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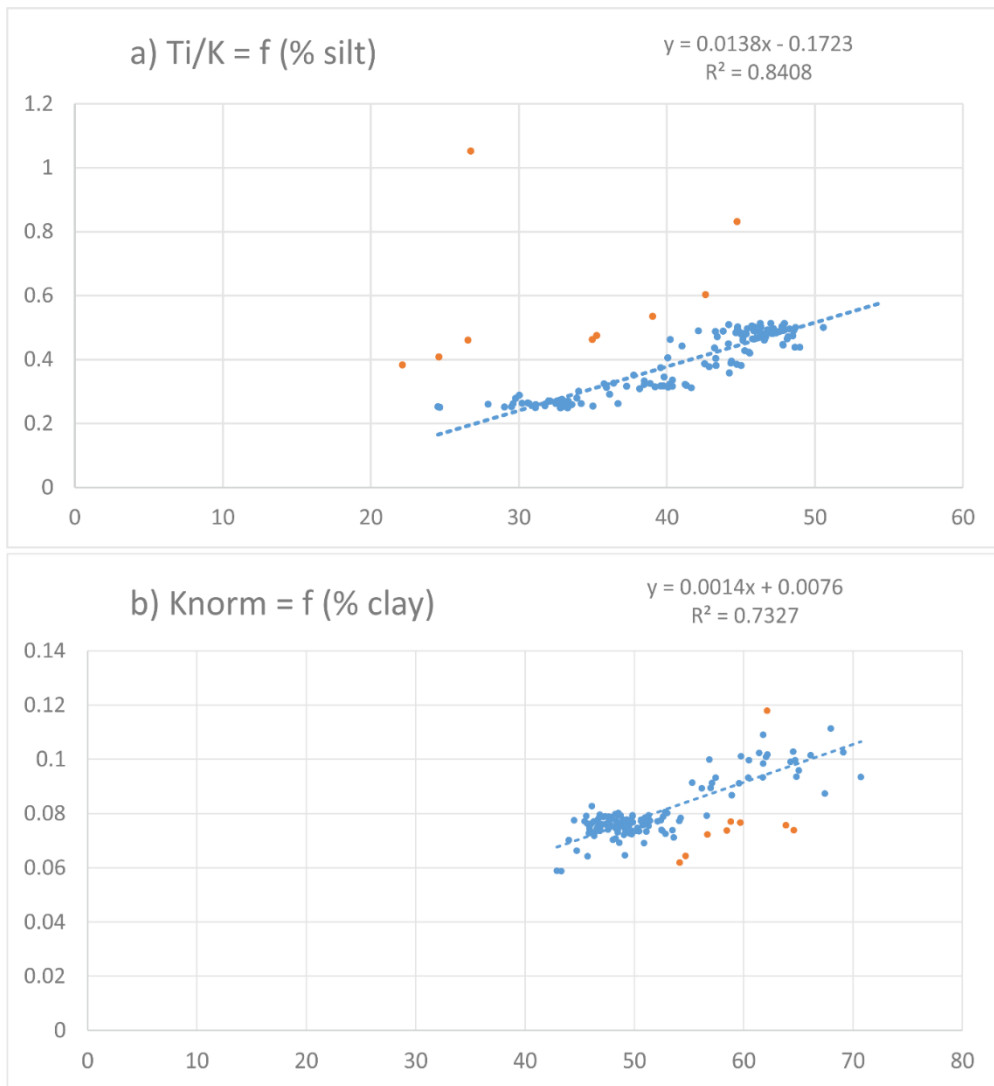
Supplement of

Deglacial to postglacial history of Nares Strait, Northwest Greenland: a marine perspective from Kane Basin

Eleanor Georgiadis et al.

Correspondence to: Eleanor Georgiadis (eleanor.georgiadis@u-bordeaux.fr)

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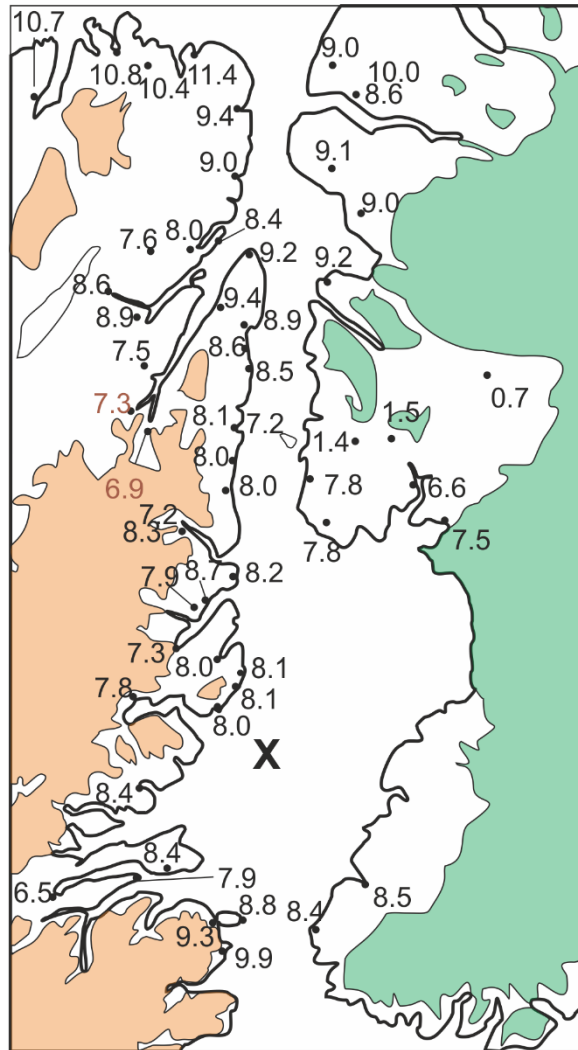
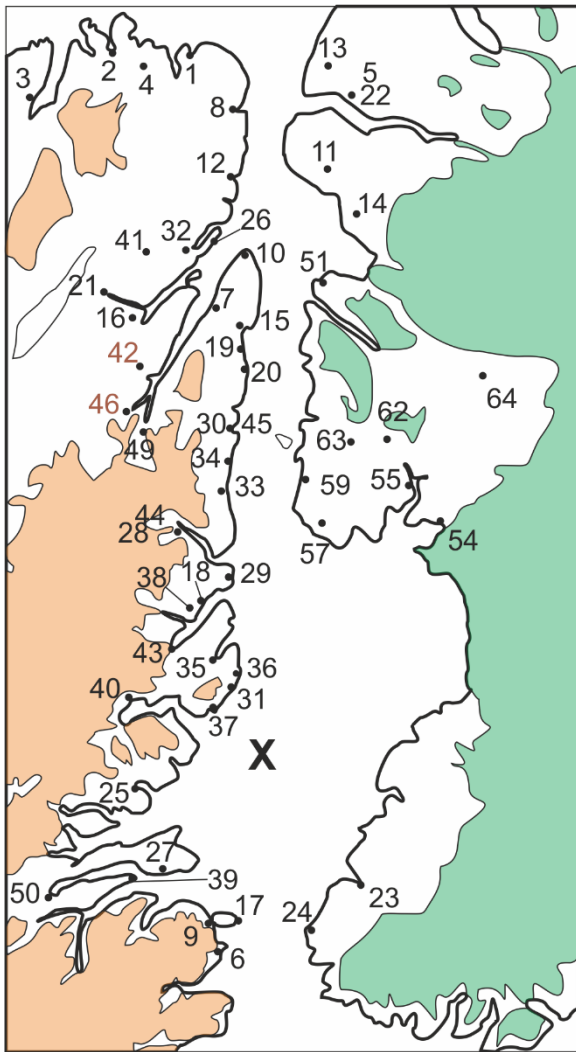
S.1: XRF data plotted against grain size data. a) $Ti/K = f (\% \text{ silt})$ shows a correlation factor $r^2=0.84$ when 9 outlying data points are omitted (shown in orange). b) $K_{norm} = f (\% \text{ clay})$ shows a correlation factor $r^2=0.73$ when 9 outlying data points are omitted (shown in orange).

S.2: radiocarbon ages as reported in England (1999) and Bennike (2002) and calibrated with $\Delta R=240 \pm 51$ years.

| | Laboratory dating number | age (yr BP) | 14C age | err | Lat | Long | Median age $\Delta R=240 \pm 51$ | sigma1 | Original reference |
|-----|--------------------------|-------------|---------|------|-------|-------|----------------------------------|---------------|-----------------------|
| 1 | GSC-1815 | 10100 | 10510 | 210 | 82°27 | 62°40 | 11386 | 11070 - 11740 | England (1977, 1983) |
| 2 | S-1984 | 9825 | 10235 | 460 | 82°42 | 64°45 | 10781 | 10111 - 11378 | England (1983) |
| 3 | GSC-3744 | 9580 | 9990 | 140 | 82°42 | 68°15 | 10668 | 10483 - 10867 | England (1985) |
| 4 | S-1985 | 9270 | 9680 | 1055 | 82°30 | 64°15 | 10358 | 8991 - 11706 | England (1983) |
| 5 | S-2307 | 9070 | 9480 | 150 | 81°49 | 58°40 | 10010 | 9807 - 10218 | England (1985) |
| 6a | TO-226 | 9010 | 9420 | 150 | 78°36 | 74°45 | 9938 | 9746 - 10159 | Blake (1992) |
| 6b | GSC-2516 | 8940 | 9350 | 100 | 78°36 | 74°45 | 9854 | 9683 - 10028 | Blake (1992) |
| 6c | TO-225 | 8840 | 9250 | 50 | 78°36 | 74°45 | 9681 | 9575 - 9759 | Blake (1992) |
| 7 | TO-136 | 8520 | 8930 | 80 | 81°23 | 66°53 | 9352 | 9274 - 9450 | England (1999) |
| 8 | SI-5551 | 8600 | 9010 | 90 | 82°08 | 62°03 | 9431 | 9345 - 9521 | Retelle (1986) |
| 9 | GSC-3314 | 8470 | 8880 | 100 | 78°43 | 74°43 | 9291 | 9183 - 9427 | Blake (1992) |
| 10 | DIC-737 | 8380 | 8790 | 105 | 81°33 | 64°30 | 9187 | 9036 - 9307 | England (1985) |
| 11a | SI-5855 | 8280 | 8690 | 90 | 81°35 | 60°55 | 9068 | 8963 - 9210 | England (1985) |
| 11b | S-2313 | 8295 | 8705 | 120 | 81°35 | 60°54 | 9082 | 8943 - 9270 | England (1985) |
| 12a | S-1990 | 8255 | 8665 | 215 | 81°53 | 63°20 | 9006 | 8723 - 9289 | England (1985) |
| 12b | GSC-3041 | 8050 | 8460 | 120 | 81°53 | 63°20 | 8746 | 8587 - 8918 | England (1985) |
| 13a | SI-5856 | 8230 | 8640 | 85 | 82°01 | 58°55 | 8994 | 8858 - 9124 | England (1985) |
| 13b | S-2309 | 8205 | 8615 | 135 | 82°01 | 58°55 | 8946 | 8730 - 9132 | England (1985) |
| 14 | SI-5857 | 8225 | 8635 | 95 | 81°18 | 61°21 | 8984 | 8840 - 9128 | England (1985) |
| 15 | DIC-549 | 8200 | 8610 | 260 | 81°15 | 65°45 | 8936 | 8604 - 9252 | England (1983) |
| 16 | GSC-1775 | 8130 | 8540 | 200 | 81°32 | 68°58 | 8850 | 8573 - 9091 | England (1983) |
| 17 | GSC-3286 | 8060 | 8470 | 70 | 78°41 | 74°07 | 8756 | 8626 - 8866 | Blake (1992) |
| 18 | TO-3450 | 8050 | 8460 | 90 | 80°10 | 71°11 | 8744 | 8598 - 8870 | England (1996) |
| 19 | GSC-2843 | 7960 | 8370 | 150 | 81°04 | 66°19 | 8643 | 8425 - 8803 | England et al. (1981) |
| 20 | TO-434 | 7870 | 8280 | 90 | 81°03 | 66°38 | 8505 | 8394 - 8588 | England (1996) |

| | | | | | | | | | |
|-----|----------|------|------|-----|--------|--------|------|-------------|----------------------------|
| 21 | GSC-3179 | 7860 | 8270 | 270 | 81°41 | 69°08 | 8549 | 8233 - 8882 | England (1983) |
| 22a | S-2408 | 7825 | 8235 | 130 | 81°46 | 59°08 | 8472 | 8318 - 8604 | England (1985) |
| 22b | GSC-3693 | 7740 | 8150 | 90 | 81°46 | 59°08 | 8373 | 8283 - 8474 | England (1985) |
| 22c | S-2301 | 7965 | 8375 | 115 | 81°46 | 59°08 | 8638 | 8451 - 8775 | England (1985) |
| 23 | L-1091E | 7800 | 8210 | 200 | ~78°38 | ~71°00 | 8461 | 8194 - 8672 | Nichols (1969) |
| 24 | TO-923 | 7780 | 8190 | 70 | ~78°39 | 71°01 | 8413 | 8342 - 8484 | Blake et al. (1992) |
| 25 | TO-4192 | 7770 | 8180 | 70 | 79°30 | 74°59 | 8403 | 8332 - 8474 | England (1996) |
| 26 | S-2109 | 7755 | 8165 | 125 | 81°40 | 65°20 | 8391 | 8266 - 8535 | England (1983) |
| 27 | GSC-3710 | 7730 | 8140 | 120 | 79°04 | 75°30 | 8363 | 8233 - 8492 | Blake (1987) |
| 28a | TO-3778 | 7650 | 8060 | 60 | 80°30 | 70°43 | 8284 | 8218 - 8348 | England (1996) |
| 28b | TO-3464 | 7630 | 8040 | 60 | 80°30 | 70°43 | 8266 | 8199 - 8328 | England (1996) |
| 29 | TO-3766 | 7540 | 7950 | 70 | 80°13 | 70°08 | 8176 | 8100 - 8278 | England (1996) |
| 30 | TO-2919 | 7490 | 7900 | 60 | 80°47 | 67°55 | 8116 | 8032 - 8177 | England (1996) |
| 31 | TO-4210 | 7480 | 7890 | 60 | 79°45 | 71°22 | 8106 | 8028 - 8168 | Gualtieri and England 1977 |
| 32 | S-2139 | 7385 | 7795 | 375 | 81°41 | 66°21 | 8042 | 7636 - 8389 | England (1983) |
| 33 | TO-3765 | 7400 | 7810 | 70 | 80°37 | 69°15 | 8035 | 7955 - 8107 | England (1996) |
| 34a | TO-2922 | 7340 | 7750 | 70 | 80°42 | 68°29 | 7971 | 7892 - 8046 | England (1996) |
| 34b | TO-2925 | 7620 | 8030 | 600 | 80°42 | 68°29 | 8337 | 7664 - 8977 | England (1996) |
| 35a | TO-4200 | 7370 | 7780 | 70 | 79°53 | 71°34 | 8001 | 7925 - 8078 | England (1996) |
| 35b | GSC-5668 | 7320 | 7730 | 80 | 79°54 | 71°30 | 7950 | 7855 - 8025 | England (1996) |
| 36 | TO-4214 | 7430 | 7840 | 70 | 79°49 | 71°07 | 8061 | 7987 - 8138 | Gualtieri and England 1977 |
| 37 | TO-4211 | 7390 | 7800 | 70 | 79°41 | 72°17 | 8022 | 7946 - 8098 | Gualtieri and England 1977 |
| 38 | TO-4198 | 7310 | 7720 | 70 | 80°10 | 71°28 | 7939 | 7859 - 8005 | England (1996) |
| 39 | GSC-3700 | 7300 | 7710 | 140 | 79°06 | 76°05 | 7931 | 7782 - 8079 | Blake (1988) |
| 40 | TO-4191 | 7190 | 7600 | 70 | 79°53 | 74°15 | 7822 | 7755 - 7909 | England (1996) |
| 41 | S-2110 | 6995 | 7405 | 130 | 81°47 | 67°37 | 7643 | 7517 - 7764 | England (1983) |

| | | | | | | | | | |
|-----|------------|------|------|-----|----------|----------|------|-------------|----------------------|
| 42 | SI-3300 | 6860 | 7270 | 70 | 81°17 | 69°25 | 7518 | 7454 - 7573 | England (1983) |
| 43 | GSC-5670 | 6650 | 7060 | 190 | 80°04 | 72°19 | 7322 | 7151 - 7517 | England (1996) |
| 44 | TO-3467 | 6500 | 6910 | 70 | 80°32 | 70°43 | 7199 | 7132 - 7284 | England (1996) |
| 45 | TO-2918 | 6490 | 6900 | 90 | 80°55 | 67°54 | 7184 | 7082 - 7291 | England (1996) |
| 46 | GSC-1614 | 6430 | | 150 | 81°11 | 70°17 | | Driftwood | England (1977, 1983) |
| 47 | GSC-2370 | 6400 | 6810 | 100 | 79°54 | 63°58 | 7079 | 6966 - 7202 | Blake (1987) |
| 48 | GSC-2334 | 5980 | 6390 | 70 | 81°04 | 63°35 | 6582 | 6490 - 6661 | Blake (1987) |
| 49 | GSC-1755 | 6000 | | 150 | 81°04 | 70°00 | | Driftwood | England (1977, 1983) |
| 50a | Beta-91863 | 5920 | 6330 | 60 | 79°09 | 78°13 | 6517 | 6442 - 6594 | England (1999) |
| 50b | GSC-6088 | 5940 | 6350 | 90 | 79°09 | 78°13 | 6350 | 6433 - 6640 | England (1999) |
| 51 | AAR-5768 | 8820 | 75 | 25 | 81°10.6 | 63°20.5 | 9225 | 9409 - 9539 | Bennike 2002 |
| 52 | AAR-5769 | 8010 | 75 | 25 | 81°10.1 | 63°04.9 | 8237 | 8389 - 8539 | Bennike 2002 |
| 53 | AAR-5766 | 6870 | 50 | 24 | 79°55.5 | 64°04.3 | 7162 | 7328 - 7427 | Bennike 2002 |
| 54 | AAR-5762 | 7240 | 65 | 23 | 79°56.5 | 64°17.1 | 7495 | 7636 - 7775 | Bennike 2002 |
| 55 | AAR-5755 | 6410 | 55 | 22 | 80°05.8 | 64°39.4 | 6605 | 6810 - 6961 | Bennike 2002 |
| 56 | AAR-5758 | 7090 | 80 | 21 | 80°24.0 | 66°58.2 | 7364 | 7496 - 7640 | Bennike 2002 |
| 57 | AAR-5757 | 7570 | 65 | 20 | 80°12.6 | 67°11.9 | 7793 | 7957 - 8102 | Bennike 2002 |
| 58 | AAR-5761 | 6890 | 60 | 19 | 80°21.5 | 67°18.7 | 7181 | 7338 - 7458 | Bennike 2002 |
| 59 | AAR-5760 | 7580 | 55 | 18 | 80°18.7 | 67°23.6 | 7803 | 7972 - 8103 | Bennike 2002 |
| 60 | AAR-5755 | 5165 | 55 | 19 | 80°08.8' | 64°20.2' | 5255 | 5470 - 5578 | Bennike 2002 |
| 64 | AAR-5772 | 1400 | 60 | 6 | 80°33.1' | 67°11.1' | 712 | 892 - 1027 | Bennike 2002 |
| 61 | K-7142 | 1310 | 35 | 15 | 80°09.4' | 63°39.6' | 638 | 609 - 672 | Bennike 2002 |
| 62 | K-7138 | 2170 | 55 | 38 | 80°23.9' | 65°18.1' | 1477 | 1693 - 1834 | Bennike 2002 |
| 63 | AAR-5531 | 2070 | 55 | 39 | 80°24.9' | 64°20.0' | 1376 | 1563 - 1706 | Bennike 2002 |



S.3: location of the radiocarbon ages in Nares Strait reported in England (1999) and Bennike (2002) and their calibrated with $\Delta R=240 \pm 51$ years.

S.4: radiocarbon ages from Jennings et al. (2011) calibrated with $\Delta R=240$

| Depth in core (cm) | Laboratory number | ^{14}C age | Material dated | Median age ($\Delta R=240$) | 1σ $\Delta R=240$ |
|--------------------|-------------------|---------------------|------------------------------|-------------------------------|--------------------------|
| 0–2 | AA-81309 | 530 \pm 53 | <i>Bathyrca glacialis</i> | ~290 | |
| 8–10 | NOS -71686 | 3100 \pm 35 | NPS | 2636 | 2595 - 2709 |
| 28-30 | NOS -71687 | 5040 \pm 40 | NPS | 5087 | 5010 - 5140 |
| 58-60 | NOS -71688 | 6870 \pm 45 | NPS | 7164 | 7120 - 7234 |
| 68-70 | AA-81310 | 7302 \pm 61 | NPS | 7543 | 7484 - 7596 |
| 69-98 | NOS -72574 | 8290 \pm 50 | NPS | 8502 | 8439 - 8558 |
| 345-349 | NOS -71689 | 9320 \pm 45 | NPS and <i>C. neoteretis</i> | 9794 | 9702 - 9882 |