DAVID MORRILL ANDERSON

CURRICULUM VITAE

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Education

1991	Ph.D. in Geological Sciences, Brown University
1989	M.Sc. in Geological Sciences, Brown University
1985	M.S. in Marine Sciences, San Jose State University
1981	B.Sc. in Biology, Tufts University

Honors and Recognition

Department of Commerce Gold Medal, For exceptional leadership and environmental stewardship in assessing the impacts of global climate change on the United States (with 7 others), 2010
NOAA Administrator's Award, contributing to Climate Change Reports (with 22 others), 2008
Arthur S. Flemming Award, presented by George Washington University, 2005.
T.M. Harris Medal for best paper in palaeobotany 2004, Birbal Sahni Institute of Palaeobotany, Lucknow, India
NOAA CIYA Award for Web Team Leadership, 2004,
NOAA CIYA Award for web site re-design, 2003
NOAA Administrator's Award for excellence in scientific research, 2003
Editor's Citation for Excellence in Refereeing, American Geophysical Union (Paleoceanography) 2000
Dept. of Commerce Silver Medal (1994)
Sigma Xi (1989).

Professional Appointments

2004-present	Branch Chief, NOAA Paleoclimatology Branch, National Climatic Data Center
2004-present	Director, World Data Center for Paleoclimatology, Boulder
2003-present	Associate Professor Adjoint, Department of Geological Sciences, University of Colorado
2003-present	Research Scientist III and Fellow, Institute of Arctic and Alpine Research, University of Colorado
2001-2002	Assistant Professor Adjoint, Department of Geological Sciences, University of Colorado
1993-present	Graduate School Faculty Member, University of Colorado
1993-2002	Research Associate II, Institute of Arctic and Alpine Research, University of Colorado
1992-2004	Physical Scientist, NOAA Paleoclimatology Program
1992-1994	Adjunct Research Assistant Professor, University of South Carolina
1990-1991	Postdoctoral Associate, University of South Carolina
1985-1989	Teaching Assistant, Brown University
1985-1989	Research Assistant, Brown University
1987	Sedimentologist, Ocean Drilling Program Leg 117
1983-1985	Research Assistant, Moss Landing Marine Laboratories
1981-1983	Outward Bound Instructor, Hurricane Island (experiential education) and sailing instructor.

Service

2007-2009	Panel Member, United States Advisory Committee, Integrated Ocean Drilling Program
2006-2009	Executive Committee, Institute for Arctic and Alpine Research, University of Colorado
2006-2007	Co-Chair, Advisory Panel, CCSP Synthesis and Assessment Report on Abrupt Climate Change
2002-present	Mentor, Environmental Careers Organization
2002-2004	Advisory Panel Member, CHRONOS (Project to distribute Earth Sciences data)
2002-2003	Mentor, SACNAS E-Mentoring Program (teacher-scientist partnership, Society for Advancement of Chicanos and Native Americans in Science).
2002-present	Advisor, National Research Council Fellowship Program
2000-2002	Paleoceanography and Paleoclimatology Committee, American Geophysical Union
1999-2000	Data Information Systems Steering Group, International Geosphere-Biosphere Programme
1999-2000	Chair, Southern Ocean Working Group, International Marine Global Changes Study (IMAGES).
1983-1986	Member of Scientific Measurements Panel, Joint Oceanographic Institutions for Deep Earth Sampling
1997-1998	Chair, Data Advisory Committee, International Marine Past Global Changes Program
1998-present	Data Advisory Committee, International Marine Past Global Changes Program
1997-present	World Wide Web Committee and Publications Committee, Institute for Arctic and Alpine Research, University of Colorado.
1992-present	Reviewer of journal articles, NSF proposals (about 12 per year).

National and International Workshops Convened

2009	Ocean Acidification and Biogeochemical Cycles Thematic Working Group Meeting.
2007	Abrupt Climate Change Report Workshop, Climate Change Science Plan (with J. McGeehin).
1998	Second Workshop on Global Paleoenvironmental Data, Boulder, USA (with R. Webb).
1993	Global Paleoenvironmental Data, Bern, Switzerland (with J. Overpeck and R. Webb).

Professional Memberships

American Geophysical Union, American Society of Limnology and Oceanography, Geological Society of America, Oceanography Society, Sigma Xi.

Field Experience

Co-Chief Scientist, IMAGES V Cruise, Paleoceanography of the North Atlantic, Aug.-Sept. 1999.

Scientist, Genesis 03 Cruise, Paleoceanography of the SE Pacific (site survey for Ocean Drilling Program), Feb. - April, 1997

Principal Investigator on NSF-sponsored Field expedition to analyze hydrography and oxygen isotope composition of coastal inlets in southern Chile, 1995.

Principal Investigator on NSF-sponsored "Research Experience for Undergraduates" Field expedition to analyze hydrography and oxygen isotope composition of coastal inlets in southern Chile, 1993.

Principal Investigator on NOAA-sponsored sediment trap deployment and recovery. (Pacific Ocean, 1991-1994). Responsible for the deployment and recovery of ocean sediment traps and moored instrument arrays.

Scientist, El Puma Cruise BAP91 (Gulf of California, February, 1991). Assisted in the deployment of moored sediment traps, conducted hydrocasts and water sampling, assisted in MOCNESS plankton sampling.

Sedimentologist, Ocean Drilling Program Leg 117 (Indian Ocean, August-October, 1987). Responsible for core description, sediment analysis.

Conrad Cruise RC2704 (Indian Ocean, May-June, 1986). Assisted in seismic surveys, piston and box coring, responsible for hydrocasts and plankton tows.

Assistant, VERTEX Leg 4 (North Pacific, June 1984). Assisted in hydrocasts and CTD profiling, shipboard analysis of salinity, chlorophyll, dissolved oxygen.

Grants & Awards:
2001-2011 [NOAA] Applied Research Center for Paleoclimatology [$350,000], Lead PI, with G. Wahl.

2000-2001 [NOAA] Surf Your Reef: Access to Regionally-Integrated Coral Reef Data [$180,000]. Lead PI, with M. Eakin, A. A. Strong, T. Picciolo, J. Hendee, and S. Rohmann.

2000-2002 [NSF] Ice-Ocean-Atmosphere Interactions Along the East Greenland Margin on Decade to Century Timescales Over the Last 14,000 years [$463,664]. With A. Jennings (lead) and J. T. Andrews.

1992-2001 [NOAA] NOAA Paleoclimatology Program [$750,000/yr.]. With R. S. Webb and J. T. Overpeck (lead).

1998 [NSF] Long IMAGES Cores from Continental Shelves Bordering Denmark Strait [$200,000]. With J. Andrews (lead), A. Jennings, J. Syvitski, and J. Hardardottir.

1995 [NSF ATM9509504] Extending the baseline of climate variability using laminated sediments from semi-isolated marine basins in Southern Chile [$40,000].

1993-1995 [NOAA] Decadal to century-scale climate variability during the Holocene: A sediment trap and sediment core study of Santa Barbara Basin [$90,000]. With R. Thunell (lead PI).

1993. [NSF] Research Experience for Undergraduates Award: Hydrography and oxygen isotope composition of inlets in southern Chile [$4,000]. Lead PI, with V. Markgraf.

1991-1993 (NSF) Planktonic foraminiferal response to oceanic upwelling and its sedimentary record ($241,895). With R. Thunell (lead PI).

1987-1989 (USSAC) Support for O.D.P. Leg 117, Neogene Upwelling [$10,000].

Publications (in peer-reviewed journals)

Anderson, D. M., Bauer, B. A., Buckner, C. R., Gille, E., Gross, W. S., Hartman, M., Morrill, C., Shah, A. M., and Wahl, E. R., 2011. Web 2.0 Collaborations Address Uncertainty in Climate Reconstructions of the Past Millennium. Earth Science Informatics 4:161-167.

Wahl, E. R., D. M. Anderson, et al., 2010. An archive of high-resolution temperature reconstructions over the past 2+ millennia. Geochem. Geophys. Geosyst. 11, Q01001, 10.1029/2009GC002817.

Anderson, D. M., C. K. Baulcomb, et al., 2010. Indian Summer Monsoon During the Last Two Millennia. Journal of Quaternary Science 24(1-7).

Anderson, D. M., and Zhang, H. –M., 2009. Shallow ocean overturning and the heat and carbon content of the Glacial Tropical Ocean. Global and Planetary Change, 69:1-2, pages 29-34.

Gupta, Anil K., Anderson, David M., Pandey, Deep N., and Ashok K. Singhvi, 2006. Adaptation and human migration, and evidence of agriculture coincident with changes in the Indian summer monsoon during the Holocene. Current Science, 90(8):1082-1090.

Das, M., A. K. Gupta and D. M. Anderson, 2006. Deep-Sea Paleoceanographic and Surface Productivity Changes in the Northwestern Arabian Sea Driven by the Indian Southwest Monsoon During the last Millennium. Journal Geological Society of India **68**(3): 387-394.

Gupta, A. K., Das, M., and D. M. Anderson, 2005. Solar influence on the Indian summer monsoon during the Holocene, Geophysical Research Letters, 32(7), L17703, 10.1029/2005GL022685.

Anderson, D. M., and Woodhouse, C. A., 2005. Climate change: Let all the voices be heard. Nature, 433:587-588.

Gupta, A.K., and Anderson, D.M., 2005, Mysteries of the Indian monsoon system, Journal Geological Society of India, 65, 54-60.

Overpeck, J., K.B. Liu, C. Morrill, J. Cole, C. Shen, D. Anderson, and L. Tang. 2005. Holocene environmental change in the Himalayan-Tibetan Plateau region: Lake sediments and the future. In: Global Change and Mountain Regions: An overview of current knowledge, U.M. Huber, H.K.M. Bugmann, and M.A. Reasoner, eds., Springer, Netherlands, pp. 83-92.

Pandey, D. N., Gupta, A. K., and D. M. Anderson, 2003. Rain harvesting as an adaptation to climate change. Current Science, 85(1):46-59.

Gupta, A. K., Anderson, D. M., and J. T. Overpeck, 2003. Abrupt Changes in the Holocene Asian Southwest Monsoon and Their Links to the North Atlantic. Nature, 421:354-357.

Moy, C. M., Seltzer, G. O., Rodbell, D. T., and D. M. Anderson, 2002. Oscillation in ENSO Activity at Millennial Time Scales During the Holocene. Nature, 420:162-165.

Anderson, D. M., and Overpeck, J. T., and A. K. Gupta, 2002. Increase in the Asian SW Monsoon During the Past Four Centuries. Science, 297:596-599.

Anderson, D. M., and Archer, D. 2002. Glacial-interglacial stability of ocean pH inferred from foraminifer dissolution rates. Nature, 416:70-73.

Dean, Walter E., Anderson, Roger Y., Bradbury, J. Platt, and David M. Anderson, 2002. A 1500-year record of climatic and environmental change in Elk Lake, Minnesota I: Varve thickness and gray-scale density. Journal of Paleolimnology, 27:287-299.

Gupta, Anil K., Dhingra, Hitesh, Melice, Jean-Luc, and David M. Anderson, 2001. Earth's eccentricity cycles and Indian Summer Monsoon variability over the past 2 million years: Evidence from deep-sea benthic foraminifer. Geophysical Research Letters, 28(11):4131-4135.

Smith, L. M., A. E. Jennings, J. P. Sachs, Anderson, D. M., and A. DeVernal. 2001. Anomalously low d13C events during deglaciation of the east Greenland continental shelf adjacent to the Denmark Strait. Geophysical Research Letters, 28(11): 2217-2220.

Anderson, D. M. 2001. Attenuation of Millennial Scale Events by Bioturbation in Marine Sediments. Paleoceanography, 16:352-357.

Rodbell, D.T., G.O. Seltzer, D.M. Anderson, M.B. Abbott, D.B. Enfield, and J.H. Newman, 1999. An 15,000-year record of El Nino-driven alluviation in Southwestern Ecuador, Science, 283:516-520.

Anderson, D. M. and R. B. Archer 1999. Preliminary evidence of early deglaciation in Southern Chile. Palaeogeography, Palaeoclimatology, Palaeoecology 146: 295-301.

Overpeck, J. T., Anderson, D. M., Trombore, S., and Prell, W. L., 1996. The Southwest Monsoon over the last 18,000 years. Climate Dynamics, 12:213-225.

Mortyn, P. G., Thunell, R. C., Anderson, D. M., Stott, L. D., Le, J., 1996. Sea surface temperatures in the Southern California Borderlands during the last glacial-interglacial cycle. Paleoceanography, 11:415-430.

Emeis, K., Anderson, D. M., Doose, H., Kroon, D., and D. Shulz-Bull, 1995. Sea surface temperatures and the history of monsoon upwelling in the northwest Arabian Sea during the last 500,000 years. Quaternary Research, 43:355-361.

Anderson, D. M., 1995. Sensitivity of ocean upwelling to climate forcing on millenial timescales. In Summerhayes, C. P., Emeis, K. -C., Angel, M. V., Smith, R. L., and Zeitschel, B., eds., Upwelling in the Ocean: Modern Processes and Ancient Records. J. Wiley and Sons, Chichester, p. 259-272.

Peterson, L. C., M. R. Abbott, D. M. Anderson, J.-P. Caulet, M. Conte, K. C. Emeis, A. E. S. Kemp, and C. P. Summerhayes, 1995, Group Report: How do upwelling systems vary through time?, *in* C. P. Summerhayes, K.-C. Emeis, M. V. Angel, R. L. Smith, and B. Zeitschel, eds., Upwelling in the Ocean: Modern Processes and Ancient Records, Chichester, J. Wiley and Sons, p. 285-312.

Thunell, R. C., Tappa, E., and D. M. Anderson, 1995, Sediment fluxes and varve formation in Santa Barbara Basin, offshore California: Geology, v. 23, p. 1083-1086.

Thunell, R. T., Anderson, D. M., Gellar, D., and M. Qingmin, 1994. Sea surface temperature estimates for the tropical western Pacific during the last Glaciation and their implications for the Pacific warm pool. Quaternary Research, 41:255-264.

Miao, Q., Thunell, R. C., and D. M. Anderson, 1994. Glacial-Holocene carbonate dissolution patterns and sea surface temperatures in the south China and Sulu Seas, Paleoceanography, 9:269-290.

Anderson, D. M., and R. S. Webb, 1994. Ice-age tropics revisited. Nature, 367:23-24.

Webb, R. S., Overpeck, J.T., Anderson, D.M., and others, 1993. World Data Center-A for Paleoclimatology at the NOAA Paleoclimatology Program, Boulder, Co, Journal of Paleolimnology, 9:69-75.

Webb, R. S., Anderson, D.M., and J. T. Overpeck. Editorial: Archiving data at the World Data Center-A for Paleoclimatology. Paleoceanography, 9(3):391-393.

Anderson, D. M., and W. L. Prell, 1993. A 300 k.y. record of upwelling off Oman during the late Quaternary: evidence of the Asian Southwest Monsoon. Paleoceanography, 8(2):193-208.

Anderson, D. M., Webb, R. S., Overpeck, J. T., and B. A. Bauer, 1993. The NOAA Paleoclimatology Program: Using evidence from the past as a key to understanding and predicting future climate change. Earth System Monitor, 3(3):6-8.

Brock, J. C., McClain, C. R., Anderson, D. M., Prell, W. L., and W. W. Hay, 1992. Southwest monsoon circulation and environments of Recent planktonic foraminifera in the Northwestern Arabian Sea. Paleoceanography, 7(6):799-813.

Anderson, D. M., Brock, J. C., and W. L. Prell, 1992. Physical upwelling processes, upper ocean environment, and the sediment record of the southwest monsoon. In Summerhayes, C. et al., eds., Upwelling Systems : Evolution Since the Early Miocene, Geological Society Special Publication no. 64, p. 121-129.

Anderson, D. M., and W. L. Prell, 1992. The structure of the SW monsoon winds over the Arabian Sea during the late Quaternary: observations, simulations, and marine geologic evidence. J. Geophysical Res., 97(C10):15,481-15,487.

Anderson, D. M., 1992. Changes in upwelling and ocean productivity over hundreds to thousands of years: the marine geologic record of climate change. Marine Technology Society, 1992.

Prell, W. L., Murray, D. W., Clemens, S. C., and D. M. Anderson, 1992. Evolution and variability of the Indian Ocean summer monsoon: Evidence from the western Arabian Sea. In Synthesis of Results from Scientific Drilling in the Indian Ocean, Geophysical Monograph 70, American Geophysical Union, pp. 447-469.

Bradley, R. S., ed., 1991. Global Changes of the Past. UCAR/ Office for Interdisciplinary Studies, Boulder, 514p. Participated in Report on Major Perturbations of the Hydrosphere-Atmosphere-Biosphere System.

Anderson, D. M. and W. L. Prell, 1991. The Coastal upwelling gradient during the Late Pleistocene. In Prell, W. L., Niitsuma, N., et al. Proc. ODP, Scientific Results, 117: College Station, TX (Ocean Drilling Program), 265-276.

Anderson, D. M., Prell., W. L., and N. J. Barratt, 1989. Estimates of sea surface temperature in the Coral Sea at the Last Glacial Maximum. Paleoceanography, 4:615-627.

Prell, W. L., Niitsuma, N., et al. 1989. Proc. Ocean Drilling Program, Init. Repts., 117: College Station, TX (Ocean Drilling Program), 1236p.

Other Publications

Gutpa, A. K., Pandey, D. N., and D. M. Anderson, 2009. Monsoon Failures and Rainwater Harvesting. Geography and You. P. 28-32.

Karl, T. R., Melillo, J. M., and Peterson, T. C., eds, 2009. Global Climate Change Impacts in the United States. Cambridge University Press.

Anderson, D. M., Feely, R., Hoenisch, B., and S. Tudhope, Eds. 2009. The Role of Scientific Ocean Drilling in Ocean Acidification. Report of the Thematic Working Group, U. S. Science Support Program, Integrated Ocean Drilling Program.

Peterson, T.C. et al., 2008. Why Weather and Climate Extremes Matter. In: T.R. Karl et al. (Editors), Weather and Climate Extremes in a Changing Climate. Regions of Focus: North America, Hawaii, Caribbean, and U.S. Pacific Islands. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research, Washington, DC.

Easterling, D.R. et al., 2008. Measures to Improve Our Understanding of Weather and Climate Extremes. In: T.R. Karl et al. (Editors), Weather and Climate Extremes in a Changing Climate. Regions of Focus: North America, Hawaii, Caribbean, and U.S. Pacific Islands. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research, Washington, DC.

Dittert, N., et al. (2008), What can data tell us about past climate that is useful for the future? Data Management in Paleoclimatology, *PAGES News*, *16*, 30-31.

Elias, S., 2006. Encyclopedia of Quaternary Sciences, Elsevier (Anderson was editor for 36 Paleoceanography articles).

Anderson, D. M., 2006. Overview of Paleoceanography. In Elias, S., ed. Encyclopedia of Quaternary Sciences, Elsevier.

Anderson, D. M., 2006. Late Pleistocene Paleoceanography of the North Atlantic. In Elias, S., ed., Encyclopedia of Quaternary Sciences, Elsevier.