

## **R. Röthlisberger and N. Abram**

- Abram, N., McConnell, J.R., Thomas, E.R., Mulvaney, R. and Aristarain, A.J., 2008: Ice core records of 20<sup>th</sup> century sea ice decline in the Bellingshausen Sea, *Geophysical Research Letters*, submitted.
- Abram, N., Mulvaney, R., Wolff, E.W. and Mudelsee, M., 2007: Ice core records as sea ice proxies: an evaluation from the Weddell Sea region of Antarctica, *Journal of Geophysical Research*, 112: D15101, doi:15110.11029/12006JD008139.
- Castebrunet, H., Genthon, C. and Martinerie, P., 2006: Sulfur cycle at Last Glacial Maximum: Model results versus Antarctic ice core data, *Geophysical Research Letters*, **33**: L22711, doi:10.1029/2006GL027681.
- Crosta, X., Sturm, A., Armand, L. and Pichon, J.J., 2004: Late Quaternary sea ice history in the Indian sector of the Southern Ocean as recorded by diatom assemblages, *Marine Micropaleontology*, **50**: 209-223.
- Curran, M.A.J. and Jones, G.B., 2000: Dimethyl sulfide in the Southern Ocean: Seasonality and flux, *Journal of Geophysical Research*, **105**: 20451-20459.
- Curran, M.A.J., van Ommen, T.D., Morgan, V.I., Phillips, K.L. and Palmer, A.S., 2003: Ice core evidence for Antarctic sea ice decline since the 1950s, *Science*, **302**: 1203-1206.
- Foster, A.F.M., Curran, M.A.J., Smith, B.T., van Ommen, T.D. and Morgan, V.I., 2006: Covariation of sea ice and methanesulphonic acid in Wilhelm II Land, East Antarctica, *Annals of Glaciology*, **44**: 429-432.
- Fundel, F., Fischer, H., Weller, R., Traufetter, F., Oerter, H. and Miller, H., 2006: Influence of large-scale teleconnection patterns on methane sulfonate ice core records in Dronning Maud Land, *Journal of Geophysical Research*, **111**: (D04103), doi:10.1029/2005JD005872.
- Jouzel et al., 2007: Orbital and Millennial Antarctic Climate Variability over the Past 800,000 Years, *Science*, **317**: 793-796.
- Minikin, A., Wagenbach, D., Graf, W. and Kipfstuhl, J., 1994: Spatial and seasonal variations of the snow chemistry at the central Filchner-Ronne Ice Shelf, Antarctica, *Annals of Glaciology*, **20**: 283-290.
- Rankin, A.M., Auld, V. and Wolff, E.W., 2000: Frost flowers as a source of fractionated sea salt aerosol in the polar regions, *Geophysical Research Letters*, **27**(21): 3469-3472.
- Röthlisberger, R. et al., 2008: The southern hemisphere at glacial terminations: insights from the Dome C ice core, *Climate of the Past: Open Discussions*, 4: 761-789.
- Röthlisberger, R., Crosta, X., Armand, L., Wolff, E.W. and Abram, N., in preparation: Comparison of marine and ice core proxy records of sea ice in the Indian Ocean sector of Antarctica.
- Sun, J., Ren, J. and Qin, D., 2002: 60 years record of biogenic sulfur from Lambert Glacier basin firn core, East Antarctica, *Annals of Glaciology*, **35**: 362-367.
- Wagnon, P., Delmas, R.J. and Legrand, M., 1999: Loss of volatile acid species from upper firn layers at Vostok, Antarctica, *Journal of Geophysical Research*, **104**(D3): 3423-3431.
- Welch, K., Mayewski, P.A. and Whitlow, S., 1993: Methanesulfonic acid in coastal Antarctic snow related to sea-ice extent, *Geophysical Research Letters*, **20**(6): 443-446.
- Wolff, E.W. et al., 2006: Southern ocean sea-ice extent, productivity and iron flux over the past eight glacial cycles, *Nature*, 440: 491-496.
- Wolff, E.W., Rankin, A.M. and Röthlisberger, R., 2003: An ice core indicator of Antarctic sea ice production?, *Geophysical Research Letters*, 30(22): 2158. doi:10.1029/2003GL018454.
- Yang, X., Pyle, J.A. and Cox, R.A., 2008: Sea salt production and bromine release – the role of snow on sea ice, *Geophysical Research Letters*, **35**(16): L16815.

## **K. Kawamura**

- Bender, M.L., 2002: Orbital tuning chronology for the Vostok climate record supported by trapped gas composition, *Earth and Planetary Science Letters*, 204(1-2): 275-289.
- Bintanja, R., Van De Wal, R.S.W. and Oerlemans, J., 2005: Modelled atmospheric temperatures and global sea levels over the past million years, *Nature*, 437(7055): 125-128.
- Bintanja, R. and Van De Wal, R.S.W., 2008: North American ice-sheet dynamics and the onset of 100,000-year glacial cycles, *Nature*, 454(7206): 869-872.
- Blunier, T. and Brook, E.J., 2001: Timing of millennial-scale climate change in Antarctica and Greenland during the last glacial period, *Science*, 291(5501): 109-112.
- Clark, P.U., McCabe, A.M., Mix, A.C. and Weaver, A.J., 2004: Rapid rise of sea level 19,000 years ago and its global implications, *Science*, 304(5674): 1141-1144.
- Denton G.H., Broecker, W.S. and Alley, R.B., 2006: The mystery interval 17.5 to 14.5 kyrs ago, *PAGES news*, 2: 14-16.
- Dreyfus, G.B., et al., 2007: Anomalous flow below 2700 m in the EPICA Dome C ice core detected using  $\delta^{18}\text{O}$  of atmospheric oxygen measurements, *Climate of the Past*, 3(2): 341-353.
- EPICA Community Members, 2006: One-to-one coupling of glacial climate variability in Greenland and Antarctica, *Nature*, 444(7116): 195-198.
- Huybers, P. and Wunsch, C., 2005: Obliquity pacing of the late Pleistocene glacial terminations, *Nature*, 434(7032): 491-494.
- Huybers, P., 2006: Early Pleistocene glacial cycles and the integrated summer insolation forcing, *Science*, 313(5786): 508-511.
- Huybers, P. and Denton, G., 2008: Antarctic temperature at orbital timescales controlled by local summer duration, *Nature Geoscience*, 10.1038/ngeo311.
- Kawamura, K., et al., 2007: Northern Hemisphere forcing of climatic cycles in Antarctica over the past 360,000 years, *Nature*, 448(7156): 912-916.
- Lüthi, D., et al., 2008: High-resolution carbon dioxide concentration record 650,000–800,000 years before present, *Nature*, 453(7193): 379-382.
- Motoyama, H., 2007: The second deep ice coring project at Dome Fuji, Antarctica, *Scientific Drilling*, 5: 41-43.
- Parrenin et al., 2007: The EDC3 chronology for the EPICA dome C ice core, *Climate of the Past*, 3(3): 485-497.
- Petit, J.R., et al., 1999: Climate and atmospheric history of the past 420,000 years from the Vostok ice core, Antarctica, *Nature*, 399: 429-436.
- Raymo, M.E., 1997: The timing of major climate terminations, *Paleoceanography*, 12(4): 577-585.
- Raynaud et al., 2007: The local insolation signature of air content in Antarctic ice. A new step toward an absolute dating of ice records, *Earth and Planetary Science Letters*, 261(3-4): 337-349.
- Ruddiman, W.F. and Raymo, M.E., 2003: A methane-based time scale for Vostok ice, *Quaternary Science Reviews*, 22(2-4): 141-155.
- Severinghaus, J.P. and Battle, M., 2006: Fractionation of gases in polar ice during bubble close-off: new constraints from firn air Ne, Kr, and Xe observations, *Earth and Planetary Science Letters*, 244: 474-500.
- Suwa, M. and Bender, M.L., 2008: Chronology of the Vostok ice core constrained by  $\text{O}_2/\text{N}_2$  ratios of occluded air, and its implication for the Vostok climate records, *Quaternary Science Reviews*, 27(11-12): 1093-1106.
- Thompson, W.G. and Goldstein, S.L., 2005: Open-system coral ages reveal persistent suborbital sea-level cycles, *Science*, 308(5720): 401-404.

Wang, Y., Cheng, H., Edwards, R.L., Kong, X., Shao, X., Chen, S., Wu, J., Jiang, X., Wang, X. and An, Z., 2008: Millennial- and orbital-scale changes in the East Asian monsoon over the past 224,000 years, *Nature*, 451(7182): 1090-1093.

Waelbroeck, C., Labeyrie, L., Michel, E., Duplessy, J.C., McManus, J.F., Lambeck, K., Balbon, E. and Labracherie, M., 2002: Sea-level and deep water temperature changes derived from benthic foraminifera isotopic records, *Quaternary Science Reviews*, 21(1-3): 295-305.

## **M.J. Bentley and D.A. Hodgson**

### Figure 3 References:

- 1) Hodgson, D.A., Doran, P.T., Roberts, D. and McMinn, A., 2004: Paleolimnological studies from the Antarctic and subantarctic islands. In: Pienitz R, et al. (Eds) *Developments in Palaeoenvironmental Research - Long-term Environmental Change in Arctic and Antarctic Lakes*, Vol 8. Springer, Dordrecht: 419-474.
- 2) Ciais, P., Jouzel, J., Petit, J.R., Lipenkov, V.Y. and White, J.W.C., 1994: Holocene temperature variations inferred from six Antarctic ice cores, *Annals of Glaciology*, 20: 427-436.
- 3) Jones, V.J., Hodgson, D.A. and Chepstow-Lusty, A., 2000: Palaeolimnological evidence for marked Holocene environmental changes on Signy Island, Antarctica, *The Holocene*, 10: 43-60.
- 4) Björck, S., Håkansson, H., Olsson, S., Barnekow, L. and Janssens, J., 1993: Palaeoclimatic studies in South Shetland Islands, Antarctica, based on numerous stratigraphic variables in lake sediments, *Journal of Paleolimnology*, 8: 233-272.
- 5) Björck, S., Olsson, S., Ellis-Evans, J.C., Håkansson, H., Humlum, O. and de Lirio, J.M., 1996: Late Holocene palaeoclimatic records from lake sediments on James Ross Island, Antarctica, *Palaeogeography, Palaeoclimatology, Palaeoecology*, 121: 195-220
- 6) Domack, E.W. and McClennen, C.E., 1996: Accumulation of glacial marine sediments in fjords of the Antarctic Peninsula and their use as late Holocene paleoenvironmental indicators, *Foundations for ecological research west of the Antarctic Peninsula, Antarctic Research Series*, 70: 135-154.
- 7) Pudsey, C.J. and Evans, J., 2001: First survey of Antarctic sub-ice shelf sediments reveals mid-Holocene ice shelf retreat, *Geology*, 29: 787-790.
- 8) Ingólfsson, Ó. and Hjort, C., 2002: Glacial history of the Antarctic Peninsula since the Last Glacial Maximum-a synthesis, *Polar Research*, 21: 227-234.
- 9) Hodgson et al., 2004: See above
- 10) Ciais et al., 1994: See above
- 11) Lorius, C., Jouzel, J., Raynaud, D., Hansen, J. and Letreut, H., 1990: The ice-core record - climate sensitivity and future greenhouse warming, *Nature*, 347: 139-145.
- 12) Goodwin, I.D., 1993: Holocene deglaciation, sea-level change, and the emergence of the Windmill Islands, Budd Coast, Antarctica, *Quaternary Research*, 40: 70-80.
- 13) Roberts, D., McMinn, A. and Zwartz, D., 2000: An initial palaeosalinity history of Jaw Lake, Bunger Hills based on a diatom-salinity transfer function applied to sediment cores, *Antarctic Science*, 12: 172-176.
- 14) Smith, G.I. and Friedmann, I., 1993: Lithology and paleoclimatic implications of lacustrine deposits around Lake Vanda and Don Juan Pond, Antarctica. In: Green, W. and Friedmann, I. (Eds): *Physical and biogeochemical processes in Antarctic lakes*, American Geophysical Union, Washington DC: 83-94.
- 15) Melles, M., Kulbe, T., Verkulich, S.R., Pushina, Z.V. and Hubberten, H.-W., 1997: Late Pleistocene and Holocene environmental history of Bunger Hills, East Antarctica, as

- revealed by fresh-water and epishelf lake sediments. In: Ricci, C.A. (Ed), *The Antarctic Region: Geological Evolution and Processes*, Siena: Universtà degli Studi di Siena, 809-820.
- 16) Kulbe, T., Melles, M., Verkulich, S.R. and Pushina, Z.V., 2001: East Antarctic climate and environmental variability over the last 9400 years inferred from marine sediments of the Bunge Oasis, *Arctic Antarctic and Alpine Research*, **33**: 223-230.
- 17) Hodgson, D.A., McMinn, A., Kirkup, H., Cremer, H., Gore, D., Melles, M., Roberts, D. and Montiel, P., 2003: Colonization, succession, and extinction of marine floras during a glacial cycle: A case study from the Windmill Islands (east Antarctica) using biomarkers, *Paleoceanography*, **18**(3):1067, doi:10.1029/2002PA000775.
- 17) Cremer, H., Gore, D., Melles, M. and Roberts, D., 2003: Palaeoceanographic significance of late Quaternary diatom assemblages from southern Windmill Islands, East Antarctica, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **195**: 261-280.
- 18) Rathburn, A.E., Pichon, J.J., Ayress, M.A. and DeDeckker, P., 1997: Microfossil and stable-isotope evidence for changes in Late Holocene palaeoproductivity and palaeoceanographic conditions in the Prydz Bay region of Antarctica, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **131**: 485-510.
- 19) Baroni, C. and Orombelli, G., 1994: Abandoned penguin rookeries as Holocene paleoclimatic indicators in Antarctica, *Geology*, **22**: 23-26.
- 20) Ikehara, M., Kawamura, K., Ohkouchi, N., Kimoto, K., Murayama, M., Nakamura, T., Oba, T. and Taira, A., 1997: Alkenone sea surface temperature in the Southern Ocean for the last two deglaciations, *Geophysical Research Letters*, **24**: 679-682.

Full References for article:

- Anderson, J.B., 1999: *Antarctic Marine Geology*, Cambridge University Press.
- Bassett, S.E., Milne, G.A., Bentley, M.J. and Huybrechts, P., 2007: Modeling Antarctic Sea-Level Data to Explore the Possibility of a Dominant Antarctic Contribution to Meltwater Pulse IA, *Quaternary Science Reviews*, **26**(17-18): 2113-2127.
- Bentley, M.J., Fogwill, C.J., Kubik, P.W. and Sugden, D.E., 2006: Geomorphological evidence and cosmogenic  $^{10}\text{Be}/^{26}\text{Al}$  exposure ages for the Last Glacial Maximum configuration and deglaciation history of the Antarctic Peninsula Ice Sheet, *Geological Society of America Bulletin*, **118**: 1149-1159. DOI: 10.1130/B25735.1
- Bentley, M.J., et al., *in press*: Mechanisms of Holocene palaeoenvironmental change in the Antarctic Peninsula region, *The Holocene*.
- Björck, S., Håkansson, H., Zale, R., Karlen, W. and Jonsson, B.L., 1991: A late Holocene sediment sequence from Livingston Island, South Shetland Islands, with palaeoclimatic implications, *Antarctic Science*, **3**: 61-72.
- Canals, M., Urgeles, R. and Calafat A.M., 2000: Deep sea-floor evidence of past ice streams off the Antarctic Peninsula, *Geology*, **28**(1): 31-34. doi: 10.1130/00917613(2000)028<0031: DSEOP1>2.0.CO;2
- Convey, P., Gibson, J.A.E., Hillenbrand, C.-D., Hodgson, D.A., Pugh, P.J.A., Smellie, J.L. and Stevens, M.I., 2008: Antarctic terrestrial life – challenging the history of the frozen continent? *Biological Reviews*, **83**: 103-117.
- Graham, A.G.C., Fretwell, P.T., Larter, R.D., Hodgson, D.A., Wilson, C.K., Tate, A.J. and Morris, P., 2008: A new bathymetric compilation highlighting extensive paleo-ice sheet drainage on the continental shelf, South Georgia, sub-Antarctica, *Geochemistry Geophysics Geosystems*, **9**(7): doi:10.1029/2008GC001993.
- Hall, B., Baroni, C. and Denton, G.H., 2004: Holocene relative sea-level history of the Southern Victoria Land Coast, Antarctica, *Global and Planetary Change*, **42**: 241-263.

- Hemer, M.A. and Harris, P.T., 2003: Sediment core from beneath the Amery Ice Shelf, East Antarctica, suggests mid-Holocene ice-shelf retreat, *Geology*, **31**(2): 127-130. doi: 10.1130/0091-7613(2003)031<0127:SCFBTA>2.0.CO;2
- Heroy, D. and Anderson, J.A., 2007: Radiocarbon constraints on Antarctic Peninsula Ice Sheet retreat following the Last Glacial Maximum (LGM), *Quaternary Science Reviews*, **26**: 3286-3297.
- Hodgson, D.A. and Convey, P., 2005: A 7000-year record of oribatid mite communities on a maritime-Antarctic island: responses to climate change, *Arctic Antarctic and Alpine Research*, **37**: 239-245.
- Hodgson, D.A., Doran, P.T., Roberts, D. and McMinn, A., 2004: Paleolimnological studies from the Antarctic and sub-Antarctic islands, In: Pienitz, R., et al., (Eds), Developments in paleoenvironmental research volume 8, *Long-term environmental change in Arctic and Antarctic Lakes*, Springer, 419–74.
- Hodgson, D.A., Bentley, M.J., Roberts, S.J., Smith, J.A., Sugden, D.E. and Domack, E.W., 2006: Examining Holocene Stability of Antarctic Peninsula Ice Shelves, *Eos Transactions*, **87**(31): 305-312.
- Jones, V.J., Hodgson, D.A. and Chepstow-Lusty, A., 2000: Palaeolimnological evidence for marked Holocene environmental changes on Signy Island, Antarctica, *The Holocene*, **10**: 43-60.
- Lowe, A. and Anderson, J.B., 2002: Reconstruction of the West Antarctic ice sheet in Pine Island Bay during the Last Glacial Maximum and its subsequent retreat history, *Quaternary Science Reviews*, **21**: 1879-1897. doi:10.1016/S0277-3791(02)00006-9
- Mackintosh, A., White, D., Fink, D., Gore, D.B., Pickard, J. and Fanning, P.C., 2007: Exposure ages from mountain dipsticks in Mac. Robertson Land, East Antarctica, indicate little change in ice-sheet thickness since the Last Glacial Maximum, *Geology*, **35**(6): 551–554. doi: 10.1130/G23503A.
- Ó Cofaigh, C., Dowdeswell, J.A., Evans, J. and Larter, R.D., 2008: Geological constraints on Antarctic palaeo-ice-stream retreat, *Earth Surface Processes and Landforms*, **33**: 513-525.
- Renssen, H., Goosse, H., Fichefet, T., Masson-Delmotte, V. and Koç, N., 2005: Holocene climate evolution in the high-latitude Southern Hemisphere simulated by a coupled atmospheric–sea-ice–ocean–vegetation model, *The Holocene*, **15**: 951–64.
- Stone, J.O., Balco, G.A., Sugden, D.E., Caffee, M.W., Sass, L.C., Cowdery, S.G. and Siddoway, C., 2003: Holocene Deglaciation of Marie Byrd Land, West Antarctica, *Science*, **299**: 99-102. doi: 10.1126/science.1077998.

### **L. Carter and G. Cortese**

- Barrows, T.T., Juggins, S., de Deckker, P., Calvo, E. and Pelejero, C., 2007: Long-term sea surface temperature and climate change in the Australian-New Zealand region, *Paleoceanography*, **22**: PA2215, doi:10.1029/2006PA001328.
- Bianchi, C. and Gersonde, R., 2002: Southern Ocean surface between Marine Isotope Stages 6 and 5d: shape and timing of climate changes, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **187**: 151-177.
- Carter, L., Manighetti, B., Ganssen, G. and Northcote, L., 2008: SW Pacific modulation of abrupt climate change during the Antarctic Cold Reversal -Younger Dryas, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **260**: 284-298.
- Carter, L., Neil, H.L. and Northcote, L., 2003: Late Quaternary incursions of icebergs into the SW Pacific, off eastern New Zealand, *Marine Geology*, **191**: 19-35.
- Cortese, G., Abelman, A. and Gersonde, R., 2007: The last five glacial-interglacial transitions: a high-resolution 450,000 year record from the subantarctic Atlantic, *Paleoceanography*, **22**: PA4203, doi:10.1029/2007PA001457.

- Cowan, E.A., 2002: Identification of the Glacial Signal from the Antarctic Peninsula since 3.0 Ma at Site 1101 in Continental Rise Sediment Drift, Chapter 10 in Ocean Drilling Program Leg 178, Scientific Results, doi:10.2973/odp.proc.sr.178.206.2001.
- EPICA Community Members, 2004: Eight glacial cycles from an Antarctic ice core, *Nature*, **429**: 623-628.
- Gersonde, R., Crosta, X., Abelmann, A. and Armand, L., 2005: Sea surface temperature and sea ice distribution of the Southern Ocean at the EPILOG Last Glacial Maximum – a circum-Antarctic view based on siliceous microfossil records, *Quaternary Science Reviews*, **24**: 869-896.
- Grobe, H. and Mackensen, A., 1992: Late Quaternary climatic cycles as recorded in sediments from the Antarctic continental margin, *Antarctic Research Series*, **56**: 349-376.
- Howard, W.R. and Prell, W.L., 1992: Late Quaternary surface circulation of the Southern Indian Ocean and its relationship to orbital variations, *Paleoceanography*, **7**: 79-117.
- Kanfoush, S.L., Hodell, D.A., Charles, C.D., Guilderson, T.P., Mortyn, P.G. and Ninnemann, U.S., 2000: Millennial scale instability of the Antarctic ice sheet during the last glaciation, *Science*, **288**: 1815-1818.
- Orsi, A.H., Whitworth III, T. and Nowlin Jr, W.D., 1995: On the meridional extent and fronts of the Antarctic Circumpolar Current, *Deep-Sea Research*, **42**: 641-673.
- Pahnke, K. and Sachs, J.P., 2006: Sea surface temperatures of southern midlatitudes 0-160 kyr B.P., *Paleoceanography*, **21**: PA2003, doi:10.1029/2005PA001191.
- Pudsey, C.J. and Howe, J.A., 1998: Quaternary history of the Antarctic Circumpolar Current: evidence from the Scotia Sea, *Marine Geology*, **148**: 83-112.
- Rintoul, S.R., Hughes, C.W. and Olbers, D., 2001: The Antarctic Circumpolar Current system, In: G. Siedler, et al., (Eds) *Ocean Circulation and Climate: Observing and Modelling the Global Ocean*, Academic Press, London, 271-302.
- Sachs, J.P. and Anderson, R.F., 2005: Increased productivity in the subantarctic ocean during Heinrich events, *Nature*, **434**: 1118-1121.
- Stommel, H., 1958: The abyssal circulation, *Deep-Sea Research*, **5**: 80-82.
- Toggweiler, J.R. and Russell, J.L., 2008: Ocean circulation in a warming climate, *Nature*, **451**: 286-288. doi:10.1038/nature06590 .

#### **D.A. Darby, L. Polyak and M. Jakobsson**

- Bond, G., Broecker, W., Johnsen, S.J., McManus, J., Labeyrie, L., Jouzel, J. and Bonani, G., 1993: Correlations between climate records from North Atlantic sediments and Greenland ice, *Nature*, **365**: 143–147.
- Brigham-Grette, J. and Carter, L.D., 1992: Pliocene marine transgressions of northern Alaska: Circumarctic Correlations and Paleoclimate, *Arctic*, **43**(4): 74-89.
- Calder, C.A., Craigmile, P.F. and Mosley-Thompson, E., 2008: Spatial variation in the influence of the North Atlantic Oscillation on precipitation across Greenland, *Journal of Geophysical Research*, **113**:(D06112), doi:10.1029/2007JD009227
- CAPE Last Interglacial Project Members, 2006: Last Interglacial Arctic Warmth Confirms Polar Amplification of Climate Change, *Quaternary Science Reviews*, **25**: 1383–1400.
- Darby, D.A., 2008: The Arctic perennial ice cover over the last 14 million years, *Paleoceanography*, **23**: PA1S07, doi:10.1029/2007PA001479.
- England, J.H, Lakeman, T.R., Lemmen, D.S., Bednarsky, J., Steward, T.G. and Evans, D.J.A., in press: A Millennial scale record of Arctic sea ice variability, *Geophysical Research Letters*.
- Funder, S. and Kjaer, K.H., 2007: A sea-ice free Arctic Ocean?, *Geophysical Research Abstracts*, **9**: 07815.

- Jakobsson, M., Macnab, R., Mayer, L., Anderson, R., Edwards, M., Hatzky, J., Schenke, H.W. and Johnson, P., 2008: An improved bathymetric portrayal of the Arctic Ocean: Implications for ocean modeling and geological, geophysical and oceanographic analyses, *Geophysical Research Letters*, **35**: L07602.
- Polyak, L., et al., in review: Late Quaternary stratigraphy and sedimentation patterns in the western Arctic Ocean, *Global and Planetary Change*.
- Williams, C.J., Mendell, E.K., Murphy, J., Court, W.M, Johnson, A.H. and Richter, S.L., 2008: Paleoenvironmental Reconstruction of a Middle Miocene Forest from the Western Canadian Arctic, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **261**(1-2): 160-176.

**M. Edwards, K. Walter, G. Grosse, L. Plug, L. Slater and P. Valdes**

- Andreev, A.A., et al., 2004: Late Saalian and Eemian palaeoenvironmental history of the Bol'shoy Lyakhovsky Island (Laptev Sea region, Arctic Siberia), *Boreas*, **33**: 319–348. Arctic Observing Network (AON), University of Alaska, Fairbanks, <http://aon.iab.uaf.edu/index.html> Accessed 28-11-2008.
- Billings, W.D. and Peterson, K.M., 1980: Vegetational change and ice-wedge polygons through the thaw-lake cycle in arctic Alaska, *Arctic and Alpine Research*, **12**: 413-432.
- Edwards, M.E. and McDowell, P.F., 1991: Interglacial deposits at Birch Creek, northeast interior Alaska, *Quaternary Research*, **35**: 41-52.
- Edwards, M.E., Bartlein, P.J., Hostetler, S.W., Schaffer, S.L., Anderson, P.M and Brubaker, L.B., 2006: Early-Holocene climate change in Beringia: mediation of global-warming impacts by regional-scale boundary-conditions changes, EOS Transactions, AGU, **87**: Fall Meeting Supplement, Abstract.
- Grosse, G., Schirmer, L. and Malthus, T.J. 2006: Application of Landsat-7 satellite data and a DEM for the quantification of thermokarst-affected terrain types in the periglacial Lena-Anabar coastal lowland, *Polar Research*, **25**: 51-67.
- Hinkel, K.M. Eisner, W.R., Bockheim, J.G., Nelson, F.E., Peterson, K.M. and Dai, X.Y., 2003: Spatial extent, age, and carbon stocks in drained thaw lake basins on the Barrow Peninsula, Alaska, *Arctic Antarctic and Alpine Research*, **35**: 291-300.
- Ilyashuk, B., Andreev, A., Bobrov, A., Tumskey, V. and Ilyashuk, E., 2006: Interglacial History of a Palaeo-lake and Regional Environment: A Multi-proxy Study of a Permafrost Deposit from Bol'shoy Lyakhovsky Island, Arctic Siberia, *Journal of Paleolimnology*, **35**: 855-872.
- Johns, T.C., et al., 2003: Anthropogenic climate change for 1860 to 2100 simulated with the HadCM3 model under updated emissions scenarios, *Climate Dynamics*, **20**: 583-612.
- Jones, C., Gregory, J., Thorpe, R., Cox, P., Murphy, J., Sexton, D. and Valdes, P., 2005: Systematic optimisation and climate simulation of FAMOUS, a fast version of HadCM3, *Climate Dynamics*, **25**: 189-204.
- Plug, L.J. and West, J.J., in press: Thaw lake expansion in a two-dimensional coupled model of heat transfer, thaw subsidence and mass movement, *Journal of Geophysical Research*, doi:10.1029/2006JF000740.
- Romanovskii, N.N., Hubberten, H.-W., Gavrillov, A.V., Tumskey, V.E., Topenko, G.S., Grigoriev, M.N. and Siegert, C., 2000: Thermokarst and Land-Ocean Interactions, Laptev Sea Region, Russia, *Permafrost and Periglacial Processes*, **11**: 137-152.
- Schwamborn, G., Andreev, A.A., Rachold, V., Hubberten, H.-W., Grigoriev, M.N., Tumskey, V., Pavlova, E.Y., Dorozhkina, M.V. and Rachold, V., 2000: Evolution of Lake Nikolay, Arga Island, western Lena River delta, during late Pleistocene and Holocene time, *Polarforschung*, **70**: 69-82.

- Walter, K.M., Zimov, S.A., Chanton, J.P., Verbyla, D. and Chapin F.S., 2006: Methane bubbling from Siberian thaw lakes as a positive feedback to climate warming., *Nature*, 443,: 71-75.
- Walter, K.M., Smith, L.C. and Chapin, F.S. III, 2007a: Methane bubbling from northern lakes: present and future contributions to the global methane budget, *Philosophical Transactions of the Royal Society London, Series A*, **365**: 1657-76.
- Walter, K.M. Edwards, M. E. Grosse, G. Zimov, S. A. Chapin F. S. III. 2007b, Thermokarst lakes as a source of atmospheric CH<sub>4</sub> during the last deglaciation, *Science* 318, 633-636.
- Walter, K. M., Duguay, C., Jeffries, M., Engram, M. and Chapin, F.S. III, 2008: Potential use of synthetic aperture radar (SAR) for estimating methane ebullition from arctic lakes, *Journal of the American Water Research Association*, April 2008 issue.
- West, J.J. and Plug, L.J., 2008: Time-dependent morphology of thaw lakes and taliks in deep and shallow ground ice, *Journal of Geophysical Research*, **113**: F01009, doi:10.1029/2006JF000696.
- Zimov, S.A., Voropaev, Y.V., Semiletov, I.P., Davidov, S.P., Prosiannikov, S.F., Chapin, F.S.III, Chapin, M.C., Trumbore, S. and Tyler, S., 1997: North Siberian lakes: A methane source- fueled by Pleistocene Carbon, *Science*, **277**: 800-802.

**K. Gajewski, M. Peros, S. Finkelstein and M. Fortin**

- Alley, R.B., 2004: GISP2 Ice Core Temperature and Accumulation Data, IGBP PAGES/World Data Center for Paleoclimatology Data Contribution #2004-013. NOAA/NGDC Paleoclimatology Program, Boulder CO, USA.
- Atkinson, D. and Gajewski, K., 2002: High-resolution estimation of surface air temperature in the Canadian High Arctic, *Journal of Climate*, **15**: 3601-3614
- Atkinson, D., Alt, B. and Gajewski, K., 2000: A new database of high Arctic climate data from the Polar Continental Shelf Project archives, *Bulletin of the American Meteorological Society*, **81**: 2621-2629.
- Barley, E., Walker, I., Kurek, J., Cwynar, L., Mathewes, R., Gajewski, K. and Finney, B., 2006: A northwest North American training set: distribution of freshwater midges in relation to air temperature and lake depth, *Journal of Paleolimnology*, **36**: 295-314.
- Bouchard, G., Gajewski, K. and Hamilton, P., 2004: Biogeography of diatoms from the Canadian Arctic Archipelago, *Journal of Biogeography*, **31**: 1955-1973.
- Bunbury, J., and Gajewski, K., Submitted: Biogeography of freshwater ostracods in the Canadian Arctic, *Arctic*.
- Finkelstein, S. and Gajewski, K., 2007: A paleolimnological record of diatom community dynamics and late Holocene climatic changes from Prescott Island, Nunavut, central Canadian Arctic, *The Holocene*, **17**: 803-812.
- Finkelstein, S.A. and Gajewski, K., 2008: Responses of Fragilarioid-dominated diatom assemblages in a small Arctic lake to Holocene climatic changes, Russell Island, Nunavut, Canada, *Journal of Paleolimnology*, DOI:10.1007/s10933-008-9215-5
- Fisher, D.A., Koerner, R.M. and Reeh, N., 1995: Holocene Climatic Records from Agassiz Ice Cap, Ellesmere Island, NWT, Canada, *The Holocene*, **5**: 19-24.
- Fortin, M.-C. and Gajewski, K., Submitted a: Assessing sediment production indices in Arctic lakes, *Polar Biology*.
- Fortin, M.-C. and Gajewski, K., Submitted b: Holocene climate change and its effect on lake ecosystem production in northern Victoria Island, Canadian Arctic, *Journal of Paleolimnology*.
- Gajewski, K., 1995: Modern and Holocene pollen accumulation in some small arctic lakes from Somerset Island, N.W.T., Canada, *Quaternary Research*, **44**: 228-236.



- Gajewski, K., 2002: Modern pollen assemblages in lake sediments from the Canadian Arctic, *Arctic, Antarctic and Alpine Research*, **34**: 26-32.
- Gajewski, K., 2006: Is Arctic palynology a “blunt instrument”?, *Géographie physique et Quaternaire*, **60**: 95-102.
- Gajewski, K., 2008: Comment on “Abrupt environmental change in Canada’s northernmost lake inferred from diatom and fossil pigment stratigraphy” by Dermott Antoniadou et al., *Geophysical Research Letters*, **35**: L08701, doi:10.1029/2007GL032316.
- Gajewski, K. and Atkinson, D., 2003: Climate change in the Canadian Arctic, *Environmental Reviews*, **11**: 69-102.
- Gajewski, K. and Frappier, M., 2001: Postglacial environmental history from Prince of Wales Island, Nunavut, Canada, *Boreas*, **30**: 485-489.
- Gajewski, K., Bouchard, G., Wilson, S., Kurek J. and Cwynar, L., 2005: Distribution of Chironomidae (Insecta: Diptera) head capsules in recent sediments of Canadian Arctic lakes, *Hydrobiologia*, **549**: 131-143.
- Gajewski, K., Garneau, M. and Bourgeois, J.C., 1995: Paleoenvironments of the Canadian High Arctic derived from pollen and plant macrofossils: problems and potentials, *Quaternary Science Reviews*, **14**: 609-629
- Gajewski, K., Mott, R.J., Ritchie, J.C. and Hadden, K., 2000: Holocene vegetation history of Banks Island, Northwest Territories, Canada, *Canadian Journal of Botany*, **78**: 430-436.
- Kaufman, D., et al. (PARCS working group), 2004: Holocene thermal maximum in the western Arctic (0° to 180°W), *Quaternary Science Reviews*, **23**: 529-560.
- Kerwin, M.W., 2000: *Quantifying and modeling Holocene climate variability based on modern and fossil pollen records from the eastern Canadian Arctic and Subarctic*, Ph.D. Dissertation, Department of Geology, University of Colorado, 307pp.
- LeBlanc, M., Gajewski, K. and Hamilton, P., 2004: A diatom-based Holocene paleoenvironmental record from a lake on the Boothia Peninsula, Nunavut, Canada, *The Holocene*, **14**: 423-431.
- Overpeck, J., Webb III, T. and Prentice, I.C., 1985: Quantitative interpretation of fossil pollen spectra: dissimilarity coefficients and the method of modern analogues, *Quaternary Research*, **23**: 87-108.
- Paull, T. and Gajewski, K., Submitted: Climate and environmental change during the Holocene at Lake RS29, Somerset Island, Nunavut, Canada, *The Holocene*.
- Paull, T., Hamilton, P., Gajewski, K. and LeBlanc, M., 2008: Numerical analysis of small Arctic diatoms (Bacillariophyceae) representing the *Staurosira* and *Staurosirella* species complexes, *Phycologia*, **47**: 213-224.
- Peros, M. and Gajewski, K., 2008a: Holocene climate and vegetation change on Victoria Island, western Canadian Arctic, *Quaternary Science Reviews*, **27**: 235-249.
- Peros, M. and Gajewski, K., 2008b: Pollen-based reconstructions of late Holocene climate from the central and western Canadian Arctic, *Journal of Paleolimnology*, in press.
- Peros, M., Gajewski, K., Paull, T., Ravindra, R. and Podrifske, B., Submitted: Multi-proxy record of postglacial environmental change of south-central Melville Island, Northwest Territories, Canada, *Quaternary Research*.
- Podrifske, B. and Gajewski, K., 2007: Diatom community response to multiple scales of Holocene climate variability in a small lake on Victoria Island, NWT, Canada, *Quaternary Science Reviews*, **26**: 3179-3196.
- Sawada, M., Viau, A.E., Vettoretti, G., Peltier, W.R. and Gajewski, K., 2004: Paleoclimate model-data comparison for 6ka, *Quaternary Science Reviews*, **23**: 225-244.
- Smith, I.R., 2002: Diatom-based Holocene paleoenvironmental records from continental site of Ellesmere Island, high Arctic Canada. *Journal of Paleolimnology*, **27**: 9-28.

- Ritchie, J.C., Hadden, K. and Gajewski, K., 1987: Modern pollen assemblages from the high arctic of western Canada, *Canadian Journal of Botany*, **68**: 1605-1613.
- Viau, A., Gajewski, K., Sawada, M. and Fines, P., 2006: Mean-continental July temperature variability in North America during the past 14,000 years, *Journal of Geophysical Research – Atmospheres* **111**: D09102, doi:10.1029/2005JD006031.
- Whitmore, J., et al., 2005: A North American Modern Pollen Database for Multi-scale Paleocological and Paleoclimatic Applications, *Quaternary Science Reviews*, **24**: 1828-1848 .
- Zabenskie, S. and Gajewski, K., 2007: Post-glacial climatic change on Boothia Peninsula, Nunavut, Canada, *Quaternary Research*, **68**: 261-270.
- Zabenskie, S., Peros, M. and Gajewski, K., 2006: The use of heavy-liquid in the separation of pollen from Arctic lake sediments, *Canadian Association of Palynologists Newsletter*, **29**: 5-7.

### **S. Holzkaemper and P. Kuhry**

- Francey, R.J., Allison, C.E., Etheridge, D.M., Trudinger, C.M., Enting, I.G., Leuenberger, M., Langenfelds, R.L., Michel, E. and Steele, L.P., 1999: A 1000-year high precision record of  $\delta^{13}\text{C}$  in atmospheric  $\text{CO}_2$ , *Tellus*, **51B**: 170-193.
- Holmes, R.L., Adams, R.K. and Fritts, H.C., 1986: Tree-ring chronologies of western North America: California, eastern Oregon and northern Great Basin, with procedures used in the chronology development work, including user manuals for computer programs COFECHA and ARSTAN, Laboratory of Tree-Ring Research, University of Arizona, Tucson Chronology Series VI, 50-65.
- Holzkaemper, S., Kuhry, P., Gunnarson, B., Kultti, S., Sonninen, E., 2008: Stable isotopes in tree rings as proxies for winter precipitation changes in the Russian Arctic over the past 150 years, *Geochronometria*, **32**:(accepted, pending minor revisions).
- Kohn, M.J. and Welker, J.M., 2005: On the temperature correlation of  $\delta^{18}\text{O}$  in modern precipitation, *Earth and Planetary Science Letters*, **231**: 87-96.
- McCarroll, D. and Loader, N.J., 2004: Stable isotopes in tree rings, *Quaternary Science Reviews*, **23**: 771-801.**
- Vaganov, E.A., Hughes, M.K., Kirilyanov, A.V., Schweingruber, F.H. and Silkin, P.P., 1999: Influence of snowfall and melt timing on tree growth in subarctic Eurasia, *Nature*, **400**: 149-151.

### **J. Brigham-Grette, M. Melles, P. Minyuk, C. Koeberl and Science Party**

- Asikainen, C.A., Francus, P. and Brigham-Grette, J., 2006: Sediment fabric, clay mineralogy, and grain-size as indicators of climate change since 65 ka at El'gygytgyn Crater Lake, Northeast Siberia, *Journal of Paleolimnology*, **37**: 105-122.
- Berger, A. and Loutre, M.F., 1991: Insolation values for the climate of the last 10 million of years, *Quaternary Science Reviews*, **10**: 297-317.
- Brigham-Grette, J. and Carter, L.D., 1992: Pliocene marine transgressions of northern Alaska: Circumarctic Correlations and Paleoclimate, *Arctic*, **43**(4): 74-89.
- Brigham-Grette, J., Melles, M., Minyuk, P. and Scientific Party, 2007: Overview and Significance of a 250 ka Paleoclimate Record from El'gygytgyn Crater Lake, NE Russia, *Journal of Paleolimnology*, **37**: 1-16.
- Cherapanov, M.V, Snyder, J.A. and Brigham-Grette, J., 2007: Diatom Stratigraphy of the last 250 ka at Lake El'gygytgyn, northeast Siberia, *Journal of Paleolimnology*, **37**: 155-162.
- Dowsett, H.J., 2007: The PRISM paleoclimate reconstruction and Pliocene sea-surface temperature. In: Williams, M., et al., (Eds.) *Deep-Time Perspectives on Climate Change: Marrying the Signal from Computer Models and Biological Proxies: The*

- Micropaleontological Society, Special Publications*, The Geological Society, London, 459-480.
- Forman S.L., Pierson J., Gomez J., Brigham-Grette J., Nowaczyk N.R. and Melles, M., 2007: Luminescence geochronology for sediments from Lake El'gygytgyn, northwest Siberia, Russia: Constraining the timing of paleoenvironmental events for the past 200 ka, *Journal of Paleolimnology*, **37**: 77-88.
- Gebhardt, A.C., Niessen, F. and Kopsch, C., 2006: Central ring structure identified in one of the world's best-preserved impact craters, *Geology*, **34**: 145-148.
- Glushkova, O.Yu. and Smirnov, V.N., 2007: Pliocene to Holocene geomorphic evolution and paleogeography of the El'gygytgyn Lake region, NE Russia, *Journal of Paleolimnology*, **37**, 37-47.
- Haug, G.H., et al., 2005: North Pacific seasonality and the glaciation of North America 2.7 million years ago, *Nature*, doi:10.1038, 1-5.
- Juschus O., Preusser F., Melles M. and Radtke U., 2007: Applying SAR-IRSL methodology for dating fine-grained sediments from Lake El'gygytgyn, north-eastern Siberia, *Quaternary Geochronology*, **2**: 137-142.
- Layer, P.W., 2000. Argon-40/argon-39 age of the El'gygytgyn impact event, Chukotka, Russia, *Meteoritics and Planetary Science*, **35**: 591-599.
- Lisiecki, L.E. and Raymo, M.E., 2005: A Pliocene-Pleistocene stack of 57 globally distributed benthic  $\delta^{18}\text{O}$  records, *Paleoceanography*, **20**: PA1003, doi:10.1029/2004PA001071
- Lozhkin, A.V., Anderson, P.M., Matrosova, T.V. and Minyuk, P.S., 2007: The pollen record from El'gygytgyn Lake: implications for vegetation and climate histories of northern Chukotka since the late middle Pleistocene, *Journal of Paleolimnology*, **37**: 135-153.
- Melles, M., Brigham-Grette, J., Glushkova, O.Yu., Minyuk, P.S., Nowaczyk, N.R. and Hubberten, H.W., 2007: Sedimentary geochemistry of a pilot core from Lake El'gygytgyn – a sensitive record of climate variability in the East Siberian Arctic during the past three climate cycles, *Journal of Paleolimnology*, **37**: 89-104.
- Miller, G.H. and Brigham-Grette, J. (lead authors) and 17 contributing authors, in press: Temperature and Precipitation history of the Arctic, Chapter 4, IN, Past Climate Variability and change in the Arctic and High Latitudes, CCSP Synthesis and Assessment Product 1.2, US Govt Climate Change Program. 201 pgs.
- Minyuk, P.S., Brigham-Grette, J., Melles, M.M., Borkhodov, V.Yu., Glushkova, O.Yu., 2007: Inorganic geochemistry of El'gygytgyn Lake sediments (northeastern Russia) as an indicator of paleoclimatic change for the last 250 kyr, *Journal of Paleolimnology*, **37**: 123-133
- Niessen, F., Gebhardt, A.C. and Kopsch, C., 2007: Seismic investigation of the El'gygytgyn impact crater lake (Central Chukotka, NE Siberia): preliminary results, *Journal of Paleolimnology*, **37**: 49-63.
- Nolan, M. and Brigham-Grette, J., 2007: Basic Hydrology, Limnology, and meteorology of modern Lake El'gygytgyn, Siberia, *Journal of Paleolimnology*, **37**: 17-35.
- Nolan, M., Liston, G., Prokein, P., Huntzinger, R., Brigham-Grette, J. and Sharpton, V., 2003: Analysis of Lake Ice Dynamics and Morphology on Lake El'gygytgyn, Siberia, using SAR and Landsat, *Journal of Geophysical Research*, **108**(D2): 8162-8174.
- Nowaczyk et al., 2002: Magnetostratigraphic results from impact crater Lake El'gygytgyn, northeastern Siberia: A 300 kyr long high resolution terrestrial paleoclimatic record from the Arctic, *Geophysical Journal International*, **150**: 109-126.
- Nowaczyk N.R., Melles, M. and Minyuk, P., 2007: A revised age model for core PG1351 from Lake El'gygytgyn, Chukotka, based on magnetic susceptibility variations correlated to northern hemisphere insolation variations, *Journal of Paleolimnology*, **37**: 65-76.

Salzmann, U., Haywood, A.M., Lunt, D.J., Valdes, P.J. and Hill, D.J., 2008: A new global biome 4004 reconstruction and data-model comparison for the Middle Pliocene, *Global Ecology and Biogeography*, **17**: 432-447.

### **D.S. Kaufman**

Axford, Y., Gersdóttir, A., Miller, G.H. and Langdon, P., in press: Climate of the Little Ice Age and the past 2000 years in northeast Iceland inferred from chironomids and other lake sediment proxies, *Journal of Paleolimnology*, **41**(1): January 2009.

Bird, B.W., Abbott, M.B., Finney, B.P. and Kutcho, B., in press: A 2000 year varve-based climate record from the central Brooks Range, Alaska, *Journal of Paleolimnology*, **41**(1): January 2009.

Bjune, A.E., Seppä, H. and Birks, H.J.B., in press: Quantitative summer-temperature reconstructions for the last 2000 years based on pollen-stratigraphical data from northern Fennoscandia, *Journal of Paleolimnology*, **41**(1): January 2009.

Chipman, M.L., Clarke, G.H., Clegg, B.F., Gregory-Eaves, I. and Hu, F.S., in press: A 2000 year record of climatic change at Ongoke Lake, southwest Alaska, *Journal of Paleolimnology*, **41**(1): January 2009.

Cook, T., Bradley, R.S., Stoner, J.S. and Francus, P., in press: Five thousand years of sediment transfer in a High Arctic watershed recorded in annually laminated sediments from Lower Murray Lake, Ellesmere Island, Nunavut, Canada, *Journal of Paleolimnology*, **41**(1): January 2009.

Geirsdóttir, A., Miller, G.H., Thordarson, T. and Ólafsdóttir, K.B., in press: A 2000 year record of climate variations reconstructed from Haukadalsvatn, west Iceland, *Journal of Paleolimnology*, **41**(1): January 2009.

Loso, M.G., in press: Summer temperatures during the Medieval Warm Period and Little Ice Age inferred from varved proglacial lake sediments in southern Alaska, *Journal of Paleolimnology*, **41**(1): January 2009.

MacDonald, G.M., Porinchu, D.F., Kostintine, V.K., Rolland, N. and Kaufman, D.S., in press: Paleolimnological evidence of the response of the central Canadian treeline zone to impacts of radiative forcing and hemispheric patterns of temperature change over the past 2000 years, *Journal of Paleolimnology*, **41**(1): January 2009.

McKay, N.P. and Kaufman, D.S., in press: Holocene climate and glacier variability at Hallet and Greyling Lakes, Chugach Range, south-central Alaska, *Journal of Paleolimnology*, **41**(1): January 2009.

Peros, M.C. and Gajewski, K., in press: Pollen-based reconstructions of late Holocene climate from the central and western Canadian Arctic, *Journal of Paleolimnology*, **41**(1): January 2009.

Porinchu, D.F., MacDonald, G.M. and Rolland, N., in press: A 2000 year midge-based paleotemperature reconstruction from the Canadian Arctic Archipelago, *Journal of Paleolimnology*, **41**(1): January 2009.

Schiff, C.J., Kaufman, D.S., Wolfe, A.P., Dodd, J. and Sharp, Z., in press: Late Holocene storm-trajectory changes inferred from the oxygen isotope composition of lake diatoms, south Alaska, *Journal of Paleolimnology*, **41**(1): January 2009.

Thomas, E.K. and Briner, J.P., in press: Climate of the past millennium inferred from varved proglacial lake sediments, northeast Baffin Island, Arctic Canada, *Journal of Paleolimnology*, **41**(1): January 2009.

Tomkins, J.D., Lamoureux, S.F., Antoniades, D. and Vincent, W.F., in press: Sedimentary pellets as an ice cover proxy in a High Arctic ice-covered lake, *Journal of Paleolimnology*, **41**(1): January 2009.

**L. Newman, P. Convey, J.A.E. Gibson and K. Linse**

- Allcock, A.L. and Pierrney, S.B., 2002: Evolutionary relationships of Southern Ocean Octipodidae (Cephalopoda, Octopoda) and a new diagnosis of *Pareledone*, *Marine Biology*, **140**: 129-135.
- Allegrucci, G., Carchini, G., Todisco, V., Convey, P. and Sbordoni, V., 2006: A molecular phylogeny of Antarctic chironomidae and its implications for biogeographical history, *Polar Biology*, **29**: 320-326.
- Bayly, I.A.E., Gibson, J.A.E., Wagner, B. and Swadling, K.M., 2003: Taxonomy, ecology and zoogeography of two East Antarctic freshwater calanoid copepod species: *Boeckella poppei* and *Gladioferens antarcticus*, *Antarctic Science*, **15**: 439-448.
- Brökeland, W. and Raupach, M.J., 2008: A species complex within the isopod genus *Haploniscus* (Crustacea: Malacostraca: Peracarida) from the Southern Ocean deep sea: a morphological and molecular approach, *Zoological Journal of the Linnean Society*, **152**(4): 655-706.
- Chown, S.L. and Convey, P., 2007: Spatial and temporal variability across life's hierarchies in the terrestrial Antarctic, *Philosophical Transactions of the Royal Society B*, **362**: 2307-2331.
- Christner, B.C., Kvitko, B.H. and Reeve, J.N., 2003: Molecular identification of bacteria and eukarya inhabiting an Antarctic cryoconite hole, *Extremophiles*, **7**:177-183.
- Clarke, A. and Crame, J.A., 1992: *The origin of the Southern Ocean marine fauna*, *Geological Society London, Special Publications*, **47**: 253-268.
- Convey, P. and Stevens, M.I., 2007: Antarctic biodiversity, *Science*, **317**: 1877-1878.
- Convey, P., Gibson, J.A.E., Hellenbrand, C., Hodgson, D.A., Pugh, P.J.A., Smellie, J.L. and Stevens, M.I., 2008: Antarctic terrestrial life – challenging the history of the frozen continent? *Biological Reviews*, **83**: 103-117.
- Cromer, L., Gibson, J.A.E., Swadling, K.M. and Ritz, D.A., 2005: Faunal microfossils: indicators of community development in a saline Antarctic lake, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **221**: 83-97.
- Cromer, L., Gibson, J.A.E., Swadling, K.M. and Hodgson, D., 2006: Evidence for a lacustrine faunal refuge in the Larsemann Hills, East Antarctica, during the Last Glacial Maximum, *Journal of Biogeography*, **33**: 1314-1323.
- Dayton, P.K. and Oliver, J.S., 1977: Antarctic soft-bottom benthos in oligotrophic and eutrophic environments, *Science*, **197**: 55-58
- DeConto, R.M. and Pollard, D., 2003: Rapid Cenozoic glaciation of Antarctica induced by declining atmospheric CO<sub>2</sub>, *Nature*, **421**: 245-249.
- Gibson, J.A.E. and Zale, R., 2006: Holocene development of the fauna of Lake Boeckella, northern Antarctic Peninsula, *Holocene*, **16**: 625-634.
- Gibson, J.A.E. and Bayly, I.A.E., 2007: New insights into the origins of crustaceans of Antarctic lakes, *Antarctic Science*, **19**: 157-164.
- Held, C., 2000: Phylogeny and Biogeography of Serolid Isopods (Crustacea, Isopoda, Serolidae) and the Use of Ribosomal Expansion Segments in Molecular Systematics, *Molecular Phylogenetics and Evolution*, **15**(2): 165–178.
- Huybrechts, P., 2002: Sea-level changes at the LGM from ice-dynamic reconstructions of the Greenland and Antarctic ice sheets during the glacial cycles, *Quaternary Science Reviews*, **22**: 203–231.
- Jansen van Vuuren, B., Mortimer, E., Stevens, M.I., Marshall, D.J., Convey, P., Daniels, S.R. and Chown, S.L., 2007: Molecular data can help to unveil biogeographic complexities since the Miocene: lessons from ameronothroid mites and isotomid springtails, In: A.K. Cooper and C.R. Raymond et al. (Eds), *Online Proceedings of the 10th International Symposium on Antarctic Earth Sciences*, USGS Open-File Report 2007-1047, Extended Abstract 008, 1-4.

- Lear, C.H., Elderfield, H. and Wilson, P.A., 2000: Cenozoic deep-sea temperatures and global ice volumes from Mg/Ca in benthic foraminiferal calcite, *Science*, **287**: 269-272.
- Lewis, A.R., et al., 2008: Mid-Miocene cooling and the extinction of tundra in continental Antarctica, *Proceedings of the National Academy of Sciences*, **105**: 10676-10680.
- Lörz, A.N. and Held, C., 2004: A preliminary molecular and morphological phylogeny of the Antarctic Epimeriidae and Iphimediidae (Crustacea, Amphipoda), *Molecular Phylogenetics and Evolution*, **31**:4–15.
- Maslen, N.R. and Convey, P., 2006: Nematode diversity and distribution in the southern maritime Antarctic - clues to history? *Soil Biology and Biochemistry*, **38**(10): 3141-3151.
- Miller, K.G. et al., 2005: The Phanerozoic record of global sea-level change, *Science*, **310**: 1293-1298.
- Page, T. and Linse, K., 2002: More evidence of speciation and dispersal across the Antarctic Polar Front through molecular systematics of Southern Ocean *Limatula* (Bivalvia: Limidae), *Polar Biology*, **25**: 818–826.
- Raupach, M.J., Malyutina, M., Brandt, A. and Wägele, J.-W., 2007: Molecular data reveal a highly diverse species flock within the munnopsid deep-sea isopod *Betamorpha fusiformis* (Barnard, 1920), *Deep-Sea Research II*, **54**: 1820-1830.
- Stevens, M.I., Greenslade, P., Hogg, I.D. and Sunnucks, P., 2006: Southern Hemisphere springtails: Could any have survived glaciation of Antarctica, *Molecular Biology and Evolution*, **23**: 874-882.
- Thatje, S., Hillenbrand, C.-D. and Larter, R.D., 2005: On the origin of Antarctic marine benthic community structure, *Trends in Ecology and Evolution*, **20**: 534-540.
- Vincent, W.F., Gibson, J.A.E., Pienitz, R., Villeneuve, V., Broady, P.A., Hamilton, P.B. and Howard-Williams, C., 2000: Ice shelf microbial ecosystems in the high Arctic and implications for life on Snowball Earth, *Naturwissenschaften*, **87**: 137-141.
- Wilson, N.G., Hunter, R.L., Lockhart, S.J. and Halanych, K.M., 2007: Multiple lineages and absence of panmixia in the “circumpolar” crinoid *Promachocrinus kerguelensis* from the Atlantic sector of Antarctic, *Marine Biology*, **152**: 895-904.
- Zachos, J., Pagani, M., Sloan, L., Thomas, E. and Billups, K., 2001: Trends, rhythms, and aberrations in global climate 65 Ma to present, *Science*, **292**: 686-693.

### **R. Powell, T. Naish, R. Levy and the MIS Science Team**

- Harwood, D., McMinn A. and Quilty P., 2000: Diatom biostratigraphy and age of the Pliocene Sorsdal Formation, Vestfold Hills, East Antarctica, *Antarctic Science*, **12**: 443–462.
- Lisiecki, L.E. and Raymo, M.E., 2005: A Pliocene-Pleistocene stack of 57 globally distributed benthic  $\delta^{18}\text{O}$  records, *Paleoceanography*, **20**: PA1003; doi:10.1029/2004PA001071.
- McKay, R., Barrett, P., Harper, M. and Hannah, M., 2008: Atmospheric transport and concentration of diatoms in surficial and glacial sediments of the Allan Hills, Transantarctic Mountains, *Palaeogeography, Palaeoclimatology, Palaeoecology*, **260**:168-183
- Naish, T.R., et al. (Eds), 2007: Studies from the ANDRILL, McMurdo Ice Shelf Project, Antarctica - Initial Science Report on AND-1B, *Terra Antarctica*, **14**: 109-328.
- Naish, T.R., et al., 2008: Late Cenozoic climate history of the Ross Embayment from the AND-1B drill hole: Culmination of three decades of Antarctic margin drilling. In Cooper, A.K. et al. (Eds), *Antarctica: A Keystone in a Changing World. Proceedings of the 10th International Symposium on Antarctic Earth Sciences*: 150pp. Washington, DC, *The National Academies Press*: 71-82.

- Raymo, M.E. and Huybers, P. 2008. Unlocking the mysteries of the ice ages, *Nature*, 415: 284-285.
- Sugden, D.E., Marchant, D.R. and Denton, G.H. (Eds.), 1993: The case for the stable East Antarctic Ice Sheet: The background, *Geografiska Annaler Series A, Physical Geography*, **75**: 151–155.
- Webb, P.N., Harwood, D.M., McKelvey, B.C., Mercer, J.H. and Stott, L.D., 1984: Cenozoic marine sedimentation and ice-volume variation on the East Antarctic craton, *Geology*, **12**: 287–291.

**L.D. Pena and I. Cacho**

- Ahn, J., Wahlen, M., Deck, B.L., Brook, E.J. Mayewski, P.A., Taylor, K.C. and White, J.W.C., 2004: A record of atmospheric CO<sub>2</sub> during the last 40,000 years from the Siple Dome, Antarctica ice core, *Journal of Geophysical Research*, **109**.
- Beaufort, L., de Garidel-Thoron, T., Mix, A. and Pisias, N.G., 2001: ENSO-Like Forcing on Oceanic Primary Production During the Late Pleistocene, *Science*, **293**: 2440-2444.
- Bostock, H.C., Opdyke, N.D. Gagan, M.K. and Fifield, L.K., 2004: Carbon isotope evidence for changes in Antarctic Intermediate Water circulation and ocean ventilation in the southwest Pacific during the last deglaciation, *Paleoceanography*, **19**: PA4013, doi:4010.1029/2004PA001047.
- Cane, M.A., 1998: A Role for the Tropical Pacific, *Science*, **282**: 59-61.
- Cane, M.A., 2004: The evolution of El Niño, past and future, *Earth and Planetary Science Letters*, **164**: 1-10.
- Clement, A.C., Seager, R. and Cane, M.A., 1999: Orbital controls on the El Niño/Southern Oscillation and the tropical climate, *Paleoceanography*, **14**: 441-456.
- Clement, A.C., Seager, R. and Cane, M.A., 2000: Suppression of El Niño during the mid-Holocene by changes in the Earth's orbit, *Paleoceanography*, **15**: 731-737.
- Chiang, J.C.H., and Lintner, B.R., 2005: Mechanisms of Remote Tropical Surface Warming during El Niño, *Journal of Climate*, **18**: 4130-4149.
- Federov, A.V., and Philander, S.G., 2000: Is El Nino Changing?, *Science*, **288**: 1997-2002.
- Jouzel, J., *et al.*, 2007: Orbital and Millennial Antarctic Climate Variability over the Past 800,000 Years, *Science*, **317**: 793-796.
- Koutavas, A., Lynch-Stieglitz, J., Marchitto, T.M. and Sachs, J.P., 2002: El Niño-Like Pattern in Ice Age Tropical Pacific Sea Surface Temperature, *Science*, **297**: 226-230.
- Koutavas, A., DeMenocal, P. and Lynch-Stieglitz, J., 2006: Holocene trends in tropical Pacific sea surface temperatures and the El Niño-Southern Oscillation, *PAGES news*, **14**: 22-23.
- Lea, D.W., Pak, D.K., and Spero, H.J., 2000: Climate Impact of Late Quaternary Equatorial Pacific Sea Surface Temperature Variations, *Science*, **289**: 1719-1724.
- Lee, S.-Y., and Poulsen, C.J., 2005: Tropical Pacific climate response to obliquity forcing in the Pleistocene, *Paleoceanography*, **20**: PA4010, doi:4010.1029/2005PA001161.
- Monnin, E., Indermühle, A., Dällenbach, A., Flückiger, J., Stauffer, B., Stocker, T.F., Raynaud, D. and Barnola, J.M., 2001: Atmospheric CO<sub>2</sub> concentrations over last glacial termination, *Science*, **291**: 112-114.
- Ninnemann, U.S., and Charles, C.D., 1997: Regional differences in Quaternary Subantarctic nutrient cycling: Link to intermediate and deep water ventilation, *Paleoceanography*, **12**: 560-567.
- Pena, L.D., Cacho, I., Ferretti, P. and Hall, M.A., 2008: El Niño–Southern Oscillation–like variability during glacial terminations and interlatitudinal teleconnections, *Paleoceanography*, **23**: PA3101, doi:10.129/2008PA001620.
- Petit, J.R., *et al.*, 1997: Four climate cycles in Vostok ice cores, *Nature*, **387**: 359-360.

- Rojas, M., Moreno, P., Kageyama, M., Crucifix, M., Hewitt, C., Abe-Ouchi, A., Ohgaito, R., Brady, E.C. and Hope, P., 2008: The Southern Westerlies during the last glacial maximum in PMIP2 simulations, *Climate Dynamics*, doi 10.1007/s00382-008-0421-7.
- Shackleton, N.J., Hall, M.A., Line, J. and Shuxi, C., 1983: Carbon isotope data in core V19-30 confirm reduced carbon dioxide concentration in the ice age atmosphere, *Nature*, **306**: 319-322.
- Spero, H.J. and Lea, D.W., 2002: The Cause of Carbon Isotope Minimum Events on Glacial Terminations, *Science*, **296**: 522-525.
- Stott, L., Poulsen, C., Lund, S. and Thunell, R., 2002: Super ENSO and Global Climate Oscillations at Millennial Time Scales, *Science*, **297**: 222-226.
- Toggweiler, J.R., 1999: Variations of atmospheric CO<sub>2</sub> by ventilation of the ocean's deepest water, *Paleoceanography*, **14**: 571-588.
- Toggweiler, J.R., Russell, J.L. and Carson, S.R. (2006): Midlatitude westerlies, atmospheric CO<sub>2</sub>, and climate change during the ice ages, *Paleoceanography*, **21**: PA2005, doi:2010.1029/2005PA001154.
- Wolff, E.W., *et al.*, 2006: Southern Ocean sea-ice extent, productivity and iron flux over the past eight glacial cycles, *Nature*, **440**: 491-496.
- Yuan, X., 2004: ENSO-related impacts on Antarctic sea ice: a synthesis of phenomenon and mechanisms, *Antarctic Science*, **16**: 415-425.
- Zebiak, S.E., and Cane, M.A., 1987: A Model El Niño-Southern Oscillation, *Monthly Weather Review*, **115**, 2262-2278.

**G. Vivaldo, C. Taricco, S. Alessio and M. Ghil**

- Arnò, V., Principe, C., Rosi, M., Santacroce, R., Sbrana, A. and Sheridan, M.F., 1987: Eruptive History, In: Santacroce R. (Ed), *Somma-Vesuvius, Quaderni de La Ricerca Scientifica CNR*, Roma, Italy, **114**(8): 53-103.
- Barmin, A., Melnik, O. and Sparks, R.S.J., 2002: Periodic behavior in lava dome eruptions, *Earth and Planetary Science Letters*, **199**: 173-184.
- Bonino, G., Cini Castagnoli, G., Callegari, E. and Zhu, G.M., 1993: Radiometric and tephroanalysis dating of recent Ionian sea cores, *Nuovo Cimento C*, **16**: 155-161.
- Cini Castagnoli, G., Bonino, G., Caprioglio, F., Provenzale, A., Serio, M. and Zhu, G.M., 1990: The carbonate profile of two recent Ionian sea cores: evidence that the sedimentation rate is constant over the last millennia, *Geophysical Research Letters*, **17**: 1937-1940.
- Cini Castagnoli, G., Bonino, G., Provenzale, A., Serio, M. and Callegari, E., 1992: The CaCO<sub>3</sub> profiles of deep and shallow Mediterranean sea cores as indicators of past solar-terrestrial relationship, *Nuovo Cimento C*, **15**: 547-563.
- Ghil, M., *et al.*, 2002: Advanced spectral methods for climatic time series, *Reviews of Geophysics*, **40**: 3.1–3.41.
- Ghil, M. and Taricco, C., 1997: Advanced spectral analysis methods, In: Cini Castagnoli, G. and Provenzale, A., (Eds) *Past and Present Variability of the Solar-terrestrial System: Measurement, Data Analysis and Theoretical Models*, IOS Press, Amsterdam, The Netherlands: 137-159.
- Palumbo, A., 1997: Long-term forecasting of large volcanic eruptions, *Journal of Volcanology and Geothermal Research*, **78**: 179-183.
- Taricco, C., Alessio, S. and Vivaldo, G., 2008: Sequence of eruptive events in the Vesuvio area recorded in shallow-water Ionian Sea sediments, *Nonlinear Processes in Geophysics*, **15**: 25-32.
- Torrence, C. and Compo, G.P., 1998: A practical guide to wavelet analysis, *Bulletin of the American Meteorological Society*, **79**: 61-78.



- O. Timm, A. Timmermann and S.H. DeCarlo
- Berger, A.~L., 1978: Long-term variations of daily insolation and Quaternary climatic changes, *Journal of Atmospheric Science*, **35**(12): 2362-2367, doi:10.1175/15200469(1978)035<2362:LTVODI>2.0.CO;2
- Goosse, H. and Fichefet, T., 1999: Importance of ice-ocean interactions for the global ocean circulation: A model study, *Journal of Geophysical Research*, **104**(C10): 23337-23356, doi:10.1029/1999JC900215.
- Opsteegh, J.D., Haarsma, R.J., Selten, F.M. and Kattenberg, A., 1998: ECBILT: A dynamic alternative to mixed boundary conditions in ocean models, *Tellus*, **50A**(3): 348-367, doi:10.1034/j.1600-0870.1998.t01-1-00007
- Peltier, W.R., 1994: Ice age paleotopography, *Science*, **265**(5169): 195-201, doi:10.1126/science.265.5169.195.
- Timm, O., and Timmermann, A. 2007: Simulation of the last 21,000 years using accelerated transient boundary conditions, *Journal of Climate*, **20**(17): 4377--4401. doi: 10.1175/JCLI4237.1
- Timm, O., Timmermann, A., Abe-Ouchi, A., Saito, F. and Segawa, T., 2008: On the definition of seasons in paleoclimate simulations with orbital forcing, *Paleoceanography*, **23**: PA2221, doi:10.1029/2007PA001461
- Timmermann, A., Timm O., Stott, L. and Menviel, L., 2008: The roles of CO2 and orbital forcing in driving southern hemispheric temperature variations during the last 21,000 years, accepted in *Journal of Climate*.