with distilled water. Air dried.
Stratigraphic context: In Holocene mud.
Significance: Part of a 3-part comparison between planktic and benthic dates at the same level in MD99-2269.
References: Andrews et al. (2002); Andersen et al. (2004).

Lab ID: AA61221 **GRL-**1751-S **Depth (cm):** 1,740-1,742
Age: 8,609±92 **Corr. Age:** 8,209±92 **Material:** Foraminifera
Weight (mg): 4.4 **Genus:** *Globobulimina* **Species:** *auriculata arctica*
δ^{13}C: Measured **δ^{13}C (‰):** -2.2
Contributor: Anne E. Jennings
Sample notes: 53 specimens. Sediment washed over sieve with distilled water. Air dried.
Stratigraphic context: In Holocene mud.
Significance: Part of a 3-part comparison between planktic and benthic dates at the same level in MD99-2269.
Core MD99-2269 is located in a critical area on the Iceland shelf where the warm Irminger Current and the cold East Iceland Current meet. Modern water temperature fluctuations over the site exceed 5 °C.
References: Andrews et al. (2002); Andersen et al. (in prep).

Lab ID: AA57900a **GRL-**1708-S **Depth (cm):** 1,750-1,752
Age: 8,590*±43 **Corr. Age:** 8,190±43 **Material:** Mollusc
Weight (mg): 6.4 **Genus:** - **Species:** -
δ^{13}C: Measured **δ^{13}C (‰):** 0.55
Contributor: John T. Andrews, Greta B. Kristjánsdóttir
Sample notes: Six very small juvenile shells.
Stratigraphic context: In Holocene mud.
Significance: For some reason Arizona came back with duplicate analysis of this sample, here designated as 57900a and b. May 2004; according to Arizona these duplicate dates for 1750-1752 cm were calculated with an assumed δ^{13}C value rather than the measured one because at the time they didn't have the measured δ^{13}C. *Age 8590±43 should be used for this sample, not 8551±47.

Lab ID: AA57900b **GRL-**1708-S **Depth (cm):** 1,750-1,752
Age: 8,551*±47 **Corr. Age:** 8,151±47 **Material:** Mollusc
Weight (mg): 6.4 **Genus:** - **Species:** -
δ^{13}C: Measured **δ^{13}C (‰):**
Contributor: John T. Andrews, Greta B. Kristjánsdóttir
Sample notes: Six very small juvenile shells.
Stratigraphic context: In Holocene mud.
Significance: For some reason Arizona came back with duplicate analysis of this sample, here designated as 57900a and b. May 2004; according to Arizona these duplicate dates for 1750-1752 cm were calculated with an assumed δ^{13}C value rather than the measured one because at the time they didn't have the measured δ^{13}C. Age 8590*±43 should be used for this sample, not 8551±47.

Lab ID: AA54594 **GRL-**1682-S **Depth (cm):** 2,100-2,102
Age: 9,477±88 **Corr. Age:** 9,077±88 **Material:** Foraminifera
Weight (mg): 5.5 **Genus:** - **Species:** -
δ^{13}C: Measured **δ^{13}C (‰):** -2.01

Contributor: John T. Andrews, Greta B. Kristjánsdóttir
Sample notes: Mixed benthic foraminifera: 180 *Cassidulina neoteretis*, 140 *Melonis barleeanus*, 90 *Islandiella norcrossi*, 48 *Globobulimina*, 39 *N. labradoricum*, 1 *Elphidium excavatum* f. *clavata*, 1 *Cibicides lobatulus*. Washed with H_2O.
Significance: Within the Saksunarvatn tephra peak. Base of tephra is at 2121 cm. This was the closest sample with well-preserved foraminifera to date

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Comments (JTA, AEJ): This high-resolution core has been studied by a number of researchers using a variety of proxies for Holocene climate variability (Andrews et al., 2003a, 2003b; Andersen et al., 2004; Giraudeau et al., 2004; Moros et al., 2006; Kristjánsdóttir et al., 2007a, 2007b). The latest chronology is given by Stoner et al., (2007).
References: Andrews et al. (2003a, 2003b); Andersen et al. (2004); Jennings et al. (2004); Moros et al. (2006); Kristjánsdóttir et al. (2007a, 2007b).

Core: B997-320 PC

Location: Iceland | Iceland Shelf | Eyjafjardarall
Lat.: 66°20.1′ | **Long.:** -18°39.04′ | **Depth (mwd):** -388

Lab ID: AA75151 | **GRL-**1786-S | **Depth (cm):** 0-2
Age: 2,101±84 | **Corr. Age:** 1,701±84 | **Material:** Foraminifera
Weight (mg): 1.9 mg | **Genus:** | **Species:**
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):** -1.4
Contributor: John T. Andrews, Ursula Quillmann
Sample notes: Small sample size. Forams submitted are good looking, not abraded. Anne Jennings checked sample and approved submittal.
References: Kristjánsdóttir (1999); Andrews et al. (2001); Smith (2004).

Lab ID: | **GRL-** | **Depth (cm):** 109-110
Age: 1,545±45 | **Corr. Age:** 1,145±45 | **Material:** Mollusc
Weight (mg): | **Genus:** *Thyasira* | **Species:** *equalis*
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):**
Contributor: Greta B. Kristjánsdóttir, Helga Jónsdóttir
References: Kristjánsdóttir (1999); Jónsdóttir (2001); Andrews et al. (2001); Smith (2004).

Lab ID: | **GRL-** | **Depth (cm):** 149-150
Age: 1,580±50 | **Corr. Age:** 1,180±50 | **Material:** Mollusc
Weight (mg): | **Genus:** *Bathyarca* | **Species:** *glacialis*
$\delta^{13}C$: Measured | **$\delta^{13}C$ (‰):**
Contributor: Greta B. Kristjánsdóttir, Helga Jónsdóttir
Reference: Kristjánsdóttir (1999); Jónsdóttir (2001); Andrews et al. (2001); Smith (2004).

Lab ID: **GRL-** **Depth (cm):** 249-250
Age: 2,585±55 **Corr. Age:** 2,185±55 **Material:** Mollusc
Weight (mg): **Genus:** *Thyasira* **Species:** spp.
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor: Greta, B. Kristjánsdóttir, Helga Jónsdóttir
Significance: Core B997-320PC is being jointly studied with the University of Aarhus, Denmark. It has one lithologic unit, Holocene marine mud which is soft and olive green with low magnetic susceptibility and high carbonate content. Average sedimentation rate is 84.3 cm/ky.
Reference: Kristjánsdóttir (1999); Jónsdóttir (2001); Andrews et al. (2001); Smith (2004).

Core: B997-316 SGC

Location: Iceland Iceland Shelf Eyjafjardarall
Lat.: 66°44.75′ **Long.:** 18°47.53′ **Depth (mwd):** 658

Lab ID: AA56302 **GRL-**1691-S **Depth (cm):** 7.5-9 cm
Age: 294±91 **Corr. Age:** 0± **Material:** Mollusc
Weight (mg): 1 mg **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.62
Contributor: John T. Andrews
Sample notes: Small articulated bivalve—periostracum stained by rose bengal from uppermost 1 cm slab of sediment.

Lab ID: AA56301 **GRL-**1690-S **Depth (cm):** 18-19 cm
Age: 402±38 **Corr. Age:** 0±38 **Material:** Mollusc
Weight (mg): 1 mg **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -7.2
Contributor: John T. Andrews
Sample notes: Small articulated bivalve—periostracum stained by Rose Bengal from uppermost 1 cm slab of sediment.

Core: B997-321PC

Location: Iceland Iceland Shelf Eyjafjardarall
Lat.: 66°53.47′ **Long.:** -18°58.47′ **Depth (mwd):** -480

Lab ID: NSRL13922 **GRL-**1757-S **Depth (cm):** 38.75-40
Age: too small **Corr. Age:** **Material:** Mollusc
Weight (mg): 2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):**
Contributor:
Sample Notes: Shell fragments.
References: Kristjánsdóttir (1999); Castaneda et al. (2004).

Lab ID: NSRL13923 **GRL-**1758-S **Depth (cm):** 85-86.25
Age: 2,270±15 **Corr. Age:** 1,870±15 **Material:** Mollusc
Weight (mg): 10 **Genus:** *Dentalium* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.463
Contributor: G. B. Kristjánsdóttir
Sample Notes: Mollusc.
Stratigraphic context: Top of soft, olive green Holocene mud.
References: Castaneda et al. (2004).

Lab ID: AA67418 **GRL-**1768-S **Depth (cm):** 175
Age: 4,771±90 **Corr. Age:** 4,371±90 **Material:** Mollusc
Weight (mg): 35 **Genus:** *Dentalium* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.5
Contributor: G. B. Kristjánsdóttir
Sample Notes: Taken from GRL# 12948 sediment sample.
References: Castaneda et al. (2004).

Lab ID: AA67419 **GRL-**1769-S **Depth (cm):** 230
Age: 4,530±360 **Corr. Age:** 4,130±360 **Material:** Mollusc
Weight (mg): 2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -6.9
Contributor: G. B. Kristjánsdóttir
Sample Notes: Small shell fragments in the > 2 mm fraction.
References: Castaneda et al. (2004).

COMMENT (JTA): Tephra counts on this core (Kristjánsdóttir, 1999) have been compared with weight% estimates of volcanic glass based on quantitative X-ray diffraction analyses (Andrews et al., 2006). Quartz weight% data are included in Andrews et al. (2009a) and Andrews (in press).
References: Kristjánsdóttir (1999); Andrews et al. (2007, 2009a); Andrews (in press).

Core: JR51-GC35

Location: Iceland Iceland Shelf North Iceland Shelf
Lat.: 66°59.96′ **Long.:** -17°57.66′ **Depth (mwd):** -420

Lab ID: AA46847 **GRL-**NA **Depth (cm):** 0-1
Age: 473±36 **Corr. Age:** 73±36 **Material:** Foraminifera
Weight (mg): 9 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.5
Contributor:
Sample notes: Mixed benthic foraminifera.
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Lab ID: AA531112 **GRL-**NA **Depth (cm):** 54-55
Age: 1,417±65 **Corr. Age:** 1,017±65 **Material:** Mollusc

Weight (mg): 11.3 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -7.9
Contributor:
Sample notes: Fragment.
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Lab ID: AA531113 **GRL-**NA **Depth (cm):** 112-113
Age: 2,621±58 **Corr. Age:** 2,221±58 **Material:** Mollusc
Weight (mg): 15.2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 1.4
Contributor:
Sample notes: Fragment and mixed foraminifera.
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Lab ID: AA531114 **GRL-**NA **Depth (cm):** 168
Age: 3,706±59 **Corr. Age:** 3,306±59 **Material:** Mollusc
Weight (mg): 30.2 **Genus:** *Dentalium*. **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.7
Contributor:
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Lab ID: AA531115 **GRL-**NA **Depth (cm):** 214-215
Age: 4,612±70 **Corr. Age:** 4,212±70 **Material:** Foraminifera
Weight (mg): 9.2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.2
Contributor:
Sample notes: Mixed benthic foraminifera.
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Lab ID: AA531116 **GRL-**NA **Depth (cm):** 276-277
Age: 5,541±44 **Corr. Age:** 5,141±41 **Material:** Mollusc
Weight (mg): 11.2 **Genus:** *Thyasira* **Species:** *sarsi*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -5.1
Contributor:
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Lab ID: AA531117 **GRL-**NA **Depth (cm):** 334
Age: 6,537±45 **Corr. Age:** 6,137±45 **Material:** Mollusc
Weight (mg): 35.8 **Genus:** *Opisthobranch* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -0.9
Contributor:
Sample notes: Fragment.
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Lab ID: AA531118 **GRL-**NA **Depth (cm):** 384
Age: 8,286±50 **Corr. Age:** 7,886±50 **Material:** Mollusc
Weight (mg): 35 **Genus:** *Dentalium* **Species:** *entails*
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** 0.2
Contributor:
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Lab ID: AA531119 **GRL-**NA **Depth (cm):** 420-421.5
Age: 9,014±51 **Corr. Age:** 8,614±51 **Material:** Foraminifera
Weight (mg): 9.9 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -1.8
Contributor:
Sample notes: Mixed benthic foraminifera.
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Lab ID: AA46848 **GRL-**NA **Depth (cm):** 449-451
Age: 9,403±58 **Corr. Age:** 9,003±58 **Material:** Foraminifera
Weight (mg): 10 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -2.2
Contributor:
Sample notes: Mixed benthic foraminifera.
References: Bendle (2003); Bendle and Rosell-Mele (2007).

Part II: Terrestrial

Site: HV-04-07

Location: Iceland near Grof
Lat.: 65°31.64′ **Long.:** -20°56.06′ **Depth (mwd):**

Lab ID: AA62441 **GRL-**1043-O **Depth (cm):** 130
Age: 3,724±74 **Corr. Age:** 3,724 ± 74 **Material:** Peat
Weight (mg): 16.2 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -22.46
Contributor: Sarah Principato
Sample notes: Presence of rhyolitic tephra layers above this basal peat.
Stratigraphic context: Peat above gravel and diamicton and below clay and upper peat layers with tephra.
Significance: Early Holocene or Younger Dryas.
Reference: Principato (2008).

Site: HV-04-10

Location: Iceland Sauadalso

Lat.: 65°31.65′	**Long.:** -20°56.06′	**Depth (mwd):**

Lab ID: AA62342 **GRL-**31-W **Depth (cm):** 130
Age: 6,148±47 **Corr. Age:** 6,148 ± 47 **Material:** Wood
Weight (mg): 441 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -29.28
Contributor: : Sarah Principato
Significance: Holocene—Hekla tephra present.
Reference: Principato (2008).

Site: LB-04-08

Location: Iceland nr Grof
Lat.: 65°47′ **Long.:** -20°48′ **Depth (mwd):**

Lab ID: AA62343 **GRL-**32-W **Depth (cm):** 100
Age: 3,969±42 **Corr. Age:** 3,969 ± 42 **Material:** Wood
Weight (mg): 273 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -28.65
Contributor: Sarah Principato
Reference: Principato (2008).

Site: RA-04-10

Location: Iceland nr Grof
Lat.: 65°47′ **Long.:** -20°48′ **Depth (mwd):**

Lab ID: AA62344 **GRL-**33-W **Depth (cm):** 100
Age: 7,940±57 **Corr. Age:** 7,940±57 **Material:** Wood
Weight (mg): 273 **Genus:** **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -28.65
Contributor: Sarah Principato
Sample notes: 10 cm from base of peat section.
Stratigraphic context: Below rhyolitic (Hekla) tephra layers.
Reference: Principato (2008).

Site: RA-05-25

Location: Iceland South of Raudkollur
Lat.: 65°28.318′ **Long.:** -20°28.913′ **Depth (mwd):**

Lab ID: AA66864 **GRL-**34-W **Depth (cm):** 25-27
Age: 7,009±45 **Corr. Age:** 7,009±45 **Material:** Wood
Weight (mg): 170 **Genus:** *Betula* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -29.3
Contributor: Sarah Principato
Stratigraphic context: Closest to base of peat profile, associated with a tephra.

Reference: Principato (2008).

Site: RA-05-35

Location: Iceland South of Raudkollur
Lat.: 65°28.318′ **Long.:** -20°28.913′ **Depth (mwd):**

Lab ID: AA66865 **GRL-**35-W **Depth (cm):** 35-37
Age: 6,188±59 **Corr. Age:** 6,188 ± 59 **Material:** Wood
Weight (mg): 34 **Genus:** *Betula* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -27.4
Contributor: John T. Andrews, Sarah Principato
Stratigraphic context: 5 cm below base of microtephra.
Reference: Principato (2008).

Site: RA-05-85

Location: Iceland South of Raudkollur
Lat.: 65°28.318′ **Long.:** -20°28.913′ **Depth (mwd):**

Lab ID: AA66866 **GRL-**36-W **Depth (cm):** 85-87
Age: 3,969±55 **Corr. Age:** 3,969±55 **Material:** Wood
Weight (mg): 175 **Genus:** *Betula* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -28.1
Contributor: Sarah Principato
Stratigraphic context: 5 cm below rhyolitic tephra/sand.
Reference: Principato (2008).

Site: SN-05-35

Location: Iceland Svinavatn
Lat.: 65°30.183′ **Long.:** -20°2.99′ **Depth (mwd):**

Lab ID: AA66867 **GRL-**37-W **Depth (cm):** 35
Age: 7,936±53 **Corr. Age:** 7,936±53 **Material:** Wood
Weight (mg): 347 **Genus:** *Betula* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -29
Contributor: Sarah Principato
Stratigraphic context: Wood below microtephra layer.
Reference: Principato (2008).

Site: SN-05-67

Location: Iceland Svinavatn
Lat.: 65°30.183′ **Long.:** -20°2.99′ **Depth (mwd):**

Lab ID: AA66868 **GRL-**38-W **Depth (cm):** 67-69
Age: 5,653±77 **Corr. Age:** 5,653±77 **Material:** Wood

Weight (mg): 161 **Genus:** *Betula* **Species:**
$\delta^{13}C$: Measured **$\delta^{13}C$ (‰):** -28
Contributor: Sarah Principato
Stratigraphic Context: Peat/wood above rhyolitic tephra at 63-65 cm.
Reference: Principato (2008).

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APPENDIX 1
Comprehensive list of dates arranged by laboratory number.

Lab ID#	GRL	Reported ^{14}C age	Reservoir corrected ^{14}C age	Core name	Collection site name
AA - 32968	1496-S	34,600 ± 640	34,200	B997-338PC	Djupall
AA - 46531	1383-S	610 ± 60	210	B997-330SGC	Sveinbjarnar-grunn
AA - 46846	NA	1,247 ± 56	847	B997-325GGC	Reykjafjardarall
AA - 46847	NA	473 ± 36	73	JR51-GC35	North Iceland Shelf
AA - 46848	NA	9,403 ± 58	9,003	JR51-GC35	North Iceland Shelf
AA - 53100	NA	9,713 ± 60	9,313	B997-350PC	Jokuldjup, W Iceland
AA - 53101	NA	10,698 ± 75	10,298	B997-350PC	Jokuldjup, W Iceland
AA - 53103	NA	10,916 ± 63	10,596	B997-350PC	Jokuldjup, W Iceland
AA - 53104	NA	11,537 ± 66	11,137	B997-350PC	Jokuldjup, W Iceland
AA - 53105	NA	11,966 ± 87	11,566	B997-350PC	Jokuldjup, W Iceland
AA - 53106	NA	4,470 ± 47	4,070	B997-325GGC	Reykjafjardarall
AA - 53107	NA	6,921 ± 72	6,521	B997-325PC	Reykjafjardarall
AA - 53108	NA	7,347 ± 66	6,947	B997-325PC	Reykjafjardarall
AA - 53109	NA	8,759 ± 67	8,359	B997-325PC	Reykjafjardarall
AA - 53110	NA	9,252 ± 70	8,852	B997-325PC	Reykjafjardarall
AA - 53111	NA	10,400 ± 150	10,000	B997-325PC	Reykjafjardarall
AA - 53121	NA	2,783 ± 39	2,383	B997-325GGC	Reykjafjardarall
AA - 54594	1682-S	9,477 ± 88	9,077	MD99-2269	Reykjafjardarall
AA - 55120	NA	645 ± 36	245	B997-350PC	Jokuldjup, W Iceland
AA - 56294	1683-S	5,408 ± 40	5,008	B997-342PC	Jokulfirdir, NW Iceland
AA - 56295	1684-S	1,857 ± 33	1,457	B997-342PC	Jokulfirdir, NW Iceland
AA - 56296	1685-S	572 ± 76	172	B997-324 SGC	Reykjafjardarall
AA - 56298	1687-S	1,465 ± 39	1,065	B997-314SGC	Djupall
AA - 56299	1688-S	1,130 ± 120	730	B997-314SGC	Djupall
AA - 56301	1690-S	402 ± 38	0	B997-316 SGC	Eyjafjardarall
AA - 56302	1691-S	294 ± 91	0	B997-316 SGC	Eyjafjardarall
AA - 56740	1694-S	1,286 ± 32	886	B997-311GGC	Isafjardardjup
AA - 56741	1695-S	2,418 ± 45	2,018	B997-311GGC	Isafjardardjup
AA - 57062	1697-S	5,986 ± 70	5,346	MD99-2317	East Greenland Shelf
AA - 57063	1698-S	5,795 ± 40	5,245	MD99-2317	East Greenland Shelf
AA – 57064	1699-S	4,840 ± 120	4,290	MD99-2317	East Greenland Shelf
AA – 57067	1700-S	13,235 ± 62	12,835	B997-338PC	Djupall
AA – 57068	1701-S	13,507 ± 78	13,107	B997-338PC	Djupall
AA – 57895	1703-S	1,978 ± 35	1,578	MD99-2269	Reykjarfjardarall
AA – 57896	1704-S	3,017 ± 39	2,617	MD99-2269	Reykjarfjardarall
AA – 57898	1706-S	3,949 ± 39	3,549	MD99-2269	Reykjarfjardarall
AA – 57899	1707-S	5,826 ± 51	5,426	MD99-2269	Reykjarfjardarall
AA – 58402	1709-S	652 ± 36	252	MD99-2256	Jokuldjup
AA – 58403	1710-S	1,466 ± 38	1,066	MD99-2256	Jokuldjup
AA – 58404	1711-S	2,154 ± 38	1,754	MD99-2256	Jokuldjup
AA – 58405	1712-S	3,624 ± 41	3,224	MD99-2256	Jokuldjup
AA – 58406	1713-S	9,393 ± 66	8,939	MD99-2256	Jokuldjup
AA – 58407	1714-S	9,424 ± 48	9,024	MD99-2256	Jokuldjup
AA – 58408	1715-S	9,555 ± 74	9,155	MD99-2256	Jokuldjup
AA – 58409	1716-S	9,734 ± 50	9,334	MD99-2256	Jokuldjup
AA – 58410	1717-S	10,075 ± 57	9,675	MD99-2256	Jokuldjup
AA – 58536	1720-S	1,640 ± 33	1,240	MD99-2266	Isafjardardjup
AA – 58537	1718-S	809 ± 30	409	MD99-2266	Isafjardardjup
AA – 58538	1719-S	2,126 ± 34	1,726	MD99-2266	Isafjardardjup
AA – 58959	1721-S	8,769 ± 48	8,319	MD99-2236	Cartwright Saddle
AA – 58960	1722-S	8,858 ± 49	8,408	MD99-2236	Cartwright Saddle
AA – 58961	1723-S	8,941 ± 47	8,491	MD99-2236	Cartwright Saddle
AA – 58962	1724-S	9,728 ± 86	9,278	MD99-2236	Cartwright Saddle
AA – 58963	1725-S	10,025 ± 67	9,575	MD99-2236	Cartwright Saddle
AA – 58964	1726-S	10,379 ± 58	9,929	MD99-2236	Cartwright Saddle
AA – 58965	1727-S	10,473 ± 50	10,023	MD99-2236	Cartwright Saddle
AA – 58966	1728-S	10,769 ± 51	10,319	MD99-2236	Cartwright Saddle

Lab ID#	GRL	Reported ^{14}C age	Reservoir corrected ^{14}C age	Core name	Collection site name
AA – 58967	1729-S	10,828 ± 71	10,378	MD99-2236	Cartwright Saddle
AA – 58968	1730-S	11,625 ± 58	11,125	MD99-2236	Cartwright Saddle
AA – 58969	1731-S	12,060 ± 63	11,610	MD99-2236	Cartwright Saddle
AA – 58970	1732-S	9,735 ± 51	9,335	MD99-2256	Jokuldjup
AA – 58971	1733-S	2,664 ± 33	2,264	MD99-2266	Isafjardardjup
AA – 58972	1734-S	3,424 ± 35	3,024	MD99-2266	Isafjardardjup
AA – 59572	1735-S	1,775 ± 35	1,375	MD99-2236	Cartwright Saddle
AA – 59573	1736-S	6,577 ± 42	6,177	MD99-2236	Cartwright Saddle
AA – 59574	1737-S	7,700 ± 200	7,250	MD99-2236	Cartwright Saddle
AA – 59575	1738-S	7,816 ± 63	7,366	MD99-2236	Cartwright Saddle
AA – 60139	1739-S	9,876 ± 50	9,476	B997-339PC2	Skotufjordur, NW Iceland
AA – 60140	1740-S	3,600 ± 38	3,200	B997-339PC2	Skotufjordur, NW Iceland
AA – 60141	1741-S	6,583 ± 41	6,183	B997-339PC2	Skotufjordur, NW Iceland
AA – 60142	1742-S	10,021 ± 51	9,621	B997-339PC2	Skotufjordur, NW Iceland
AA – 60143	1743-S	10,313 ± 52	9,913	B997-339PC2	Skotufjordur, NW Iceland
AA – 61215	1745-S	10,090 ± 110	9,540	MD99-2317	East Greenland shelf
AA – 61217	1747-S	6,833 ± 81	6,433	MD99-2269	Reykjarfjardarall
AA – 61218	1748-S	LOST		MD99-2269	Reykjarfjardarall
AA – 61219	1749-S	8,950 ± 120	8,550	MD99-2269	Reykjarfjardarall
AA – 61220	1750-S	8,572 ± 78	8,172	MD99-2269	Reykjarfjardarall
AA – 61221	1751-S	8,609 ± 92	8,209	MD99-2269	Reykjarfjardarall
AA – 62342	31-W	6,148 ± 47	6,148	HV-04-10	Sauadalso
AA – 62343	32-W	3,969 ± 42	3,969	LB-04-08	near Grof
AA – 62344	33-W	7,940 ± 57	7,940	RA-04-10	near Grof
AA – 62441	1043-O	3,724 ± 74	3,724	HV-04-07	near Grof
AA – 64125	1752-s	1,329 ± 34	929	B997-327PC	Reykjafjardarall
AA – 65331	1761-S	3,840 ± 39	3,440	MD99-2256	Jokuldjup
AA – 65331	1762-S	5,636 ± 57	5,236	MD99-2256	Jokuldjup
AA – 66845		2,818 ± 39	2,418	B997-350PC	Jokuldjup, W Iceland
AA – 66864	34-W	7,009 ± 45	7,009	RA-05-25	South of Raudkollur
AA – 66865	35-W	6,188 ± 59	6,188	RA-05-35	South of Raudkollur
AA – 66866	36-W	3,969 ± 55	3,969	RA-05-85	South of Raudkollur
AA – 66867	37-W	7,936 ± 53	7,936	SN-05-35	Svinavatn
AA – 66868	38-W	5,653 ± 77	5,653	SN-05-67	Svinavatn
AA – 67416	1766-S	4,406 ± 49	4,006	MD99-2264	Djupall
AA – 67417	1767-S	3,466 ± 48	3,066	MD99-2264	Djupall
AA – 67418	1768-S	4,771 ± 90	4,371	B997-321PC	Eyjafjardarall
AA – 67419	1769-S	4,530 ± 36	4,130	B997-321PC	Eyjafjardarall
AA – 67746	1770-S	822 ± 67	422	MD99-2266	Isafjardardjup
AA – 67747	1771-S	746 ± 61	346	MD99-2266	Isafjardardjup
AA – 68075	1772-S	5,435 ± 41	5,035	MD99-2264	Djupall
AA – 68076	1773-S	7,775 ± 46	7,375	MD99-2264	Djupall
AA – 70935	1775-S	845 ± 48	395	MD99-2236	Cartwright Saddle
AA – 70936	1776-S	1,082 ± 37	632	MD99-2236	Cartwright Saddle
AA – 70937	1777-S	1,057 ± 36	607	MD99-2236	Cartwright Saddle
AA – 70938	1778-S	2,370 ± 40	1,920	MD99-2236	Cartwright Saddle
AA – 70939	1779-S	2,910 ± 40	2,510	MD99-2256	Jokuldjup
AA – 70940	1780-S	4,568 ± 44	4,168	MD99-2256	Jokuldjup
AA – 70941	1781-S	6,200 ± 56	5,800	MD99-2256	Jokuldjup
AA – 70942	1782-S	8,379 ± 51	7,979	MD99-2256	Jokuldjup
AA – 70943	1783-S	8,978 ± 53	8,573	MD99-2256	Jokuldjup
AA – 75151	1786-S	2,101 ± 84	1,701	B997-320	Eyjafjardarall
AA – 81065	1817-S	766 ± 43	366	MD99-2259	Jokuldjup
AA – 81066	1818-S	2,535 ± 45	2,135	MD99-2259	Jokuldjup
AA – 81067	1819-S	4,950 ± 57	4,550	MD99-2259	Jokuldjup
AA – 81068	1820-S	1,287 ± 44	887	MD99-2259	Jokuldjup
AA – 81303	1810-S	9,626 ± 80	9,176	MD99-2236	Cartwright Saddle
AA – 81304	1811-S	3,248 ± 44	2,848	343300 GC	SW Disko Bugt

Lab ID#	GRL	Reported ^{14}C age	Reservoir corrected ^{14}C age	Core name	Collection site name
AA – 81305	1812-S	9,473 ± 57	9,073	343300 GC	SW Disko Bugt
AA – 81306	1813-S	9,593 ± 58	9,193	343300 GC	SW Disko Bugt
AA – 81307	1822-S	5,822 ± 57	5,422	343300 GC	SW Disko Bugt
AA – 81308	1814-S	9,706 ± 65	9,306	343300 GC	SW Disko Bugt
AA – 81309	1823-S	530 ± 52	80	HLY0301-05GC	Nares Strait, Hall Basin
AA – 81310	1824-S	7,302 ± 61	6,852	HLY0301-05GC	Nares Strait, Hall Basin
AA – 82359	1836-S	9,385 ± 52	8,935	MD99-2236	Cartwright Saddle
AA – 82360	1837-S	9,777 ± 54	9,327	MD99-2236	Cartwright Saddle
AA – 82361	1832-S	1,447 ± 38	1,047	343390 GC	SW Disko Bugt
AA – 82362	1833-S	1,308 ± 36	908	343390 GC	SW Disko Bugt
AA – 82363	1834-S	2,352 ± 37	1,952	343390 GC	SW Disko Bugt
AA – 82697	1831-S	21,440 ± 140	20,990	HE0006-4-2PC	West Greenland Slope
AA – 82698	1828-S	10,102 ± 56	9,652	HE0006-4-2TC	West Greenland Slope
AA – 531112	NA	1,417 ± 65	1,017	JR51-GC35	North Iceland Shelf
AA – 531113	NA	2,621 ± 58	2,221	JR51-GC35	North Iceland Shelf
AA – 531114	NA	3,706 ± 59	3,306	JR51-GC35	North Iceland Shelf
AA – 531115	NA	4,612 ± 70	4,212	JR51-GC35	North Iceland Shelf
AA – 531116	NA	5,541 ± 44	5,141	JR51-GC35	North Iceland Shelf
AA – 531117	NA	6,537 ± 45	6,137	JR51-GC35	North Iceland Shelf
AA – 531118	NA	8,286 ± 50	7,886	JR51-GC35	North Iceland Shelf
AA – 531119	NA	9,014 ± 51	8,614	JR51-GC35	North Iceland Shelf
AA - 56297	1686-S	1,453±25	1053	B997-324 SGC	Reykjafjardarall
AA - 56300	1689-S	2,015 ± 65	1615	B997-314SGC	Djupall
AA - 56300	1689-S	818 ± 65	418	B997-314SGC	Djupall
AA – 56527A	1693-S	1,026 ± 32	826	B997-314SGC	Djupall
AA – 56527B	1693-S	1,005 ± 57	805	B997-314SGC	Djupall
AA – 57897a	1705-S	3,751 ± 44	3,351	MD99-2269	Reykjarfjardarall
AA – 57897b	1705-S	3,840 ± 33	3,440	MD99-2269	Reykjarfjardarall
AA – 57900a	1708-S	8,590 ± 43	8,190	MD99-2269	Reykjarfjardarall
AA – 57900b	1708-S	8,551 ± 47	8,151	MD99-2269	Reykjarfjardarall
AA - 81069	NA	5,230 ± 60	4,780	HU90023-022 LCF	Brevoort Basin
AA - NA	NA	9,890 ± 85	9,440	HU90023-022 LCF	Brevoort Basin
AA - NA	NA	8,195 ± 65	7,745	HU90023-022 LCF	Brevoort Basin
AA - NA	1821-S	2,869 ± 54	2,469	MD99-2259	Jokuldup
AA - NA	1702-S	5,630 ± 100	5,230	MD99-2317	East Greenland Shelf
Beta - 234922	NA	10,090 ± 60	9,690	343300 GC	SW Disko Bugt
CURL - 7613	1754-S	6,790 ± 20	6,390	MD99-2266	Isafjardardjup
CURL - 7633	1755-S	1,450 ± 15	1,050	MD99-2266	Isafjardardjup
CURL - 7634	1756-S	1,620 ± 15	1,220	B997-341PC3	Jokulfirdir, NW Iceland
CURL - 7756	1760-S	7,780 ± 25	7,380	MD99-2266	Isafjardardjup
CURL - 7757	1763-S	7,095 ± 25	6,695	MD99-2256	Jokuldjup
CURL - 7903	1759-S	7,640 ± 30	7,240	MD99-2266	Isafjardardjup
CURL - 7903	1764-S	8,285 ± 15	7,825	MD99-2266	Isafjardardjup
CURL - 8022	1765-s	830 ± 15	430	MD99-2266	Isafjardardjup
KCCAMS - 50860	1829-S	9,730 ± 550	9,280	HE0006-4-2PC	West Greenland Slope
KCCAMS - 50859	1830-S	10,240 ± 250	9,790	HE0006-4-2TC	West Greenland Slope
NSRL - 13920	1754-S	7,755 ± 20	7,355	MD99-2266	Isafjardardjup
NSRL - 13922	1757-S	too small		B997-321PC	Eyjafjardarall
NSRL - 13923	1758-S	2,270 ± 15	1,870	B997-321PC	Eyjafjardarall
NSRL - 15187	1784-S	2,985 ± 20	2,585	B997-315PC	Djupall
NSRL - 15188	1788-S	385 ± 15	-15	B997-325PC	Reykjafjardarall
NSRL - 15287	1805-S	600 ± 15	200	MD99-2263	Djupall
NSRL - 15288	1809-S	1,620 ± 15	1,220	MD99-2263	Djupall
NSRL - 15289	1806-S	10,675 ± 20	10,265	B997-315PC	Djupall
NSRL - 15290	1807-S	4,895 ± 15	4,495	B997-315PC	Djupall
NSRL - 15950	1825-S	725 ± 15	325	MD99-2258	Jokuldjup

Lab ID#	GRL	Reported ^{14}C age	Reservoir corrected ^{14}C age	Core name	Collection site name
NSRL - 15951	1826-S	2,655 ± 15	2,265	MD99-2258	Jokuldjup
NSRL - 15952	1827-S	3,180 ± 20	2,780	MD99-2258	Jokuldjup
NSRL - 16096	1835-S	3,650 ± 29	3,250	HU90023-022 LCF	Brevoort Basin
NSRL - 15191	1804-S	2,165 ± 15	1,765	MD99-2263	Djupall
NSRL – 15189	1802-S	680 ± 20	280	MD99-2263	Djupall
NSRL - 15928	1815-S	595 ± 15	195	MD99-2263	Djupall
NSRL - 15929	1816-S	690 ± 15	290	MD99-2263	Djupall
NSRL - 15190	1803-S	850 ± 15	450	MD99-2263	Djupall
NA (depth: 109-110 cm)	NA	1,545 ± 45	1,145	B997-320PC	Eyjafjardarall
NA (depth: 149-150 cm)	NA	1,580 ± 50	1,180	B997-320PC	Eyjafjardarall
NA (depth: 249-250 cm)	NA	2,585 ± 55	2,185	B997-320PC	Eyjafjardarall

APPENDIX 2
Radiocarbon dates arranged by region.

GRL	Lab ID #	Core number	Depth in core (cm)	Reported ^{14}C age
Baffin Island Shelf				
1835-S	NSRL - 16096	HU90023-022 LCF	56–57	3,650 ± 29
NA	AA – NA	HU90023-022 LCF	673	9,890 ± 85
NA	AA – NA	HU90023-022 LCF	357	8,195 ± 65
NA	AA - NA	HU90023-022 LCF	159	5,230 ± 60
Greenland Shelf (East)				
1697-S	AA - 57062	MD99-2317	453–457	5,986 ± 70
1698-S	AA - 57063	MD99-2317	453–457	5,795 ± 40
1699-S	AA - 57064	MD99-2317	391–397	4,840 ± 120
1702-S	AA - NA	MD99-2317	453–457	5,630 ± 100
1745-S	AA - 61215	MD99-2317	1,293–1,295	10,090 ± 110
1811-S	AA - 81304	343300 GC	190–192	3,248 ± 44
Greenland Shelf (West)				
1811-S	AA - 81304	343300 GC	190–192	3,248 ± 44
1812-S	AA - 81305	343300 GC	655–657	9,473 ± 57
1813-S	AA - 81306	343300 GC	775–777	9,593 ± 58
1814-S	AA - 81308	343300 GC	940–942	9,706 ± 65
1822-S	AA - 81307	343300 GC	340–342	5,822 ± 57
1832-S	AA - 82361	343390 GC	281–283	1,447 ± 38
1833-S	AA - 82362	343390 GC	250	1,308 ± 36
1834-S	AA - 82363	343390 GC	498–500	2,352 ± 37
NA	Beta - 234922	343300 GC	1,019–1,021	10,090 ± 60
1828-S	AA - 82698	HE0006-4-2TC	35–37	10,102 ± 56
1829-S	KCCAMS - 50860	HE0006-4-2PC	25–27	9,730 ± 550
1830-S	KCCAMS - 50859	HE0006-4-2TC	45–47	10,240 ± 250
1831-S	AA - 82697	HE0006-4-2PC	315–317	21,440 ± 140
Iceland Shelf				
1766-S	AA - 67416	MD99-2264	108–109	4,406 ± 49
1767-S	AA - 67417	MD99-2264	82–83	3,466 ± 48
1772-S	AA - 68075	MD99-2264	134–136	5,435 ± 41
1773-S	AA - 68076	MD99-2264	195–196	7,775 ± 46
1383-S	AA - 46531	B997-330SGC	19–20	610 ± 60
1496-S	AA - 32968	B997-338PC	412	34,600 ± 640
1682-S	AA - 54594	MD99-2269	2,100–2,102	9,477 ± 88
1683-S	AA - 56294	B997-342PC	184–186	5,408 ± 40
1684-S	AA - 56295	B997-342PC	10-12	1,857 ± 33
1685-S	AA - 56296	B997-324 SGC	10-12	572 ± 76
1686-S	AA - 56297	B997-324 SGC	10-12	1453 ± 25
1687-S	AA - 56298	B997-314SGC	18.5–19	1,465 ± 39
1688-S	AA - 56299	B997-314SGC	0–1.5	1,130 ± 120
1689-S	AA - 56300	B997-314SGC	0–1.5	818 ± 85
1690-S	AA - 56301	B997-316 SGC	18–19 cm	402 ± 38
1691-S	AA - 56302	B997-316 SGC	7.5–9 cm	294 ± 91
1693-S	AA – 56527a	B997-314SGC	19–20	1,026 ± 32
1693-S	AA – 56527b	B997-314SGC	19–20	1,005 ± 57

GRL	Lab ID #	Core number	Depth in core (cm)	Reported ^{14}C age
1694-S	AA - 56740	B997-311GGC	0–2.5	1,286 ± 32
1695-S	AA - 56741	B997-311GGC	61–63.5	2,418 ± 45
1700-S	AA - 57067	B997-338PC	209–211	13,235 ± 62
1701-S	AA - 57068	B997-338PC	193–195	13,507 ± 78
1703-S	AA - 57895	MD99-2269	351	1,978 ± 35
1704-S	AA - 57896	MD99-2269	562–564	3,017 ± 39
1705-S	AA - 57897a	MD99-2269	707–708	3,751 ± 44
1705-S	AA - 57897b	MD99-2269	707–708	3,840* ± 33
1706-S	AA - 57898	MD99-2269	815	3,949 ± 39
1707-S	AA - 57899	MD99-2269	1,280–1,282	5,826 ± 51
1708-S	AA - 57900a	MD99-2269	1,750–1,752	8,590* ± 43
1708-S	AA - 57900b	MD99-2269	1,750–1,752	8,551 ± 47
1709-S	AA - 58402	MD99-2256	6-7	652 ± 36
1710-S	AA - 58403	MD99-2256	37–38	1,466 ± 38
1711-S	AA - 58404	MD99-2256	47–48	2,154 ± 38
1712-S	AA - 58405	MD99-2256	123–124	3,624 ± 41
1713-S	AA - 58406	MD99-2256	315–316	9,393 ± 66
1714-S	AA - 58407	MD99-2256	343–344	9,424 ± 48
1715-S	AA - 58408	MD99-2256	389–390	9,555 ± 74
1716-S	AA - 58409	MD99-2256	413–414	9,734 ± 50
1717-S	AA - 58410	MD99-2256	529–530	10,075 ± 57
1718-S	AA - 58537	MD99-2266	34.5–35.5	809 ± 30
1719-S	AA - 58538	MD99-2266	195–196	2,126 ± 34
1720-S	AA - 58536	MD99-2266	139–141	1,640 ± 33
1732-S	AA - 58970	MD99-2256	448	9,735 ± 51
1733-S	AA - 58971	MD99-2266	240	2,664 ± 33
1734-S	AA - 58972	MD99-2266	372	3,424 ± 35
1739-S	AA - 60139	B997-339PC2	263.75–265	9,876 ± 50
1740-S	AA - 60140	B997-339PC2	35–36.25	3,600 ± 38
1741-S	AA - 60141	B997-339PC2	101.25–102.5	6,583 ± 41
1742-S	AA - 60142	B997-339PC2	348.75–350	10,021 ± 51
1743-S	AA - 60143	B997-339PC2	418.75–420	10,313 ± 52
1747-S	AA - 61217	MD99-2269	1,410–1,412	6,833 ± 81
1748-S	AA - 61218	MD99-2269	1,410–1,412	LOST
1749-S	AA - 61219	MD99-2269	1,740–1,742	8,950 ± 120
1750-S	AA - 61220	MD99-2269	1,740–1,742	8,572 ± 78
1751-S	AA - 61221	MD99-2269	1,740–1,742	8,609 ± 92
1752-s	AA - 64125	B997-327PC	95	1,329 ± 34
1754-S	CURL - 7613	MD99-2266	1,398.5	6,790 ± 20
1754-S	NSRL - 13920	MD99-2266	1,790	7,755 ± 20
1755-S	CURL - 7633	MD99-2266	113	1,450 ± 2015
1756-S	CURL - 7634	B997-341PC3	66.25	1,620 ± 15
1757-S	NSRL - 13922	B997-321PC	38.75–40	too small
1758-S	NSRL - 13923	B997-321PC	85–86.25	2,270 ± 15
1759-S	CURL - 7903	MD99-2266	1,736.5	7,640 ± 30
1760-S	CURL - 7756	MD99-2266	1,784.5	7,780 ± 25
1761-S	AA - 65331	MD99-2256	113–114	3,840 ± 39
1762-S	AA - 65331	MD99-2256	163–164	5,636 ± 57
1763-S	CURL - 7757	MD99-2256	197–198	7,095 ± 25
1764-S	CURL - 7903	MD99-2266	2,236.5–2,238.5	8,285 ± 15

GRL	Lab ID #	Core number	Depth in core (cm)	Reported ^{14}C age
1765-s	CURL - 8022	MD99-2266	22–23	830 ± 15
1768-S	AA - 67418	B997-321PC	175	4,771 ± 90
1769-S	AA - 67419	B997-321PC	230	4,530 ± 360
1770-S	AA - 67746	MD99-2266	9.5–10.5	822 ± 67
1771-S	AA - 67747	MD99-2266	24–25	746 ± 61
1779-S	AA - 70939	MD99-2256	80–82	2,910 ± 40
1780-S	AA - 70940	MD99-2256	140–142	4,568 ± 44
1781-S	AA - 70941	MD99-2256	180–182	6,200 ± 56
1782-S	AA - 70942	MD99-2256	240–242	8,379 ± 51
1783-S	AA - 70943	MD99-2256	280–282	8,978 ± 53
1784-S	NSRL - 15187	B997-315PC	0–2	2,985 ± 20
1786-S	AA - 75151	B997-320	0–2	2,101 ± 84
1788-S	NSRL - 15188	B997-325PC	0–5	385 ± 15
1802-S	NSRL - 15189	MD99-2263	17	680 ± 20
1803-S	NSRL - 15190	MD99-2263	25	850 ± 15
1804-S	NSRL - 15191	MD99-2263	45	2,165 ± 15
1805-S	NSRL - 15287	MD99-2263	10	600 ± 15
1806-S	NSRL - 15289	B997-315PC	75	10,675 ± 20
1807-S	NSRL - 15290	B997-315PC	30–32	4,895 ± 15
1809-S	NSRL - 15288	MD99-2263	38.5	1,620 ± 15
1815-S	NSRL - 15928	MD99-2263	7	595 ± 15
1816-S	NSRL - 15929	MD99-2263	12	690 ± 15
1817-S	AA - 81065	MD99-2259	22–23	766 ± 43
1818-S	AA - 81066	MD99-2259	44–45	2,535 ± 45
1819-S	AA - 81067	MD99-2259	84–85	4,950 ± 57
1820-S	AA - 81068	MD99-2259	130–131	1,287 ± 44
1821-S	AA - NA	MD99-2259	461–462	2,869 ± 54
1825-S	NSRL - 15950	MD99-2258	27.5	725 ± 15
1826-S	NSRL - 15951	MD99-2258	40	2,655 ± 15
1827-S	NSRL - 15952	MD99-2258	69–72	3,180 ± 20
31-W	AA - 62342	HV-04-10	130	6,148 ± 47
32-W	AA - 62343	LB-04-08	100	3,969 ± 42
33-W	AA - 62344	RA-04-10	100	7,940 ± 57
NA	AA - 46847	JR51-GC35	0–1	473 ± 36
NA	AA - 531112	JR51-GC35	54–55	1,417 ± 65
NA	AA - 531113	JR51-GC35	112–113	2,621 ± 58
NA	AA - 531114	JR51-GC35	168	3,706 ± 59
NA	AA - 531115	JR51-GC35	214–215	4,612 ± 70
NA	AA - 531116	JR51-GC35	276–277	5,541 ± 44
NA	AA - 531117	JR51-GC35	334	6,537 ± 45
NA	AA - 531118	JR51-GC35	384	8,286 ± 50
NA	AA - 531119	JR51-GC35	420–421.5	9,014 ± 51
NA	AA - 46848	JR51-GC35	449–451	9,403 ± 58
NA	NA	B997-320PC	109–110	1,545 ± 45
NA	NA	B997-320PC	149–150	1,580 ± 50
NA	NA	B997-320PC	249–250	2,585 ± 55
NA	AA - 46846	B997-325GGC	0–1	1,247 ± 56
NA	AA - 53121	B997-325GGC	9-10	2,783 ± 39
NA	AA - 53106	B997-325GGC	31	4,470 ± 47
NA	AA - 53107	B997-325PC	87–88	6,921 ± 72
NA	AA - 53108	B997-325PC	99–101	7,347 ± 66

GRL	Lab ID #	Core number	Depth in core (cm)	Reported ^{14}C age
NA	AA - 53109	B997-325PC	139–141	8,759 ± 67
NA	AA - 53110	B997-325PC	171–173	9,252 ± 70
NA	AA - 53111	B997-325PC	211–213	10,400 ± 150
NA	AA - 53105	B997-350PC	324	11,966 ± 87
NA	AA - 53104	B997-350PC	249–250	11,537 ± 66
NA	AA - 53103	B997-350PC	196	10,916 ± 63
NA	AA - 53101	B997-350PC	88	10,698 ± 75
NA	AA - 53100	B997-350PC	42	9,713 ± 60
NA	AA - 55120	B997-350PC	5	645 ± 36
NA	AA - 66845	B997-350PC	0–1	2,818 ± 39
Iceland - terrestrial				
33-W	AA - 62344	RA-04-10	100	7,940 ± 57
1043-O	AA - 62441	HV-04-07	130	3,724 ± 74
34-W	AA - 66864	RA-05-25	25–27	7,009 ± 45
35-W	AA - 66865	RA-05-35	35–37	6,188 ± 59
36-W	AA - 66866	RA-05-85	85–87	3,969 ± 55
37-W	AA - 66867	SN-05-35	35	7,936 ± 53
38-W	AA - 66868	SN-05-67	67–69	5,653 ± 77
Labrador Shelf				
1721-S	AA - 58959	MD99-2236	890	8,769 ± 48
1722-S	AA - 58960	MD99-2236	902	8,858 ± 49
1723-S	AA - 58961	MD99-2236	1,142	8,941 ± 47
1724-S	AA - 58962	MD99-2236	1,181	9,728 ± 86
1725-S	AA - 58963	MD99-2236	1,513	10,025 ± 67
1726-S	AA - 58964	MD99-2236	1,708	10,379 ± 58
1727-S	AA - 58965	MD99-2236	1,839	10,473 ± 50
1728-S	AA - 58966	MD99-2236	1,868	10,769 ± 51
1729-S	AA - 58967	MD99-2236	1,894	10,828 ± 71
1730-S	AA - 58968	MD99-2236	1,950	11,625 ± 58
1731-S	AA - 58969	MD99-2236	2,019.5	12,060 ± 63
1735-S	AA - 59572	MD99-2236	118	1,775 ± 35
1736-S	AA - 59573	MD99-2236	249.5	6,577 ± 42
1737-S	AA - 59574	MD99-2236	431.5	7,700 ± 200
1738-S	AA - 59575	MD99-2236	467.5	7,816 ± 63
1775-S	AA - 70935	MD99-2236	1-4	845 ± 48
1776-S	AA - 70936	MD99-2236	10-13	1,082 ± 37
1777-S	AA - 70937	MD99-2236	17–19	1,057 ± 36
1778-S	AA - 70938	MD99-2236	133–136	2,370 ± 40
1810-S	AA - 81303	MD99-2236	1,183–1,184	9,626 ± 80
1836-S	AA - 82359	MD99-2236	1,143–1,145	9,385 ± 52
1837-S	AA - 82360	MD99-2236	1,351–1,352	9,777 ± 54
Nares Strait				
1823-S	AA - 81309	HLY0301-05GC	0–2	530 ± 52
1824-S	AA - 81310	HLY0301-05GC	68–70	7,302 ± 61

APPENDIX 3
Comprehensive date list arranged by radiocarbon age.

^{14}C age	Lab ID #	Material
294 ± 91	AA - 56302	Mollusc
385 ± 15	NSRL - 15188	Foraminifera
402 ± 38	AA - 56301	Mollusc
473 ± 36	AA - 46847	Foraminifera
530 ± 52	AA - 81309	Mollusc
572 ± 76	AA - 56296	Mollusc
595 ± 15	NSRL - 15928	Mollusc
600 ± 15	NSRL - 15287	Mollusc
610 ± 60	AA - 46531	Mollusc
645 ± 36	AA - 55120	Serpulid worm tube
652 ± 36	AA - 58402	Mollusc
680 ± 20	NSRL - 15189	Mollusc
690 ± 15	NSRL - 15929	Mollusc
725 ± 15	NSRL - 15950	Mollusc
746 ± 61	AA - 67747	Mollusc
766 ± 43	AA - 81065	Mollusc
809 ± 30	AA - 58537	Mollusc
818 ± 85	AA - 56300	Seaweed
822 ± 67	AA - 67746	Mollusc
830 ± 15	CURL - 8022	Mollusc
845 ± 48	AA - 70935	Foraminifera
850 ± 15	NSRL - 15190	Mollusc
1,005 ± 57	AA - 56527B	Plant Macrofossils
1,026 ± 32	AA - 56527A	Plant Macrofossils
1,057 ± 36	AA - 70937	Foraminifera
1,082 ± 37	AA - 70936	Foraminifera
1,130 ± 120	AA - 56299	Mollusc
1,247 ± 56	AA - 46846	Foraminifera
1,286 ± 32	AA - 56740	Mollusc
1,287 ± 44	AA - 81068	Mollusc
1,308 ± 36	AA - 82362	Mollusc
1,329 ± 34	AA - 64125	Mollusc
1,417 ± 65	AA - 531112	Mollusc
1,447 ± 38	AA - 82361	Mollusc
1,450 ± 15	CURL - 7633	Mollusc
1,453 ± 25	AA - 56297	Plant Microfossils
1,465 ± 39	AA - 56298	Mollusc
1,466 ± 38	AA - 58403	Mollusc
1,545 ± 45	NA; B997-320PC (109-110cm)	Mollusc
1,580 ± 50	NA; B997-320PC (149-150cm	Mollusc
1,620 ± 15	CURL - 7634	Mollusc
1,620 ± 15	NSRL - 15288	Mollusc
1,640 ± 33	AA - 58536	Mollusc
1,775 ± 35	AA - 59572	Mollusc
1,857 ± 33	AA - 56295	Mollusc
1,978 ± 35	AA - 57895	Mollusc
2,015 ± 65	AA - 56300	Foraminifera Seaweed
2,101 ± 84	AA - 75151	Foraminifera
2,126 ± 34	AA - 58538	Mollusc
2,154 ± 38	AA - 58404	Mollusc
2,165 ± 15	NSRL - 15191	Mollusc
2,270 ± 15	NSRL - 13923	Mollusc
2,352 ± 37	AA - 82363	Mollusc
2,370 ± 40	AA - 70938	Foraminifera
2,418 ± 45	AA - 56741	Mollusc
2,535 ± 45	AA - 81066	Mollusc
2,585 ± 55	NA; B997-320PC (109-110cm)	Mollusc
2,621 ± 58	AA - 531113	Mollusc
2,655 ± 15	NSRL - 15951	Mollusc
2,664 ± 33	AA - 58971	Mollusc
2,783 ± 39	AA - 53121	bivalve fr & Foraminifera
2,818 ± 39	AA - 66845	Foraminifera
2,869 ± 54	AA -	Mollusc
2,910 ± 40	AA - 70939	benthic forams
2,985 ± 20	NSRL - 15187	Foraminifera
3,017 ± 39	AA - 57896	Mollusc
3,180 ± 20	NSRL - 15952	Mollusc
3,248 ± 44	AA - 81304	Mollusc
3,424 ± 35	AA - 58972	Mollusc
3,466 ± 48	AA - 67417	Mollusc
3,600 ± 38	AA - 60140	Mollusc
3,624 ± 41	AA - 58405	Mollusc
3,650 ± 29	NSRL - 16096	Mollusc
3,706 ± 59	AA - 531114	Mollusc
3,724 ± 74	AA - 62441	Peat
3,751 ± 44	AA - 57897a	Mollusc
3,840 ± 39	AA - 65331	Foraminifera
3,949 ± 39	AA - 57898	Mollusc
3,969 ± 42	AA - 62343	Wood
3,969 ± 55	AA - 66866	Wood
4,406 ± 49	AA - 67416	Mollusc
4,470 ± 47	AA - 53106	Gastropod mollusc

^{14}C age	Lab ID #	Material
4,530 ± 360	AA - 67419	Mollusc
4,568 ± 44	AA - 70940	benthic forams
4,612 ± 70	AA - 531115	Foraminifera
4,771 ± 90	AA - 67418	Mollusc
4,840 ± 120	AA - 57064	Foraminifera
4,895 ± 15	NSRL - 15290	Mollusc
4,950 ± 57	AA - 81067	Mollusc
5,230 ± 60	AA -	
5,408 ± 40	AA - 56294	Mollusc
5,435 ± 41	AA - 68075	Mollusc
5,541 ± 44	AA - 531116	Mollusc
5,630 ± 100	AA -	Foraminifera
5,636 ± 57	AA - 65331	Foraminifera
5,653 ± 77	AA - 66868	Wood
5,795 ± 40	AA - 57063	Mollusc
5,822 ± 57	AA - 81307	Foraminifera
5,826 ± 51	AA - 57899	Mollusc
5,986 ± 70	AA - 57062	Foraminifera
6,148 ± 47	AA - 62342	Wood
6,188 ± 59	AA - 66865	Wood
6,200 ± 56	AA - 70941	Benthic forams
6,537 ± 45	AA - 531117	Mollusc
6,577 ± 42	AA - 59573	Mollusc
6,583 ± 41	AA - 60141	Mollusc
6,790 ± 20	CURL - 7613	Mollusc
6,833 ± 81	AA - 61217	Foraminifera
6,921 ± 72	AA - 53107	Foraminifera
7,009 ± 45	AA - 66864	Wood
7,095 ± 25	CURL - 7757	Foraminifera
7,302 ± 61	AA - 81310	Foraminifera
7,347 ± 66	AA - 53108	Foraminifera and bivalves
7,640 ± 30	CURL - 7903	Mollusc
7,700 ± 200	AA - 59574	Mollusc
7,755 ± 20	NSRL - 13920	Mollusc
7,775 ± 46	AA - 68076	Mollusc
7,780 ± 25	CURL - 7756	Mollusc
7,816 ± 63	AA - 59575	Mollusc
7,936 ± 53	AA - 66867	Wood
7,940 ± 57	AA - 62344	Wood
8,195 ± 65	AA -	
8,285 ± 15	CURL - 7903	Mollusc
8,286 ± 50	AA - 531118	Mollusc
8,379 ± 51	AA - 70942	Benthic foraminifera
8,551 ± 47	AA - 57900b	Mollusc
8,572 ± 78	AA - 61220	Foraminifera
8,609 ± 92	AA - 61221	Foraminifera
8,759 ± 67	AA - 53109	Foram & bivalves
8,769 ± 48	AA - 58959	Mollusc
8,858 ± 49	AA - 58960	Mollusc
8,941 ± 47	AA - 58961	Mollusc
8,950 ± 120	AA - 61219	Foraminifera
8,978 ± 53	AA - 70943	Benthic forams
9,014 ± 51	AA - 531119	Foraminifera
9,252 ± 70	AA - 53110	Foraminifera
9,385 ± 52	AA - 82359	Mollusc
9,393 ± 66	AA - 58406	Mollusc
9,403 ± 58	AA - 46848	Foraminifera
9,424 ± 48	AA - 58407	Mollusc
9,473 ± 57	AA - 81305	Mollusc
9,477 ± 88	AA - 54594	Foraminifera
9,555 ± 74	AA - 58408	Mollusc
9,593 ± 58	AA - 81306	Mollusc
9,626 ± 80	AA - 81303	Foraminifera
9,706 ± 65	AA - 81308	Mollusc
9,713 ± 60	AA - 53100	Bivalve
9,728 ± 86	AA - 58962	Mollusc
9,730 ± 550	KCCAMS - 50860	Foraminifera
9,734 ± 50	AA - 58409	Mollusc
9,735 ± 51	AA - 58970	Mollusc
9,777 ± 54	AA - 82360	Foraminifera
9,876 ± 50	AA - 60139	Mollusc
9,890 ± 85	AA - 6462	Mollusc
10,021 ± 51	AA - 60142	Mollusc
10,025 ± 67	AA - 58963	Mollusc
10,075 ± 57	AA - 58410	Mollusc
10,090 ± 110	AA - 61215	Foraminifera
10,090 ± 60	Beta - 234922	Mollusc
10,102 ± 56	AA - 82698	Foraminifera
10,240 ± 250	KCCAMS - 50859	Foraminifera
10,313 ± 52	AA - 60143	Mollusc
10,379 ± 58	AA - 58964	Mollusc
10,400 ± 150	AA - 53111	See sample comments
10,473 ± 50	AA - 58965	Mollusc
10,675 ± 20	NSRL - 15289	Mollusc
10,698 ± 75	AA - 53101	Fragments of bivalve mollusc
10,769 ± 51	AA - 58966	Mollusc
10,828 ± 71	AA - 58967	Mollusc
10,916 ± 63	AA - 53103	Gastropod fragment
11,537 ± 66	AA - 53104	Scaphopod
11,625 ± 58	AA - 58968	Mollusc
11,966 ± 87	AA - 53105	Bivalve
12,060 ± 63	AA - 58969	Mollusc
13,235 ± 62	AA - 57067	Mollusc
13,507 ± 78	AA - 57068	Mollusc
21,440 ± 140	AA - 82697	Foraminifera
34,600 ± 640	AA - 32968	Foraminifera
3,840* ± 33	AA - 57897b	Mollusc
8,590* ± 43	AA - 57900a	Mollusc