

Curriculum vitae
AMOS WINTER

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Citizenship: Germany; resident alien of U.S.A

Languages: English, German, Spanish, Hebrew

Education

- 1981 Ph.D. **The Hebrew University of Jerusalem, Israel** – Geology (Distinction)
Specialty: Marine Micropaleontology, Sedimentology, Quaternary Geology
Title: Paleoenvironmental interpretation of calcareous nanofossils in the Gulf of 'Aqaba
- 1978 M.S. **The Hebrew University of Jerusalem, Israel** – Oceanography
Specialty: Marine Biodiversity, Marine Ecology, Marine Micropaleontology
Title: Living coccolithophores from the Gulf of 'Aqaba
- 1972 B.Sc. **Beloit College, Wisconsin, U.S.A.** – Biology

Employment History

- 2003–2005 Associate Program Director, Marine Geology and Geophysics: National Science Foundation
- 2000–now Research Associate, Geosciences Research Division: Scripps Institution of Oceanography
- 1999–2001 Climate Change Outreach Educator: California Space Institute
- 1999–2000 Visiting Professor, Geosciences Research Division: Scripps Institution of Oceanography
- 1996–now Professor, Department of Marine Sciences: University of Puerto Rico
- 1995 Visiting Scholar, Department of Marine Geology: University of Göteborg, Sweden
- 1993–now Commonwealth Climatologist: Puerto Rico
- 1992–now Director: Caribbean Climate Center
- 1992 Invited Professor, Geology Institute: Swiss Federal Institute of Technology (ETH), Zurich, Switzerland
- 1991 Invited Scholar, Paleoceanography Section: GEOMAR, University of Kiel, Germany
- 1988–1996 Associate Professor, Department of Marine Sciences: University of Puerto Rico
- 1982–1987 Sonnenberg Senior Research Scientist, Marine Geoscience Unit: University of Cape Town
- 1982 Postdoctoral fellow: Stanford University, California
- 1981 Postdoctoral fellow: Tübingen University, Germany
- 1973 Research Assistant: Alfred Wagener Institute/ Biologische Anstalt Helgoland, Germany

Awards and Honors

- 1998 Guest Editor; Special Edition on *Coccolithophores*, Marine Micropaleontology
- 1995 Swedish Competitive Award in Marine Geology
- 1990 NSF (EPSCOR) Summer Research Award
- 1989 NSF (EPSCOR) Summer Research Award
- 1988–1998 University of Puerto Rico Productivity Award
- 1984 South African Council for Oceanographic Research Award
- 1982 Micropaleontology Award for Excellence in Scientific Writing
- 1980–1981 Lady Davis Graduate Fellowship, Hebrew University of Jerusalem

Recently Organized and Invited Presentations/Workshops

- 2005 Invited lecturer: Louisiana Universities Marine Consortium, department colloquium

- 2000 Organizer and Presenter: University of the Virgin Islands, St. Thomas and St. Croix “Climate Modeling Workshop–Strategies to Study the Caribbean Regional Climate”
- 1999 Invited lecturer–Scripps Institution of Oceanography, department colloquium
- 1999 Invited lecturer–Columbia University, Lamont Doherty Earth Observatory, department colloquium
- 1999 Invited lecturer–Hokkaido University, Japan, department colloquium
- 1998 Primary organizer–International Nannoplankton Association, Biannual Conference
- 1995 Course developer and presenter–University of Copenhagen, Botany Institute, Marine Phytoplankton Workshop: “Coccolithophores”
- 1995 Invited lecturer–International Symposium on Carbon Cycle: “Role of the North Pacific Ocean”
- 1995 Course developer and presenter–Third International Post Graduate Course on Phytoplankton

Recent Institution and Public Service

- 2001–2003 Puerto Rican Television Media Representative on Climate
- 2000–2003 Building Facilities Committee: University of Puerto Rico
- 1999 Education Outreach Coordinator for Global Climate Change Scripps
- 1998 Guest Editor, Marine Micropaleontology
- 1996–now Board Member: National Association of State Universities and Land Grant Colleges
- 1995–2001 Board Member: Southeast Regional Climate Center
- 1993–now Commonwealth Climatologist: Puerto Rico
- 1992–2001 Curriculum Committee: University of Puerto Rico
- 1995–now Editorial Board - Journal of Geosciences of China

Current Funding

- 2003–2005 NOAA/NOS/Center for Sponsored Coastal Ocean Research, Coral Reef Ecosystem Studies CRES 2002: Integrating Science & Management in the Caribbean. \$4,999,867 (5 years: 2002-2008). Award Number: NA17OP2919 (with 9 Co-PIs).
- 2002–2003 NASA–IDEAS (\$29,067, one year) The influence of Saharan Dust on the precipitation pattern in the Caribbean (P.I. with Robin Williams).
- 2002–2003 USGS WRI (\$20,000, two years) Climate control of precipitation pattern on the Virgin Islands (P.I. with Nazario Ramirez).
- 2000–2005 NASA–EPSCoR (\$750,000, five years) Caribbean climate change studies and regional modelling (4 Co–P.I.s).

Publications

Books

- 1994 Winter A, and Siesser WG, (Eds). Coccolithophores, Cambridge University Press, 290 pp.

Journal Articles

- 2006 Gallup CD, Olson DG, Edwards RL, Gruhn L, Winter A, and Taylor FW. Sr/Ca-Sea surface temperature calibration in the branching Caribbean coral *Acropora palmata*. *Geophysical Research Letters* 3, LO 3606. DOI 10.1029/2005GL024935
- 2006 Ramirez-Beltran ND, Lau William KM, Winter A, Castro, JM, Ramirez-Escalante, N. Empirical probability models to predict Puerto Rico monthly rainfall process. *Monthly Weather Review* in press
- 2006 Sammarco, P W, Winter A. and Stewart JC. Coefficient of Variation (CV) of Sea Surface Temperature (SST) as an Indicator of Bleaching in Caribbean Corals. Jan 2006, Pages 1 - 8, DOI 10.1007/s00227-006-0318-0, URL <http://dx.doi.org/10.1007/s00227-006-0318-0>

- 2006 Velazquez-Lozada A, Gonzalez JE, and Winter A. Urban Heat Island Effect Analysis for San Juan, Puerto Rico, *Journal of Atmospheric Environment*, 40 (9): 1731-1741.
- 2005 Lal D, Gallup C, Somayajulu BLK., Vacher L, Caffee MW, Jull AJT, Finkel RC, Speed RC and Winter A. Records of cosmogenic radionuclides, ^{10}Be , ^{26}Al and ^{36}Cl in corals: first studies on coral erosion rates and potential of dating very old corals, *Geochim Cosmochim Acta*, 69 (24): 5717–5728
- 2005 Shimamura M, Oba T, Xu G, Lu B, Wang L, Murayama M, Toyoda K, and Winter A. Fidelity of $\delta^{18}\text{O}$ as a proxy for sea surface temperature: Influence of variable coral growth rates on the coral *Porites lutea* from Hainan Island, China. *Geochemistry, Geophysics, Geosystems* (G3), 6, Q09017
- 2004 Harmsen EW, González Pérez A, and Winter A. Re-evaluation of pan evaporation coefficients at seven locations in Puerto Rico. *J. Agric.* 88(3-4): 109 -122
- 2003 Quinn PS, Hans RT, Brand LE, and Winter A. Experimental evidence for the species character of *C. leptoporus* morphotypes. *Journal of Paleontology* 77(5): 825-830.
- 2003 Winter A, Paul A, Nyberg J, Oba T, Lundberg J, Schrag D, Taggart B. Orbital control of low-latitude seasonality during the Eemian. *Geophysical Research Letters* 30:10-14.
- 2002 Winter A, Rost B, Hilbrecht H, Elbrächter M. Vertical and horizontal distribution of coccolithophores in the Caribbean Sea. *Geo-Marine Letters* 22: 150–161.
- 2002 Nyberg J, Malmgren BA, Kuijpers A, Winter A. A centennial-scale variability of subtropical North Atlantic surface hydrography during the late Holocene. *Palaeogeography, Palaeoclimatology, Palaeoecology* 183:25–41.
- 2002 Watanabe T, Winter A, Oba T, Anzai R, Ishioroshi H. Evaluation of accuracy in coral isotope records for environmental proxy: A comparative study of skeletal elements, sampling resolution, and different colonies in the coral *Montastrea faveolata* from Puerto Rico. *Coral Reefs* 21:169–178.
- 2001 Watanabe T, Minagawa M, Oba T, Winter A. Pretreatment of coral aragonite for trace elemental analysis: Implications of coral thermometers *Geochemical Journal* 35(4):265–269.
- 2001 Nyberg J, Csapó J, Malmgren BA, Winter A. Changes in the concentrations of 17 amino acids in a scleractinian coral over the last 250 years and their potential utility for age determination. *Organic Geochemistry* 32:623–632.
- 2001 Watanabe T, Winter A, Oba T. Seasonal changes in sea surface temperature and salinity during the Little Ice Age in the Caribbean Sea deduced from Mg/Ca and O-18/O-16 ratios in corals. *Marine Geology* 173: 21–35.
- 2000 Winter A, Oba T, Ishioroshi H, Watanabe T, Christy JR. Tropical sea surface temperatures: two-to-three degrees cooler than present during the Little Ice Age. *Geophysical Research Letters*, 27: 3365–3368.
- 2000 Young JR, Thierstein HR, Winter A. Introduction. Nannoplankton ecology and palaeoecology *Marine Micropaleontology* 39:7–9.
- 2000 Jordan RW, Winter, A. Assemblages of coccolithophorids and other living microplankton off the coast of Puerto Rico during January–May 1995. *Marine Micropaleontology* 39: 113–130.
- 1999 Winter A, Elbrachter M, Krause G. Subtropical coccolithophores in the Weddell Sea, *Deep Sea Research*, 46(3): 439–449.
- 1999 Malmgren B, Winter A. Climatic Zonation in Puerto Rico Based on Multivariate Statistical Analysis and an Artificial Neural Network. *Journal of Climate*, 12(4): 977–985.
- 1998 Jordan RW Winter A. Unusual coccolithophorid (haptophyta) specimen from Puerto Rico. *Journal of Nannoplankton Research* 20: 81–83.
- 1998 Winter A, Appeldoorn R, Bruckner A, Williams E, Goenaga C. Sea surface temperatures and coral reef bleaching off La Parguera, Puerto Rico (northeastern Caribbean Sea). *Coral Reefs*, 17: 377–382.
- 1998 Malmgren B, Winter A, Chen D. El Niño–Southern Oscillation and North Atlantic Oscillation control of the Puerto Rico climate. *Journal of Climate* 11: 2713–2717.

- 1998 Tosteson TR, Ballantine D, Winter A., Sea surface temperatures, benthic dinoflagellate toxicity and toxin transmission in the ciguatera food web. In: B. Reguera, J. Blanco, M.L. Fernandez, and T. Wyatt (editors). *Harmful Alga*, Xunta de Galicia and the intergovernmental oceanographic commission of UNESCO.
- 1998 Garcia JR, Schmitt C, Heberer C, Winter, A. La Parguera, Puerto Rico– Caribbean coral reef, seagrass and mangrove sites. *Coastal region and small island papers 3*, UNESCO, Paris, XIV; 347-352
- 1994 Siesser WG. Winter A. Coccolith morphology. In: A. Winter and W.G. Siesser (editors) *Coccolithophores*. Cambridge University Press 290 pp.
- 1994 Winter A, and Siesser WG. Atlas of Living Coccolithophores. In: A. Winter and W.G. Siesser (eds) *Coccolithophores*. Cambridge University Press, 290 pp.
- 1994 Winter A, Jordan R, and Roth PH. Biogeography of coccolithophores in oceanic waters. In: A. Winter and W.G. Siesser (editors) *Coccolithophores*. Cambridge University Press, 290 pp.
- 1993 Winter A, and Tosteson TR. Ciguatera toxins in the food chain revealed by stable isotopes. In: Acts of the Fourth International Conference on Ciguatera Fish Poisoning, *Bulletin of Soc. Path., Ex.*, vol. 85. Masson, Paris. pp 510–513.
- 1991 Winter A, Goenaga C, and Maul GA. Carbon and oxygen isotope time series from an 18 year Caribbean reef coral. *Journal of Geophysical Research* 96(C9):16673–16678.
- 1990 Winter A, and Martin K. Late Quaternary history of the Agulhas Current. *Paleoceanography* 5(4):479–486.
- 1989 Fincham MJ, and Winter A. Paleoceanographic Interpretation of coccoliths and oxygen isotopes from the sediment surface of the southwest Indian Ocean. *Marine Micropaleontology* 13:325–351.
- 1988 Siesser WG, Rogers J, and Winter A. Late Miocene erosion of the Agulhas Moat and the Oligocene position of the Subantarctic surface water. *Marine Geology* 80:119–129.
- 1987 Dingle RV, Birch GF, Bremner RH, De Decker, RH, du Plessis A, Engelbrecht JC, Fincham MJ, Fitton T, Flemming BW, Gentle RI, Goodlad SW, Martin AK, Mills EG, Moir GJ, Parker R.J, Robson SW, Rogers J, Salmon DA, Siesser WG, Simpson ESW, Summerhayes CP, Westall F, Winter A, and Woodborne MW. Deep–Sea sedimentary environments around southern Africa (SE Atlantic and SW Indian Oceans). *Annals of the South African Museum* 9 8:1–27.
- 1987 Friedinger P, and Winter A. Distribution of modern coccolithophore assemblages in the area of the Natal Valley (southwest Indian Ocean). *Journal of Micropaleontology* 6:49–56.
- 1987 Mitchell–Innes BA, and Winter A. Coccolithophores: a major component in an upwelling plume off the Cape of southern Africa. *Marine Biology* 95:25–30.
- 1987 Pokras EM, Winter A. Oceanographic control of Holocene diatom assemblages in laminated sediments near Walvis Bay, southwest Africa. *Marine Geology* 76:185–194.
- 1986 Winter A, Stockwell D, Hargraves P. Tintinnid agglutination of coccoliths: A selective or random process? *Marine Micropaleontology* 10:375–379.
- 1985 Winter A. Distribution of living coccolithophores in the California Current System, Southern California Borderland. *Marine Micropaleontology* 9:385–393.
- 1984 Reiss Z, Luz B, Almogi–Labin A, Halicz E, Winter A, Erez J. Paleoceanography of the Gulf of Aqaba during the last 150, 000 years. In: J.A. Coetzee et al. (eds) *Palaeoecology of Africa and the surrounding islands* 16:55–64.
- 1983 Winter A, Almogi–Labin A, Erez Y, Halicz E, Luz B, Reiss Z. Salinity tolerance of marine organisms deduced from Red Sea Quaternary record. *Marine Geology* 53:M17–M22.
- 1982 Winter A. Paleoenvironmental interpretation of Quaternary coccolith assemblages from the Gulf of 'Aqaba (Elat), Red Sea. *Rev. Esp. de Micropaleontologia* 14:291–314.
- 1982 Winter A. Post–depositional shape modification in Red Sea coccoliths. *Micropaleontology* 28:319–323.

- 1980 Reiss Z, Luz B, Almogi-Labin A, Halicz E, Winter A, Wolf M, Ross DA. Late Quaternary paleoceanography of the Gulf of 'Aqaba (Elat), Red Sea. *Quaternary Research* 14:294–308.
- 1979 Winter A, Reiss Z, and Luz B. Distribution of living coccolithophore assemblages in the Gulf of Elat ('Aqaba). *Marine Micropaleontology* 4:197–223.
- 1978 Winter A, Reiss Z, and Luz B. Living *Gephyrocapsa protohuxleyi* McIntyre in the Gulf of Elat ('Aqaba). *Micropaleontology* 3:295–298.

Selected Recent Abstracts

- 2004 Kilbourne KH, Quinn TM, Taylor FW, Webb RS, Winter A, Guilderson T. Caribbean Climate Reconstructions Using Coral Skeletal Geochemistry: Initial Results from Puerto Rico. *Eos Trans. AGU*, 85(47), Fall Meet
- 2004 Mulero P.J., Gonzalez JE, Velazquez A., Winter A., Numerical Study of Urban Growth Effects on the Surface Atmospheric Fields over a Large Tropical City. Combined Pre-prints of the 84th American Meteorological Society Annual Meeting in Seattle, WA on January 11-15, 2004.
- 2003 Ramirez NE, Winter A, Ching F, Veneros A, Escalante, NR. Neural networks estimates atmospheric variables in the Caribbean Region. American Meteorological Society, Long Beach, Feb. 9-13th.
- 2003 Ramirez NE, Winter A and Escalante, NR. Empirical Models to Predict Puerto Rico Monthly Rainfall Process. American Meteorological Society, Long Beach, Feb. 9-13th.
- 2002 Winter A, Gonzalez J, Ramirez N, Vásquez R. Regional Atmospheric Modeling of Caribbean Climate AGU Fall Meet. Suppl.
- 2002 Cárdenes O, Winter A, Morell J, Corredor J. Chemical-taxonomic identification of phytoplankton in the northeast Caribbean Sea: coccolithophores and the chlorophyll maximum. *CoccoCo*. Ascona, Switzerland. Feb 10-15th.
- 2001 Nyberg J, Winter A, Christy J, Malmgren B. Surface Temperatures in the eastern Caribbean during the 8th Century AD average up to 6°C colder than present. AGU Fall Meet. Suppl. OS51B-0482
- 2001 Webb RS, Winter A, Diaz HF, Eischeid JK. Evaluation of 20th century decadal climate variability from massive scleractinian pinnacle corals from La Parguera, Puerto Rico, northeast Caribbean Sea. AGU Fall Meet. Suppl. OS51B-0481
- 2001 Boehm F, Brodersen B, Dullo W-Chr, Haase-Schramm A, Joachimski M, Oba T, Winter A. Seasonally resolved stable isotope records from a sclerosponge in the northern Caribbean sea. 7th International Conference on Paleoceanography. Sapporo, Japan.
- 2000 Brodersen B, Böhm F, Chr.-Dullo W., Eisenhauer A, Haase-Schramm A, Winter A. Density banding of Caribbean sclerosponges and corals - proxies for environmental parameters? European Geophysical Symposium Nice – France.
- 2000 Winter A, Appeldoorn R, Berger W, Johnson K, Paul A, Thierstein HR. Lunar banding in *Montastrea faveolata*. *EOS Trans. AGU Fall Meet. Suppl.* 81(47), OS11C-11.
- 2000 Winter A, Rost B, Elbrächter M. Coccolithophores in the Caribbean Sea during April-May 1996. International Nannoplankton Association Meeting. Bremen September 11-14. *J. Nannoplankton Res.* 22(2): 153.
- 2000 Behnken A, Böhm F, Dullo C, Eisenhauer A, Joachimski M, Ruprecht E, Winter A, Zahn R. The North Atlantic Oscillation: Record potential in marine archives?" European Geophysical Society XXV General Assembly Millennium Conference on Earth, Planetary and Solar Systems Sciences Nice, France.
- 1999 Winter A, Nyberg J, Oba T, Lundberg J, Weil E, Schrag D, Taggart B. Coral based reconstruction of the tropical Atlantic During the Last Interglacial Maximum. AGU Fall meeting, San Francisco.

