CURRICULUM VITA

**THURE E. CERLING**

 Born: November 16, 1949; Elmhurst, Illinois

**CONTACT:**

 thure.cerling@utah.edu

 (1) 801-581-7062 (Geology)

 (1) 801-585-0415 (Biology)

**ACADEMIC POSITION:**

 Distinguished Professor. Dept. of Geology and Geophysics, University of Utah

 Distinguished Professor, Dept. Biology, University of Utah

 UU history

 Assistant Professor. Geology 1979-1985

 Associate Professor. Geology 1985-1990

 Professor Geology 1990-present

 Distinguished Professor. Dept. of Geology and Geophysics 2002-present

 Distinguished Professor. Dept. of Biology 2002-present

 Francis H Brown Presidential Chair 2018-present

 Chair, Dept Geology & Geophysics 2016-present

**EDUCATION:**

 B.S. Geology and Chemistry Iowa State University 1972

 M.S. Geology Iowa State University 1973

 Ph.D. Geology University of California Berkeley 1977

**SOCIETY AFFILIATIONS**

 American Association for the Advancement of Science (Fellow–1997)

 American Geophysical Union (Fellow­–2017)

 Geochemical Society (Fellow–2021)

 Geological Society of America (Fellow–­1996)

 International Association of Geochemistry and Cosmochemistry (Fellow– 2008)

**PROFESSIONAL EXPERIENCE**

 Geologist, Shell Oil Company, 1973; Geologist, The Anaconda Company, 1976

 Research Scientist, Oak Ridge National Laboratory, 1977–79

 Assistant, Associate, Full Professor, Distinguished Professor. University of Utah.

 1979–present

**FIELD STUDIES**

 Cosmogenic isotope studies: western USA, Antarctica, Argentina, Hawaii

 Exploration Geology (oil and uranium): Utah, Arizona, Colorado, Texas

 Ice studies: Antarctica, Alaska

 Lakes: Lake Turkana (Kenya), Lake Malawi (Malawi), Lake Hövsgul (Mongolia)

 Paleontological/Archeological sites: Turkey, Kenya, Tanzania, Spain, western USA, Bolivia, India, Pakistan, India, Argentina, Ethiopia

 Radioactive waste disposal: Tennessee, Nevada, California

 Savanna/grassland ecosystems: Kenya, Uganda, Argentina, USA, Canada, Mongolia

 Soils and paleosols: USA, Canada, Kenya, Tanzania, Spain, France, Pakistan, India, Ethiopia

Volcanic ash correlation and radiometric dating: Kenya

Wildlife Conservation studies: Kenya, Uganda, South Africa, USA, DR Congo

**Current research interests**

 isotope physiology and paleodiets of mammals; isotopes in forensics; geology of Old World paleoanthropologic sites; development of the Asian monsoon system; stable isotopes as climatological indicators; geochemistry of large lakes; environmental geochemistry (contaminant migration in groundwater, rivers, and soils); surface exposure dating using cosmogenic isotopes; history of the atmosphere (CO2, O2).

**PROFESSIONAL ACTIVITIES**

National Academy of Science ­– National Research Council.

National Academy of Sciences

 GK Warren Committee (2011, 2014, 2024); NAS Award for Scientific Reviewing Committee (2011); Mary Thompson Award Committee (2015, 2021 (chair)); Cozzarelli Prize Committee (2013-2015); Section Chair (15 – Geology, 2015-2018); Arthur Day Medal and Lecture Committee, chair (2016-17); Class Membership Committee (Class I) 2016-2018

National Academy of Sciences – Section Chair (15 – Geology, 2015-2018)

Board of Earth Sciences and Resources (BESR)

 BESR Board member, 1994–96; Physics and Chemistry of Earth Materials, 1986; Earth Surface Processes, 1988–1990; Characterizing the Upper Part of the Earth's Crust, 1993; Geodynamics Committee, 1995–97; Grand Challenges in Earth Sciences, 2006–2008; Climate and Human Evolution, 2007–2010; Committee on Earth Resources, 2012–2018

Board of Environmental Studies and Toxicology (BEST)

 Study of the Control of Respirable Coal Mine Dust Exposure in Underground Mines, 2016-2018 (Chair).

Board on Radioactive Waste Management (BRWM)

 Hydrologic/tectonic/hydrothermal systems at Yucca Mountain. guest expert, 1991; Review of Specific Scientific and Technical Safety Issues Related to Ward Valley, CA, 1994–95; Committee on Long–Term Institutional Management of DOE Legacy Waste Sites, 2001– 2002.

U.S. National Committee for the International Union of Quaternary Research: 1992–95; 2021-2024

NASA: Workshop on the Dating of Surface Features of Mars, 2000

United Nations - Office on Drugs and Crime; Guidelines for forensics methods and procedures for ivory sampling and analysis, 2013-2014.

American Geophysical Union; Water Quality Committee, 1986–88.

Geochemical Society. Board of Directors. 2000–2002

Geological Society of America: Climate Change Committee, 2004–2006, 2009–2010

 Arthur Day Medal Committee Member (2019-2022)

National Science Foundation: Panel member: Archeometry, 1992–94, 2021–22; Geology and Paleontology, 1999–2000

U. S. Department of Energy, Basic Energy Sciences: Panel review member, Geochemistry Program, 1992–93; Guest panelist, Reactivity and mobility of geologic fluids: constraints from inorganic chemistry. 1996

Stable Isotope Ecology Short Course – University of Utah (co-founder). 1996 – 2019.

Stable Isotope Ecology Short Course – University of New Mexico (guest lecturer). 2021-2023

Geology of Turkana Basin Field Course. 2007-2012.

International Union of Geological Sciences: Nuclear Waste Group (1995–1997)

Fulbright Foundation: Discipline Peer Review Committee. 2010-2016

Save–The–Elephants: Science Advisory Board. 2012–present.

IsoForensics: Advisory Board Member, 2004-2019.

Utah Department of Environmental Quality: review of documents for Division of Water Quality, 2016.

Northwestern University, committee member – Nemmers Award in the Earth Sciences. 2018.

Turkana Basin Institute. Grants Committee member, 2019 – present

Review of Department or Center: The Ohio State University – Byrd Polar Center (2002); UC Santa Barbara – Earth Sciences (2004); Purdue University – Earth, Atmospheric, and Planetary Sciences (2009, 2014); University of New Mexico – Earth & Planetary Sciences (2013)

**EDITORIAL BOARDS**

*Geology*, Editorial Board. 1992–1997

*Chemical Geology*, Editorial Board. 1999–2007

*Geochimica et Cosmochimica Acta*. Associate Editor. 1999–2002, 2013–2015.

*Quaternary Research*. Editorial Board. 2002– 2017.

*African Journal of Ecology* – International Review Panel. 2007–2021.

*Proceedings of the National Academy of Science*. Editor. 2011–2021.

**HONORS, AWARDS, AND SPECIAL APPOINTMENTS**

Governor's Nuclear Waste Task Force, State of Utah, 1981–83

Visiting scholar, professor, fellow

 Visiting Scholar. Scripps Institution of Oceanography, 1987–1988

 Visiting Fellow for Global Change. Yale University, Jan–March, 1990

 Visiting Professor. University of Lausanne, Switzerland. 1994–1995.

 Visiting Professor. California Institute of Technology. March – June 1996

 Fulbright Fellow. University of Cape Town, South Africa. August 2004–June 2005

 Visiting Professor. California Institute of Technology. Jan – May 2012

 Visiting Scholar. École Normale Supérieure, Lyon, France. May – June 2016.

 Visiting Scholar. ETH-Zurich. Sept – Oct 2019.

 Visiting Scholar. Mpala Research Centre, Kenya. Nov – Dec 2019.

Distinguished Research Award, University of Utah, 1998.

National Academy of Science, elected 2001.

Distinguished Professor of Geology and Geophysics, University of Utah. 2002

Distinguished Professor of Biology. University of Utah. 2002

US Nuclear Waste Technical Review Board. 2002–2011. (Presidential appointment)

Iowa State University. College of Liberal Arts and Science Alumni Award. 2005

Utah Governor’s Medal for Science and Technology. 2012

Gordon P Getty Award, LSB Leakey Foundation, 2014

Geological Society of America. President’s Medal. 2017

American Geophysical Union. Excellence in Earth and Space Science Education Award.

2017.

International Mineral Association. Mineral of the year 2017: Rowleyite.

International Union of Geological Sciences. Émile Argand Medal. 2022

Utah Academy of Engineering and Science (2021 ­– Founding member)

Rosenblatt Prize, University of Utah. 2022

**PUBLICATIONS**

1. Cerling TE, DL Biggs, CF Vondra, and HJ Svec, 1975, Use of oxygen isotope ratios in correlation of tuffs, East Rudolf Basin, Northern Kenya*. Earth and Planetary Science Letters* 25: 291–296.
2. Curtis GH, RE Drake, TE Cerling, BW Cerling, and J Hampel, 1975, Age of KBS Tuff in Koobi Fora Formation, Northern Kenya. *Nature* 258: 395–398.
3. Cerling TE, 1976, Oxygen isotope studies of the volcanoclastics of the East Rudolf Basin. In: Coppens, et al, eds., *Stratigraphy, Paleoecology and Evolution in the Lake Rudolf Basin*, University of Chicago Press, Chicago. pp. 105–114.
4. Cerling TE, RL Hay and JR O'Neil, 1977, Isotopic evidence for dramatic climatic changes in East Africa during the Pleistocene. *Nature* 267: 137–138.
5. Cerling TE and DW Powers, 1977, Paleorifting between the Gregory and Ethiopian Rifts. *Geology* 5: 441–444.
6. Cerling TE, BW Cerling, GH Curtis, RE Drake, and FH Brown, 1978, Correlation of reworked ash deposits; the KBS Tuff, Northern Kenya. *United States Geological Survey Open–File Report* 78–701: 61–63.
7. Cerling TE, RL Hay and JR O'Neil, 1978, Isotopic, geochemical and faunal evidence for Pleistocene climatic change in East Africa. *United States Geological Survey Open–File Report* 78–701: 63–65.
8. Curtis GH, RE Drake, TE Cerling, BW Cerling, and J Hampel, 1978, Age of KBS Tuff, Koobi Fora Formation, Northern Kenya. In: WW Bishop, ed., *Geological Background to Fossil Man*, Scottish Academic Press, 463–469. (Reprint of Nature 258: 395–398 (1975)).
9. Cerling TE, 1979, Paleochemistry of Plio–Pleistocene Lake Turkana, Kenya. *Palaeogeography, Palaeoclimatology, Palaeoecology* 27: 247–285.
10. Cerling TE, FH Brown, BW Cerling, GH Curtis and RE Drake, 1979, Preliminary correlations between the Koobi Fora and Shungura Formations, East Africa. *Nature* 279: 118–121.
11. Spalding BP and TE Cerling, 1979, Association of radionuclides with streambed sediments in White Oak Watershed. *ORNL/TM–6895*, Oak Ridge National Laboratory, Oak Ridge, Tennessee. 44 pp.
12. Drake RE, GH Curtis, TE Cerling, BW Cerling, and J Hampel, 1980, KBS Tuff dating and geochronology of tuffaceous sediments in the Koobi Fora and Shungura Formations, East Africa. *Nature* 283: 368–372.
13. Cerling TE and BP Spalding, 1981, Areal distribution of 60Co, 137Cs, and 90Sr in streambed gravels of White Oak Creek watershed. *ORNL/TM–7318*, Oak Ridge National Laboratory, Oak Ridge, Tennessee, 67 pp.
14. Cerling TE and RR Turner, 1982, Formation of freshwater Fe–Mn coatings on gravel and the behavior of 60Co, 90Sr, and 137Cs in a small watershed. *Geochimica et Cosmochimica Acta* 46: 1333–1343.
15. Cerling TE and FH Brown, 1982, Tuffaceous marker horizons in the Koobi Fora region and the lower Omo Valley. *Nature* 299: 216– 221.
16. Cerling TE and BP Spalding, 1982, Distribution and relationship of radionuclides to streambed gravels in a small watershed. *Environmental Geology* 4: 99–116.
17. Brown FH, and TE Cerling, 1982, Stratigraphical significance of the Tulu Bor Tuff of the Koobi Fora Formation. *Nature* 299: 212– 215.
18. Yuretich RF and TE Cerling, 1983, Hydrogeochemistry of Lake Turkana, Kenya: mass balance and mineral reactions in an alkaline lake. *Geochimica et Cosmochimica Acta* 47: 1099–1109.
19. Cerling TE, 1983, Mineralogy of nonfibrous minerals with regard to health studies. In WL Wagner, WN Rom, and JA Merchant (eds.), *Health Issues Related to Metal and Non–metallic Mining*, Butterworth Publ., Boston, p. 34–47.
20. Cerling TE, 1984, The stable isotopic composition of modern soil carbonate and its relationship to climate. *Earth and Planetary Science Letters* 71: 229–240
21. Cerling TE, FH Brown, and JR Bowman, 1985, Low temperature alteration of volcanic glass: hydration, Na, K, 18O, and Ar mobility*. Chemical Geology (Isotope Geoscience Section)* 52: 281–293.
22. Torgerson T, WB Lyons, TE Cerling, 1985, SLEADS Group studies arid environments, *Geotimes* 30: 10-12.
23. Cerling TE, 1986, A mass balance approach to basin sedimentation: constraints on the recent history of the Turkana Basin. *Palaeogeography, Palaeoclimatology, Palaeoecology* 54: 63–86.
24. Cerling TE and RL Hay, 1986, An isotopic study of paleosol carbonates from Olduvai Gorge. *Quaternary Research* 25: 63–78.
25. Hillhouse JW, TE Cerling, and FH Brown, 1986, Magnetostratigraphy of the Koobi Fora Formation, Lake Turkana, Kenya. *Journal of Geophysical Research 91: 11581–11595.*
26. National Research Council, 1987, *Earth Materials Research*. National Academy of Sciences. Washington DC 122 pp. (Contributing author)
27. Barton CE, DK Solomon, JR Bowman, TE Cerling, and MD Sayer, 1987, Chloride budgets in transient lakes: Lakes Baringo, Naivasha, and Turkana, Kenya. *Limnology and Oceanography* 32: 745–751.
28. Solomon DK and TE Cerling, 1987, The annual carbon dioxide cycle in a montane soil: observations, modeling, and implications for weathering. *Water Resources Research* 23: 2257–2265.
29. Cerling TE and AJ Alexander, 1987, The chemical composition of hoarfrost, rime, and snow during a winter inversion in Utah, USA. *Water, Air, and Soil Pollution* 35: 373–379.
30. Bye BA, FH Brown, TE Cerling, and I McDougall, 1987, Increased age estimate for the Lower Palaeolithic hominid site of Olorgesailie Kenya. *Nature* 329: 237–239.
31. Morrison SJ and TE Cerling, 1987, Survey of metal, radionuclide, and organic contamination at 20 Waste Area Groups (WAGs) Oak Ridge, Tennessee. *ORNL/RAP/Sub–87/27463/1*. Oak Ridge National Laboratory, Oak Ridge, Tennessee. 212 pp.
32. Poreda RJ, TE Cerling, and DK Solomon, 1988, Use of tritium and helium isotopes as hydrologic tracers in a shallow unconfined aquifer. *Journal of Hydrology* 103: 1–9.
33. Cerling TE, JR Bowman, and JR O'Neil, 1988, An isotopic study of a fluvial–lacustrine sequence: The Plio–Pleistocene Koobi Fora Formation, East Africa. *Palaeogeography, Palaeoclimatology, Palaeoecology* 63: 335–356.
34. Quade J, TE Cerling, and JR Bowman, 1989, Systematic variations in the carbon and oxygen isotopic composition of pedogenic carbonate along elevation transects in the southern Great Basin, USA. *Geological Society of America Bulletin* 101: 464–475.
35. Cerling TE, 1989, Amber. *McGraw–Hill Yearbook of Science and Technology*, New York. p. 8–9.
36. Cerling TE, BL Pederson, KL Von Damm, 1989, Sodium–calcium ion exchange in the weathering of shales: implications for global weathering budgets. *Geology* 17: 552–554.
37. Cerling TE, 1989, Does the gas content of amber reveal the composition of palaeoatmospheres? *Nature* 339: 695–696.
38. Cerling TE, J Quade, Y Wang, and JR Bowman, 1989, Carbon isotopes in soils and paleosols as ecologic and paleoecologic indicators. *Nature* 341: 138–139.
39. Quade J, TE Cerling, and JR Bowman, 1989, Development of Asian monsoon revealed by marked ecological shift during the latest Miocene in northern Pakistan. *Nature* 342: 163–166.
40. Cerling TE, SJ Morrison, RW Sobocinski, and IL Larsen, 1990, Sediment–water interaction in a small stream: adsorption of 137Cs by bedload sediments. *Water Resources Research* 26: 1165–1176.
41. Sobocinski RJ, TE Cerling, SJ Morrison, and IL Larsen, 1990, Sediment transport in a small stream based on 137Cs inventories of the bedload fraction. *Water Resources Research* 26: 1177–1187.
42. Cerling TE, 1990, Dating geomorphologic surfaces using cosmogenic 3He. *Quaternary Research* 33: 148–156.
43. Cerling TE, BL Pedersen, and KL Von Damm, 1990, Reply to Comment on: Sodium–calcium ion exchange in the weathering of shale: implications for global weathering budgets. *Geology* 18: 190–191.
44. Quade J and TE Cerling, 1990, Stable isotopic evidence for a pedogenic origin of carbonates in Trench 14 near Yucca Mountain. *Science* 250: 1549–1552.
45. Cerling TE, 1991, Carbon dioxide in the atmosphere: evidence from Cenozoic and Mesozoic paleosols. *American Journal of Science* 291: 377–400.
46. Cerling TE, J Quade, SH Ambrose, and N Sikes, 1991, Fossil soils from Fort Ternan, Kenya: grassland or woodland? *Journal of Human Evolution* 21: 295–306.
47. Cerling TE, DK Solomon, J Quade, and JR Bowman, 1991, On the isotopic composition of carbon in soil carbon dioxide. *Geochimica et Cosmochimica Acta* 55: 3403–3406.
48. Quade J and TE Cerling, 1991, Stable isotopes in paleosols and the origins of the Asian monsoons. in JL Betancourt and VL Tharp (eds) *Proceedings of the Seventh Annual Pacific Climate (PACLIM) Workshop*, California Department of Water Resources, Interagency Ecological Studies Program Technical Report 26, p. 229–235.
49. Cerling TE and J Quade, 1992, Carbon isotopes in modern soils. In W. A. Nierenberg (editor), *Encyclopedia of Earth System Science*, Volume 1, Academic Press, San Diego. p 423–429.
50. Cerling TE, 1992, Development of grasslands and savannas in East Africa during the Neogene. *Palaeogeography, Palaeoclimatology, Palaeoecology (Global and Planetary Change Section)* 5: 241–247.
51. Quade J, TE Cerling, MM Morgan, DR Pilbeam, J Barry, AR Chivas, JA Lee–Thorp, and NJ van der Merwe, 1992, A 16 million year record of paleodiet using carbon and oxygen isotopes in fossil teeth from Pakistan*. Chemical Geology (Isotope Geoscience Section)* 94: 183–192.
52. Cerling TE, 1992, Further comments on using carbon isotopes in paleosols to estimate the CO2 content of the atmosphere. *Journal of the Geological Society, London* 149: 673–675.
53. Rogers KL, EE Larson, G Smith, D Katzman, GR Smith, TE Cerling, Y Wang, RG Baker, KC Lohmann, CA Repenning, P Patterson, and G Mackie, 1992, Pliocene and Pleistocene geologic and climatic evolution in the San Luis Valley of south–central Colorado. *Palaeogeography, Palaeoclimatology, Palaeoecology* 94: 55–86.
54. Poreda RJ and TE Cerling, 1992, Cosmogenic neon in recent lavas from the western United States. *Geophysical Research Letters* 19: 1863–1866.
55. Cerling TE, 1992, Use of carbon isotopes in paleosols as an indicator of the P(CO2) of the paleo–atmosphere. *Global Biogeochemical Cycles* 6: 307–314.
56. Cerling TE, J Kappelman, J Quade, SH Ambrose, NE Sikes, and P Andrews, 1992, Reply to comment on the paleoenvironment of Kenyapithecus at Fort Ternan. *Journal of Human Evolution* 23: 371–377.
57. McDougall I, FH Brown, TE Cerling, and JW Hillhouse, 1992, A reappraisal of the geomagnetic polarity time scale to 4 Ma using data from the Turkana Basin, East Africa. *Geophysical Research Letters* 19: 2349–2352.
58. Cerling, TE, Y Wang, and J Quade, 1993, Expansion of C4 ecosystems as an indicator of global ecological change in the late Miocene. *Nature* 361: 344–345.
59. Smith GA, Y Wang, TE Cerling, and JW Geissman, 1993, Comparison of a paleosol–carbonate isotope record to other records of Pliocene–early Pleistocene climate in the Western United States. *Geology* 21: 691–694.
60. Cerling TE and J Quade, 1993, Stable carbon and oxygen isotopes in soil carbonates. In (Ed. PK Swart, KC Lohmann, JA McKenzie, and SM Savin) *Climate Change in Continental Isotopic Records*. American Geophysical Union Geophysical Monograph 78, p. 217–231.
61. Wang Y, TE Cerling, J Quade, JR Bowman, GA Smith, and EH Lindsay, 1993, Stable isotopes of paleosol carbonates and fossil teeth as paleoecology and paleoclimate indicators: an example from the Upper Cenozoic non–marine sediments in the San Pedro Valley, Arizona. (Ed. PK Swart, KC Lohmann, JA McKenzie, and SM Savin) *Climate Change in Continental Isotopic Records*. American Geophysical Union Geophysical Monograph 78, p. 241–248.
62. Wang Y, TE Cerling, and WR Effland, 1993, Stable isotope ratios of soil carbonate and soil organic matter as indicators of forest invasion of prairie near Ames, Iowa. *Oecologia* 95: 365–369.
63. Quade J, TE Cerling, JR Bowman, and MA Jah, 1993, Paleoecologic reconstruction of floodplain environments using paleosols from upper Siwalik Group sediments, northern Pakistan. (In: JF Shroder, ed.), *Himalayas to the Sea: Geology and Geomorphology*. Rutledge Press. p. 213–226.
64. National Research Council, 1993, *Solid-Earth Sciences and Society.* Contributing author. National Academy of Sciences. 346 pp. . (Contributing author)
65. Cerling TE and H Craig, 1994, Cosmogenic production rates of 3He from 39 to 46 °N latitude, western USA and France. *Geochimica et Cosmochimica Acta* 58: 249–255.
66. Cerling TE and H Craig, 1994, Geomorphology and in–situ cosmogenic isotopes. *Annual Review of Earth and Planetary Sciences* 22: 273–317.
67. Cerling TE, RJ Poreda, and SL Rathburn, 1994, Cosmogenic 3He and 21Ne age of the Big Lost River Flood, Snake River Plains, Idaho. *Geology* 22: 227–230.
68. MacFadden BJ, Y Wang, TE Cerling, and R Anaya, 1994, South American fossil mammals and carbon isotopes: a 25 million year sequence from the Bolivian Andes. *Palaeogeography, Palaeoclimatology, Palaeoecology* 107: 257–268.
69. Wang Y, TE Cerling, and BJ MacFadden, 1994, Fossil horses and carbon isotopes: new evidence for Cenozoic dietary, habitat, and ecosystem changes in North America. *Palaeogeography, Palaeoclimatology, Palaeoecology* 107: 269–279.
70. Wang Y and TE Cerling, 1994, A model of fossil tooth enamel and bone diagenesis: implications for stable isotope studies and paleoenvironment reconstruction. *Palaeogeography, Palaeoclimatology, Palaeoecology*. 107: 281–289.
71. Quade J, N Solounias, and TE Cerling, 1994, Stable isotopic evidence from paleosol carbonates and fossil teeth in Greece for forest or woodlands over the past ll Mya. *Palaeogeography, Palaeoclimatology, Palaeoecology* 108: 41–53.
72. MacFadden BJ and TE Cerling, 1994, Fossil horses, carbon isotopes, and global change. *Trends in Ecology and Evolution* 9: 481–485.
73. Cerling TE, J Quade, and Y Wang, 1994, Expansion and emergence of C4 plants. *Nature* 371: 112.
74. Cerling TE, 1995, Chemistry of closed basin lake waters: a comparison between African Rift Valley lakes and some central North American lakes. in K Kelts and E Gierlowski–Kordesch (eds.) *Global Geological Record of Lake Basins*. IGCP–219 Monograph, p. 29–30.
75. Cerling TE, 1995, Lake Turkana and its precursors in the Turkana Basin, East Africa (Kenya and Ethiopia) in K Kelts and E Gierlowski–Kordesch (eds.) *Global Geological Record of Lake Basins*. IGCP–219 Monograph, p. 341–343.
76. Quade J, and TE Cerling, 1995, Expansion of C4 grasses in the late Miocene of northern Pakistan: evidence from stable isotopes in paleosols. *Palaeogeography, Palaeoclimatology, Palaeoecology* 115: 91–116.
77. Quade J, TE Cerling, P Andrews, B Alpagut, 1995, Paleodietary reconstruction of Miocene faunas from Pasalar, Turkey, using stable carbon and oxygen isotopes of fossil tooth enamel. *Journal of Human Evolution* 28: 373–384.
78. Thompson GA, TE Cerling, GB Dalrymple, et al. (17 authors total), 1995, *Ward Valley: An Examination of Seven Issues in Earth Sciences and Ecology*. National Academy Press. Washington DC. 212 pp.
79. Ehleringer JR and TE Cerling, 1995, Atmospheric CO2 and the ratio of intercellular to ambient CO2 concentrations in plants. *Tree Physiology* 15: 105–111.
80. Cerling TE, 1996, Pore water chemistry of an alkaline lake, In TC Johnson and E Odada, (Eds), *The Limnology, Climatology, and Paleoclimatology of East African Lakes.* Cambridge University Press, p. 225–240.
81. Cerling TE and Y Wang, 1996, Stable carbon and oxygen isotopes in soil CO2 and soil carbonate: theory, practice, and application to some prairie soils of the upper Midwestern North America. In (TW Boutton and S–I Yamasaki, eds), *Mass Spectrometry of Soils,* Marcel Dekker, New York. Pp. 113–131.
82. Slate JL, GA Smith, Y Wang, and TE Cerling, 1996, Carbonate–paleosol genesis in the Plio–Pleistocene St. David Formation, Southeastern Arizona. *Journal of Sedimentary Petrology* 66: 85–94.
83. MacFadden BJ and TE Cerling, 1996, Mammalian herbivore communities, ancient feeding ecology, and carbon isotopes: a 10 million–year sequence from the Neogene of Florida. *Journal of Vertebrate Paleontology* 16: 103–115.
84. Sharp ZD and TE Cerling, 1996, A laser GC–IRMS method for *in situ* carbon and oxygen isotope analysis of of carbonates and phosphates. *Geochimica et Cosmochimica Acta* 60: 2909–2916.
85. MacFadden BJ, TE Cerling, and J Prado, 1996, Cenozoic terrestrial ecosystem evolution in Argentina: evidence from carbon isotopes of fossil mammal teeth. *Palaios* 11: 319–327.
86. Cerling TE and ZD Sharp, 1996, Stable carbon and oxygen isotope analysis of fossil tooth enamel using laser ablation. *Palaeogeography, Palaeoclimatology, Palaeoecology* 126: 173–186.
87. Leakey MG, CS Feibel, RL Bernor, JM Harris, TE Cerling, KM Stewart, GW Stoors, A Walker, L Werdelin, and AJ Winkler, 1996, Lothagam: A record of faunal change in the Late Miocene of East Africa. *Journal of Vertebrate Paleontology* 16: 556–570.
88. Cerling TE, 1997, Late Cenozoic vegetation change, atmospheric CO2, and tectonics. In WF Ruddiman (ed), *Tectonic Uplift and Climate Change*. Plenum Publishing Corp. p. 313–327.
89. Fowell SJ, J Peck, TE Cerling, A Donnellan, J Feng, B Hallet, 1997, Data collected in Mongolia offer key clues to past climate. *EOS* 78: 320–321.
90. Cerling TE, JM Harris, BJ MacFadden, MG Leakey, J Quade, V Eisenmann, JR Ehleringer, 1997, Global change through the Miocene/Pliocene boundary. *Nature* 389: 153–158.
91. Ehleringer JR, TE Cerling, B Helliker, 1997, C4 photosynthesis, atmospheric CO2, and climate. *Oecologia* 112: 285–299.
92. Cerling TE and H Craig, 1997, Geomorphology and in–situ cosmogenic isotopes, in (W Dietrich and G Sposito, eds) *Hydrologic Processes from Catchment to Continental Scales*. Annual Reviews, Menlo Park, California. (Reprint of : Cerling TE and H Craig, 1994, Geomorphology and in–situ cosmogenic isotopes. Annual Review of Earth and Planetary Sciences 22: 273–317.)
93. Cerling TE, JM Harris, SH Ambrose, MG Leakey, N Solounias, 1997, Dietary and environmental reconstruction with stable isotope analyses of herbivore tooth enamel from the Miocene locality of Fort Ternan, Kenya. *Journal of Human Evolution* 33: 635–650.
94. Cerling TE, JM Harris, BJ MacFadden, 1998, Carbon isotopes, diets of North American equids, and the evolution of North American C4 grasslands. In (H Griffiths, Ed.)*Stable Isotopes and the Integration of Biological, Ecological, and Geochemicial Processes*. Bios Scientific Publishers, Oxford, p. 363–379.
95. Cerling TE, JR Ehleringer, and JM Harris, 1998, Carbon dioxide starvation, the development of C4 ecosystems, and mammalian evolution. *Philosophical Transactions of the Royal Society B* 353:159–171.
96. Sharp ZD and TE Cerling, 1998, Fossil records of seasonal climate and ecology: straight from the horses' mouth. *Geology* 26: 219–222.
97. Cerling TE, JM Harris, BJ MacFadden, MG Leakey, J Quade, V Eisenmann, JR Ehleringer, 1998, Miocene/Pliocene shift: one step or several? Reply. *Nature* 393: 127.
98. Webb RH, TS Melis, PG Griffiths, JG Elliott, TE Cerling, RJ Poreda, TW Wise, and J Pizzuto, 1998, Lava Falls Rapid in Grand Canyon: Effects of Late Holocene debris flows on the Colorado River. *US Geological Survey Professional Paper 1591*. 90 pp.
99. Cerling TE and CS Cook, 1998, You are what you eat: a traveler's diet in Mongolia. *Finnigan Analytical News* 1998 (2): 4–5.
100. Cerling TE, 1999, Paleorecords of C4 plants and ecosystems. In: (RF Sage and RK Monson, Eds.), *C4 Plant Biology.* Academic Press, San Diego. p. 445–469.
101. Handwerger DA, TE Cerling, and RL Bruhn, 1999, Cosmogenic 14C in carbonate rocks: preliminary results. *Geomorphology* 27: 13–24.
102. Cerling TE, RH Webb, RJ Poreda, AD Rigby, and TS Melis, 1999, Cosmogenic 3He ages and frequency of late Holocene debris flows from Prospect Canyon, Grand Canyon, USA. *Geomorphology* 27: 93–111.
103. MacFadden BJ, N Solounias, TE Cerling, 1999, Ancient diets, ecology, and extinction of 5–million–year old horses from Florida. *Science* 283: 824–827.
104. Cerling TE, 1999, Stable carbon isotopes in paleosol carbonates, In (M Thiry and R Simon–Coinçon, eds.), *Palaeoweathering, Palaeosurfaces, and Related Continental Deposits*. Blackwells, Cambridge. p. 43–60.
105. Cerling TE and JM Harris, 1999, Carbon isotope fractionation between diet and bioapatite in ungulate mammals and implications for ecological and paleoecological studies. *Oecologia* 120: 347–363.
106. Cerling TE, JM Harris, and MG Leakey, 1999, Browsing and grazing in modern and fossil proboscideans. *Oecologia* 120: 364–374.
107. Cerling TE, JR Ehleringer, JM Harris, and BJ MacFadden, 1999, Invited Lecture: Atmospheric CO2, terrestrial ecology, and mammalian evolution. in Armannsson, J (Ed*.) Geochemistry of the Earth’s Surface*. AA Balkema, Rotterdam. p. 7–9.
108. Ekart DD, TE Cerling, I Montanez, and N Tabor, 1999, A 400 million year carbon isotope record of pedogenic carbonate: Implications for atmospheric carbon dioxide. *American Journal of Science* 299: 805–817.
109. MacFadden BJ, TE Cerling, JM Harris, and J.Prado. 1999. Ancient latitudinal gradients of C3/C4 grasses interpreted from stable isotopes of New World Pleistocene horse (*Equus*) teeth. *Global Ecology and Biogeography* 8:137–149.
110. Mermut AR, R Amundson, and TE Cerling, 2000, The use of stable isotopes in studying carbonate dynamics in soils. In (R Lal, JM Kimble, H Eswaran, and BA Stewart, eds.) *Global Climate Change and Pedogenic Carbonates*. Lewis Publishers, London. p. 65–85.
111. Cerling TE and JR Ehleringer, 2000, Welcome to the C4–world. In: Gastaldo, RA and WM DiMichele (eds.) Phanerozoic Terrestiral Ecosystems. *The Paleontology Society Papers* 6: 273–286.
112. Marchetti DW and TE Cerling, 2000. Cosmogenic Ages of Boulder Deposit.. In (R. B. Waitt, Ed.) Red Gate to Blue Gate: Lava–Boulder Diamicts and Gravel, Aquarius Plateau through Waterpocket Fold (Capitol Reef), Utah. *Friends of the Pleistocene Rocky Mountain Section Field Guide, 44th Annual Reunion*. Privately printed. p. 15–17.
113. Farley KA, TE Cerling, and PG Fitzgerald, 2001, Cosmogenic 3He in igneous and fossil tooth enamel fluorapatite. *Earth and Planetary Science Letters* 185: 7–14.
114. Ehleringer JR and TE Cerling, 2001, Photosynthetic pathways and climate. In (Schültze D, et al., eds) *Global Biogeochemical Cycles in the Climate System*. Academic Press, 267–277.
115. Cerling TE 2001, Evolution of modern grasslands and grazers. In: *Palaeobiology II.* Briggs DE, ed., Blackwell Science, Oxford. p. 105–107.
116. Fenton CR, RH Webb, PA Pearthree, TE Cerling and RJ Poreda, 2001, Displacement rates on the Toroweap and Hurricane faults: implications for Quaternary downcutting in Grand Canyon, Arizona: *Geology* 29: 1035–1038.
117. Fenton CR, RH Webb, PA Pearthree, TE Cerling, RJ Poreda, and BP Nash, 2001, Cosmogenic 3He dating of western Grand Canyon basalts: implications for Quaternary incision of the Colorado River. In: RA Young and EE Spamer, eds., *The Colorado River: Origin and Evolution: Grand Canyon, Arizona*, Grand Canyon Association Monograph 12. pp. 147–152.
118. Marchetti DW and TE Cerling, 2001, Bedrock incision rates for the Fremont River, tributary of the Colorado River. In: RA Young and EE Spamer, eds., *The Colorado River: Origin and Evolution: Grand Canyon, Arizona*, Grand Canyon Association Monograph 12. pp. 119–121.
119. Fenton CR, TE Cerling, BP Nash, RH Webb, and RJ Poreda, 2002, Lava–dam outburst flood deposits in the Western Grand Canyon, In: (PK House, RH Webb, VR Baker, and DR Levish, eds.), *Ancient Floods, Modern Hazards: Principles and Applications of Paleoflood Hydrology*. Water Science and Application Series, Vol. 5, American Geophysical Union, Washington DC, p. 191–215.
120. Harris JM and TE Cerling, 2002, Dietary adaptations of extant and Neogene African suids. *Journal of Zoology* 256: 45–54.
121. Ehleringer JR and TE Cerling, 2002. Stable Isotopes. In: *Encyclopedia of Global Environmental Change. Vol. II*. (HA Mooney and JG Canadell, eds.), p. 544–550.
122. Ehleringer JR and TE Cerling, 2002. C3 and C4 photosynthesis. In: *Encyclopedia of Global Environmental Change. Vol. II.* (HA Mooney and JG Canadell, eds.), p. 186–190.
123. Ehleringer JR, TE Cerling, LB Flanagan, 2002, Global change and linkages between physiological ecology and ecosystem ecology. In: M Press, N Huntly, S Levin (eds.) *Ecology: Achievement and Challenge.* Blackwell, Oxford. p. 115–138.
124. Passey BH, ME Perkins, MR Voorhies, TE Cerling, JM Harris, and ST Tucker, 2002, Timing of C4 biomass expansion and environmental change in the Great Plains: an isotopic record from fossil horses. *Journal of Geology* 110: 123–140.
125. Passey BH and TE Cerling, 2002, Tooth enamel mineralization in ungulates: implications for recovering a primary isotopic time–series. *Geochimica et Cosmochimica Acta* 18: 3225–3234.
126. Ehleringer JR, TE Cerling, MD Dearing, 2002, Atmospheric CO2 as a global change driver influencing plant–animal interactions. *Integr. And Comp. Biol*. 42: 424–430.
127. Kohn MJ and TE Cerling, 2002, Stable isotope compositions of biological apatite. In MJ Kohn, J Rakovan, J Hughes, (eds.) *Phosphates: Geochemical, Geobiological, and Materials Importance*. Reviews in Mineralogy and Geochemistry. Mineralogical Society of America, Washington, DC vol. 48, 455–488.
128. Lee KN, CG Whipple, JS Applegate, SL Brantley, TE Cerling, et al (12 authors total), 2002, *Remediation at the Moab Site – Safety Now and for the Long Term.* National Research Council. National Academies Press. Washington DC.
129. Lee KN, CG Whipple, JS Applegate, SL Brantley, TE Cerling, et al (12 authors total), 2003, *Long–Term Stewardship of DOE Legacy Waste Sites – A Status Report*. National Research Council. National Academies Press. Washington DC.
130. Cerling TE, JM Harris, MG Leakey, N Mudida, 2003, Stable isotope ecology of Northern Kenya, with emphasis on the Turkana Basin, Kenya. In: MG Leakey and JM Harris (eds). *Lothagam: the Dawn of Humanity in Africa.* Columbia Univ. Press. p. 583–603.
131. Cerling TE, JM Harris, MG Leakey, 2003, Isotope paleoecology of the Nawata and Apak Formations at Lothagam, Turkana Basin, Kenya. In: MG Leakey and JM Harris (eds). *Lothagam: the Dawn of Humanity in Africa.* Columbia Univ. Press. p. 605–624
132. Sponheimer M, T Robinson, B Roeder, J Hammer, LK Ayliffe, BH Passey, TE Cerling, MD Dearing, JR Ehleringer, 2003. Digestion and passage rates of grass hays by llamas, alpacas, goats, rabbits, and horses. *Small Ruminant Research* 48: 149–154.
133. Sponheimer M, T Robinson, L Ayliffe, B Roeder, J Hammer, B Passey, A West, TE Cerling, MD Dearing, JR Ehleringer, 2003, Nitrogen isotopes in mammalian herbivores: Hair 15N values from a controlled–feeding study. *International Journal of Osteology*13: 80–87.
134. Sponheimer M, T Robinson, B Roeder, L Ayliffe, B Passey, TE Cerling, MD Dearing, JR Ehleringer, 2003, An experimental study of nitrogen flux in llamas: Is 14N preferentially excreted? *Journal of Archaeological Science* 30: 1649–1655.
135. Sponheimer M, T Robinson, L Ayliffe, B Roeder, L Shipley, E Lopez, A West, J Hammer, B Passey, TE Cerling, MD Dearing, and JR Ehleringer, 2003, An experimental study of carbon isotopes in the diets, feces and hair of mammalian herbivores. *Canadian Journal of Zoology* 81: 871–876.
136. Cerling TE, JM Harris, BH Passey, 2003, Dietary preferences of East African Bovidae based on stable isotope analysis. *Journal of Mammalogy* 84: 456–471.
137. Harris JM, MG Leakey, TE Cerling, AJ Winkler, 2003. Early Pliocene tetrapod remains from Kanapoi, Lake Turkana Basin, Kenya. *Natural History Museum of Los Angeles County, Contributions in Science* 498: 39–113.
138. Cerling TE, JA Hart, TB Hart, 2004, Stable isotope ecology in the Ituri Forest. *Oecologia* 138: 5–12.
139. Passey BH and TE Cerling, 2004, Response to the comment by MJ Kohn on ''Tooth Enamel Mineralization in Ungulates: Implications for Recovering a Primary Isotopic Time–Series,'' by BH Passey and TE Cerling (2002). *Geochimica et Cosmochimica Acta* 68: 407–410.
140. Fenton CR, RJ Poreda, BP Nash, RH Webb, TE Cerling, 2004, Geochemical discrimination of five Pleistocene lava dam outburst–flood deposits, Western Grand Canyon, Arizona. *Journal of Geology* 112: 91–112.
141. Cerling TE, BH Passey, LK Ayliffe, CS Cook, JR Ehleringer, JM Harris, MB Dhidha, SM Kasiki, 2004, Orphans’ tales: seasonally dietary changes in elephants from Tsavo National Park, Kenya. *Palaeogeography, Palaeoclimatology, Palaeoecology* 206: 367–376.
142. Cerling TE & K Viehl, 2004, Seasonal diet changes of the giant forest hog (*Hylochoerus meinertzhagani* Thomas) based on the carbon isotopic composition of hair. *African Journal of Ecology* 42: 88–92.
143. Baugh AT, AG West, EA Richart, TE Cerling, JR Ehleringer, MD Dearing, 2004, Stable isotope ratios (15N and 13C) of synoptic shrews (*Sorex*). *The Southwestern Naturalist* 49: 493–500.
144. Doran PT, SM Clifford, SL Forman, L Nyquist, DA Papanastassiou, BW Stewart, NC Sturchio, TD Swindle, TE Cerling, J Kargel, G McDonald, K Nishiizumi, R Poreda, JW Rice, K Tanaka , 2004, Mars chronology: assessing techniques for quantifying surficial processes. *Earth Science Reviews* 67: 313–337.
145. Coltrain JB, JM Harris, TE Cerling, JR Ehleringer, MD Dearing, J Ward, J Allen, 2004, Rancho La Brea stable isotope biogeochemistry and its implications for the paleaoecology of late Pleistocene, coastal southern California. *Palaeogeography, Palaeoclimatology, Palaeoecology* 205: 199–219.
146. Ayliffe LK, TE Cerling, T Robinson, AG West, M Sponheimer, BH Passey, J Hammer, B Roeder, MD Dearing, JR Ehleringer, 2004, Turnover of carbon isotopes in tail hair and breath CO2 of horses fed an isotopically varied diet. *Oecologia* 139:11–22.
147. West AG, LK Ayliffe, TE Cerling, TF Robinson, B Karren, MD Dearing, JR Ehleringer, 2004, Short–term diet changes revealed using stable carbon isotopes in horse tail–hair. *Functional Ecology* 18: 616–624.
148. Ward JK, JM Harris, TE Cerling, A Wiedenhoeft, MJ Lott, MD Dearing, JB Coltrain, JR Ehleringer, 2005, Carbon starvation in glacial trees recovered from La Brea tar pits. *Proceedings of the National Academy Sciences* 102: 690–694.
149. Marchetti DW & TE Cerling, 2005, Cosmogenic 3He exposure ages of Pleistocene debris flows and desert pavements in Capitol Reef National Park, Utah. *Geomorphology* 67: 423–435.
150. Cerling TE, JM Harris, MG Leakey, 2005, Environmentally driven dietary adaptations in African mammals. in JR Ehleringer, MD Dearing, TE Cerling (editors)*. History of Atmospheric CO2 and the Impacts on Plants, Animals, and Ecosystems*. Springer, New York. p. 258–272.
151. Ehleringer JR, MD Dearing, TE Cerling (editors), 2005*. History of Atmospheric CO2 and the Impacts on Plants, Animals, and Ecosystems*. Springer, New York. 530 pp.
152. Passey BH, TF Robinson, LK Ayliffe, TE Cerling, M Sponheimer, MD Dearing, BL Roeder, JR Ehleringer, 2005, Carbon isotopic fractionation between diet, breath, and bioapatite in different mammals. *Journal of Archaeological Science* 32: 1459–1470.
153. Bowen GJ, L Chesson, K Nielson, TE Cerling, JR Ehleringer, 2005, Treatment methods for the determination of 2H and  18O of hair keratin by continuous–flow isotope ratio mass spectrometry. *Rapid Communications in Mass Spectrometry* 19: 2371–2378.
154. Marchetti, DW, TE Cerling, EW Lips, 2005, A glacial chronology for the Fish Creek drainage of Boulder Mountain, Utah, USA. *Quaternary Research* 64: 264–271.
155. Passey BH, TE Cerling, GT Schuster, TF Robinson, BL Roeder, SK Krueger, 2005, Inverse methods for estimating primary input signals from time–averaged intra–tooth profiles. *Geochimica et Cosmochimica Acta* 69:4101–4116.
156. Marchetti DW, JC Dohrenwend, TE Cerling, 2005, Geomorphology and rates of landscape change in the Fremont River drainage, northwestern Colorado Plateau. In (JL Pederson and CM Dehler, eds) *Interior Western United States Field Guide 6*. Geological Society of America, Denver, CO, USA. p. 79–100. doi: 10.1130/2005.fld006(04).
157. Bowen GJ, DA Winter, HJ Spero, RA Zierenberg, MD Reeder, TE Cerling, JR Ehleringer, 2005, Stable hydrogen and oxygen isotope ratios of bottled waters of the world. *Rapid Communications in Mass Spectrometry* 19: 3442–3450.
158. Badgely C, S Nelson, J Barry, AK Behrensmeyer, TE Cerling, 2005, Testing models of faunal turnover with Neogene mammals from Pakistan. In (D.E. Lieberrman, R. J. Smith, J. Kelly, eds) *Interpreting the Past: Essays on Human, Primate, and Mammal Evolution.* Brill Academeic Publishers, Boston. p. 29–46.
159. Cerling TE, G Wittemyer, HB Rasmussen, F Vollrath, CE Cerling, TJ Robinson, I Douglas–Hamilton, 2006, Stable isotopes in elephant hair documents migration patterns and diet changes. *Proceedings of the National Academy of Sciences* 103: 371–373.
160. Sponheimer M, TF Robinson, TE Cerling, L Tegland, BL Roeder, L Ayliffe, MD Dearing, JR Ehleringer. 2006, Turnover of stable carbon isotopes in the muscle, liver, and breath CO2 of alpacas (*Lama pacos*). *Rapid Communications in Mass Spectrometry* 20: 1395–1399.
161. West JB, GJ Bowen, TE Cerling, JR Ehleringer, 2006, Stable isotopes as one of nature’s ecological recorders. *Trends in Ecology and Evolution* 21: 408–414.
162. Levin, NE, TE Cerling, BH Passey, JM Harris, JR Ehleringer, 2006, Stable isotopes as a proxy for paleoaridity. *Proceedings of the National Academy of Science* 103: 11201–11205.
163. Fenton CR, RH Webb, TE Cerling, 2006, Peak Discharge of a Pleistocene lava–dam outburst flood in Grand Canyon, Arizona, USA, *Quaternary Research* 65: 324–335.
164. Robinson, TF, M Sponheimer, BL Roeder, BH Passey, TE Cerling, MD Dearing, JR Ehleringer, 2006, Digestibility and nitrogen retention in llamas and goats fed alfalfa, C3 grass, and C4 grass hays. *Small Ruminant Research* 64:162–168.
165. Sponheimer, M, BH Passey, DJ de Ruiter, D. Guatelli–Steinberg, TE Cerling, JA Lee–Thorp, 2006, Isotopic evidence for dietary variability in the early hominin *Paranthropus robustus*. *Science* 314: 980–982.
166. Passey BH & TE Cerling, 2006, In situ stable isotope analysis (13C and 18O) of very small teeth using laser ablation GC/IRMS. *Chemical Geology* 235: 238–249.
167. Passey BH, TE Cerling, MA Chan, 2006, Dam fun: A scale–model classroom experiment for teaching basic concepts in hydrology and sedimentary geology. *Journal of Geological Education* 54: 487–490.
168. Quade J & TE Cerling, 2007, Carbonate stable isotopes: Non–lacustrine terrestial studies, In SA Elias (Ed.) *Encyclopedia of Quaternary Science*, Elsevier, p. 339–351.
169. Cerling, TE, LK Ayliffe, MD Dearing, JR Ehleringer, BH Passey, DW Podlesak, A–M. Torregrossa, AG West, 2007, Determining biological tissue turnover using stable isotopes: the reaction progress variable. *Oecologia* 151:175–189.
170. Bowen GJ, JR Ehleringer, LA Chesson, E Stange, TE Cerling, 2007, Stable isotope ratios of tap water in the contiguous USA. *Water Resources Research* 43, W03419, doi:10.1029/2006WR005186.
171. Ségalen, L, JA Lee–Thorp, and TE Cerling, 2007, Timing of C4 grass expansion across Sub–Saharan Africa. *Journal of Human Evolution* 53: 549–559.
172. Bowen, GJ, TE Cerling, JR Ehleringer, 2007, Stable isotopes and human water resources: signals of change. In T Dawson and R Siegwolf (eds), *Isotopes as Tracers of Ecological Change*, Elsevier Press. p. 285–300.
173. Passey, BH, TE Cerling, & NE Levin, 2007, Temperature dependence of acid fractionation for modern and fossil tooth enamels. *Rapid Communications in Mass Spectrometry* 21: 2853–2859.
174. Cerling TE, P Omondi, & AN Macharia, 2007, Diets of Kenyan elephants from stable isotopes and the origin of confiscated ivory in Kenya. *Journal of African Ecology* 45: 614–623. doi: 10.1111/j.1365–2028.2007.00784.
175. Behrensmeyer AK, J Quade, TE Cerling, IA Kahn, P Copeland, L Roe, J Hicks, P Stubblefield, BJ Willis, C Latorre, 2007, The structure and rate of late Miocene expansion of C4 plants: evidence from lateral variation in stable isotopes in paleosols of the Siwalik Group, northern Pakistan. *Geological Society of America Bulletin* 119: 1486–1505.
176. Cerling, TE, GJ Bowen, JR Ehleringer, & M Sponheimer, 2007, The reaction progress variable and isotope turnover in biological systems. In T Dawson and R Siegwolf (eds), *Isotopes as Tracers of Ecological Change*, Elsevier Press. 163–171.
177. Ehleringer JR, TE Cerling, JB West, 2007, Forensic applications of stable isotope ratio analysis, in Blackledge RD (ed.) *Forensic Analysis on the Cutting Edge: New Mehtods for Trace Evidence Analysis*. Wiley–Interscience. p. 399–422.
178. West JB, JR Elheringer, TE Cerling, 2007, Geography and vintage predicted by a novel GIS model of wine 18O. *Journal of Agricultural and Food Chemistry* 55: 7075–7083.
179. Marchetti DW, Cerling TE, Dohrenwend JC, Gallin W, 2007, Ages and significance of glacial and mass movement deposits on the west side of Boulder Mountain, Utah, USA *Palaeogeography, Palaeoclimatology, Palaeoecology* 252 503–513.
180. Podlesak, DW, A–M Torregrossa, JR Ehleringer, MD Dearing, BH Passey, and TE Cerling, 2008. Turnover of oxygen and hydrogen isotopes in the body water, CO2, hair and enamel of a small mammal after a change in drinking water. *Geochimica et Cosmochimica Acta* 72: 19–35.
181. Ehleringer, JR, GJ Bowen, LA Chesson, AG West, DW Podlesak, TE Cerling, 2008, Hydrogen and oxygen isotope ratios in human hair are related to geography. *Proceedings of the National Academy of Sciences* 105: 2788–1793.
182. Chesson, LA, DW Podlesak, AJ Thompson, TE Cerling, JR Ehleringer, 2008, Variation of hydrogen, carbon, nitrogen and oxygen stable isotope ratios in an American diet: fast food meals. *Journal of Agricultural and Food Chemistry* 56: 4084–4091.
183. Harris JM, TE Cerling, MG Leakey, BH Passey, 2008, Stable isotope ecology of fossil hippopotamids from the Lake Turkana Basin region of East Africa. *Journal of Zoology* 275: 323–331.
184. Cerling, TE, JA Hart, P Kaleme, H Klingel, MG Leakey, NE Levin, RL Lewison, BH Passey, JM Harris, 2008, Stable isotope ecology of modern *Hippopotamus amphibius* in East Africa. *Journal of Zoology* 276: 204–212.
185. National Research Council (DePaolo D, TE Cerling, S Hemming, A Knoll, F Richter, R Rudnick, L Sixtrude, J Trefil), 2008. *Origin and Evolution of Earth: Research Questions for a Changing Planet.* National Academy of Science Press. Washington DC. 185 pp.
186. Levin NE, SW Simpson, J Quade, TE Cerling, S Semaw, SR Frost, 2008, Herbivore enamel carbon isotopic composition and the environmental context of *Ardipithecus* at Gona, Ethiopia. In: *The Geology of Early Humans in the Horn of Africa* (editors J Quade and JG Wynn). Geological Society of America Special Paper 446: 215–234.
187. Ehleringer JR, TE Cerling, JB West, DW Podlesak, LA Chesson, GJ Bowen, 2008, Spatial Considerations of Stable Isotope Analyses in Environmental Forensics. In (Hester, Ronald E.; Harrison, Roy M. (Eds.) *Issues in Environmental Science and Technology Series, Vol. 26*. Springer, Berlin. pp. 38–53.
188. Badgley C, JC Barry, ME Morgan, SV Nelson, AK Behrensmeyer, TE Cerling, D Pilbeam, 2008, Ecological changes in Miocene mammalian record show impact of prolonged climatic forcing. *Proceedings of the National Academy of Sciences*. 105:12145–12149. doi:10.1073/pnas.0805592105
189. Passey BH, LK Ayliffe, A Kaakinen, Z Zhaoqun, Z Yanming, Z Liping, TE Cerling, M Fortelius, 2009, Strengthened East Asian summer monsoons during a period of high–latitude warmth? Isotopic evidence from Mio–Pliocene fossil mammals and soil carbonates from northern China. *Earth and Planetary Science Letters* 277: 443–452. doi:10.1016/j.epsl.2008.11.008.
190. Chesson LA, JR Ehleringer, TE Cerling, 2009, American fast food isn't all–corn based. *Proc. National Acad. Sci.* 106: E8. doi 10.1073 pnas.0811787106
191. Chesson LA, DW Podlesak, TE Cerling JR Ehleringer, 2009, Evaluating uncertainty in the calculation of non–exchangeable hydrogen fractions within organic materials. *Rapid Commun. Mass Spectrom*. 23: 1275–1280. DOI: 10.1002/rcm.4000187.
192. Bowen GJ, JR Ehleringer, L Chesson, A Thompson, D Podlesak, TE Cerling, 2009, Dietary and physiological controls on the hydrogen and oxygen isotope ratios of hair from mid–20th century indigenous populations. *American Jour. Phys. Anthro*. 139: 494–504.
193. Prideaux GJ, LK Ayliffe, LRG DeSantis, BW Schubert, PF Murray, MK Gagan, TE Cerling, 2009, Extinction implications of a saltbush diet in a giant Pleistocene kangaroo. *Proceeding of the National Academy of Science*. 106:11646–11650. doi:10.1073/pnas.0900956106
194. Wittemyer, G, TE Cerling, I Douglas–Hamilton, 2009, Establishing longitudinal diet chronologies from isotopic profiles in serially collected animal tissues: An example using tail hairs from African elephants. *Chemical Geology* 267: 3–11. doi:10.1016/j.chemgeo.2008.08.010
195. Levin NE, EJ Zipser, TE Cerling, 2009, Isotopic composition of waters from Ethiopia and Kenya: Insights into moisture sources for eastern Africa*. Journal of Geophysical Research* 114: D23306, doi:10.1029/2009JD012166.
196. Cerling TE, G Wittemyer, JR Ehleringer, CH Remien, I Douglas–Hamilton, 2009, History of Animals using Isotope Records (HAIR): A 6–year dietary history of one family of African elephants. *Proceedings of the National Academy of Science* 106: 8093–8100; doi:10.1073/pnas.0902192106.
197. Yeakel JD, Patterson BD, Fox–Dobbs K, Okumura MM, Cerling TE, Moore JW, Koch PL, Dominy NJ, 2009, Cooperation and individuality among man–eating lions. *Proceedings of the National Academy of Science* 106: 19040–19043. doi 10.1073 pnas.0905309106.
198. Sponheimer M, D Codron, BH Passey, DJ de Ruiter, TE Cerling, JA Lee–Thorp, 2009, Using carbon isotopes to track dietary change in modern, historical, and ancient primates. *American Journal of Physical Anthropology* 140: 661–670.
199. Chesson LA, DW Podlesak, BR Erkkila, TE Cerling, JR Ehleringer, 2010, Isotopic consequences of consumer food choice: hydrogen and oxygen stable isotope ratios in foods from fast food restaurants versus supermarkets. *Food Chemistry* 119: 1250–1256.doi:10.1016/j.foodchem.2009.07.046
200. Ehleringer JR, AH Thompson, D Podlesak, GJ Bowen, TE Cerling, T Park, P Dostie, H Schwarcz, 2010, A framework for the incorporation of isotopes and isoscapes in geospatial forensic application. In: (Editors JB West, GJ Bowen, KP Tu, TE Dawson) *Isoscapes: Understanding movement, pattern and process on Earth through isotope mapping*. Springer–Verlag. p. 357–388.
201. Hobson KA, R Barnett–Johnson, TE Cerling, 2010, Using isoscapes to track animal migration. In: (Editors JB West, GJ Bowen, KP Tu, TE Dawson) *Isoscapes: Understanding movement, pattern and process on Earth through isotope mapping*. Springer–Verlag. p. 273–298.
202. Thompson AH, LA Chesson, DW Podlesak, TE Cerling, JR Ehleringer, 2010, Stable isotope analysis of modern human hair: An Asian geographic transect.*American Journal of Physical Anthropology* 141: 440–451. DOI: 10.1002/ajpa.21162
203. National Research Council (RM Hamilton, B Asfaw, GM Ashley, TE Cerling, AS Cohen, PB deMenocal, AP Hill, TC Johnson, JE Kutzbach, R Potts, KE Reed, AR Rogers, AC Walker), 2010, *Understanding Climate’s Influence on Human Evolution*. US National Academy of Science Press, Washington, DC. 128 pp.
204. Cerling TE, JM Harris, MG Leakey, BH Passey, NE Levin, 2010, Stable carbon and oxygen isotopes in East African mammals: Modern and fossil. In (L Werdelin and W Sanders, eds) *Cenozoic Mammals of Africa*. University of California Press. p. 949–960.
205. Cerling TE, NE Levin, J Quade, JG Wynn, DL Fox, JD Kingston, RG Klein, FH Brown, 2010, Paleoenvironment of Aramis Ethiopia. *Science* 328:1105–d; DOI:10.1126/science.1185274.
206. O’Grady SP, CH Remien, AR Wende, LO Valenzuela, LE Enright, LA Chesson, ED Abel, TE Cerling, JR Ehleringer, 2010, Aberrant water homeostasis detected by stable isotope analysis. *PLoS ONE* 5(7): e11699. doi:10.1371/journal.pone.0011699
207. Chesson LA, LO Valenzuela, SP O’Grady, TE Cerling, JR Ehleringer, 2010, Links between purchase location and the stable isotope ratios of bottled water, soda, and beer in USA. *Journal of Agricultural and Food Chemistry* 58: 7311–7316. DOI: 10.1021/11003539
208. Passey BH, NE Levin, TE Cerling, FH Brown, J Eiler, 2010, High temperature environments of human evolution in East Africa based on bond ordering in paleosol carbonates. *Proceedings of the National Academy of Sciences* 107: 11245–11249. doi: 10.1073/pnas.1001824107.
209. Chesson LA, Valenzuela L, O’Grady S, Cerling TE, Ehleringer JR, 2010, Hydrogen and oxygen stable isotope ratios of milk in the USA. *Journal of Agricultural and Food Chemistry* 58: 2358–2363.
210. Lee–Thorp JA, M Sponheimer, BH Passey, DJ de Ruiter, TE Cerling, 2010, Stable isotopes in fossil hominin tooth enamel demonstrates a fundamental dietary shift in the Pliocene. *Philosophical Transactions of the Royal Society B*: 365, 3389–3396.
211. O’Grady SP, LE Enright, JE Barnette, TE Cerling, JR Ehleringer, 2010, Accuracy and precision of cavity ring–down spectroscopy (CRDS) in the analysis of H and O in human urine. *Isotopes in Environmental and Health Studies* 46: 476–483.
212. Chan MA, J Gosse, TE Cerling, K Netoff, 2010, Weathering pits in Jurassic Sandstones: Cosmogenic exposure age dating of geomorphic surfaces in Southern Utah. In: *Geology of South–Central Utah* (SM Carney, DE Tabet, and CL Johnson, editors) Utah Geological Association Publication 39, p. 1–18.
213. Hynek SA, DW Marchetti, DP Fernandez, TE Cerling, 2010, Composition, pre–eruptive zonation, and geochronologic significance of the ca. 450 ka Diamante Tuff, Andean Cordillera (34 S), Argentina. *Quaternary Geochronology* 5: 591–601.
214. Chesson LA, BJ Tipple, BR Erkkila, TE Cerling, JR Ehleringer, 2010, B–HIVE: Beeswax hydrogen isotopes as validation of environment. Part I: Bulk honey and honeycomb stable isotope analysis. *Food Chemistry* 125: 576–581. [doi:10.1016/j.foodchem.2010.09.050](http://dx.doi.org/10.1016/j.foodchem.2010.09.050)
215. Marchetti DW, CM Bailey, TE Cerling, S Bergman, 2011, Timing of glaciation and last glacial maximum paleoclimate estimates from the Fish Lake Plateau, Utah. *Quaternary Research* 75: 183–195.
216. Chesson LA, JR Ehleringer, TE Cerling, 2011, Light–element isotopes (H, C, N, and O) as tracers of human diet: A case study on fast food meals. M. Baskaran (ed.), *Handbook of Environmental Isotope Geochemistry, Advances in Isotope Geochemistry*, Springer–Verlag Berlin Heidelberg. p. 707–723. DOI 10.1007/978–3–642–10637–8\_33
217. Uno KT, TE Cerling, JM Harris, Y Kunimatsu, MG Leakey, M Nakatsukasa, H Nakaya. 2011. Late Miocene to Pliocene carbon isotope record of differential diet change among East Africa herbivores. *Proceedings of the National Academy of Science* 108: 6509–6514.
218. Martinelli LA, GB Nardoto, FD Rinaldi, JP Ometto, LA Chesson, TE Cerling, JR Ehleringer. 2011, Worldwide stable carbon and nitrogen isotopes of Big Mac patties: An example of a truly ‘‘glocal’’ food. *Food Chemistry* 127: 1712–1718. doi:10.1016/j.foodchem.2011.02.046
219. Levin NE, FH Brown, AK Behrensmeyer, R Bobe, TE Cerling, 2011. Paleosol carbonates from the Omo Group: isotopic records of local and regional environmental change in East Africa. *Palaeogeography, Palaeoecology Palaeoclimatology* 307: 75–89. doi:10.1016/j.palaeo.2011.04.026
220. Cerling TE, E Mbua, FM Kirera, FK Manthi, FE Grine, MG Leakey, M Sponheimer, KT Uno. 2011. Diet of *Paranthropus boisei* in the early Pleistocene of East Africa. *Proceedings of the National Academy of Science* 108: 9337–9341. doi/10.1073/pnas.1104627108
221. Cerling TE, JG Wynn, SA Andanje, MI Bird, D Kimutai, NE Levin, W Mace, AN Macharia, J Quade, CH Remien. 2011. Woody cover and hominin environments in the past 6 million years. *Nature* 476: 51–56.
222. Marchetti DW, CM Bailey, SA Hynek, TE Cerling. 2011. Quaternary geology and geomorphology of the Fremont River drainage basin, south–central Utah: *in* Beard LS, Karlstrom KE, Young RA, and Billingsley GH, *Origin and Evolution of the Colorado River System*. U.S. Geological Survey Open–file Report 2011–1210, p. 206−211
223. Valenzuela LO, LA Chesson, SP O’Grady, TE Cerling, JR Ehleringer, 2011, Spatial distributions of carbon, nitrogen and sulfur isotope ratios in human hair across the central United States. *Rapid Communications in Mass Spectrometry* 25: 861–868. DOI: 10.1002/rcm.4934
224. Cerling TE, E Mbua, FM Kirera, FK Manthi, FE Grine, MG Leakey, M Sponheimer, KT Uno, JA Lee–Thorp, 2011. Response to Godfrey et al: Out of the woods. *Proceeding of the National Academy of Science*. doi: 10.1073/pnas.1111409108.
225. Cerling TE, NE Levin, BH Passey. 2011. Stable isotope ecology in the Omo–Turkana Basin. *Evolutionary Anthropology* 20: 228–237.
226. Chesson LA, LO Valenzuela, GJ Bowen, TE Cerling, JR Ehleringer, 2011. Consistent predictable patterns in the hydrogen and oxygen stable isotope ratios of animal proteins consumed by modern humans in the USA. *Rapid Communications in Mass Spectrometry* 25: 3713–3722. DOI: 10.1002/rcm.5283.
227. Podlesak DW, Bowen GJ, O'Grady S, Cerling TE, Ehleringer JR, 2012, δ2H and δ18O of human body water: a GIS model to distinguish residents from non-residents in the contiguous USA. *Isotopes in Environmental and Health Studies* 48: 259-279.
228. Marchetti DW, SA Hynek, TE Cerling, 2012, Gravel–capped benches above northern tributaries of the Escalante River, south–central Utah. *Geosphere* 8: 835–853. doi:10.1130/GES00772.1
229. O'Grady SP, LO Valenzuela, CH Remien, LE Enright, MJ Jorgensen, JR Kaplan, JD Wagner, TE Cerling, JR Ehleringer, 2012, Hydrogen and oxygen isotope ratios in body water and hair: modeling isotope dynamics in nonhuman primates. *American Journal of Primatology* 74: 651–660. doi: 10.1002/ajp.22019.
230. Valenzuela LO, LA Chesson, GJ Bowen, TE Cerling, JR Ehleringer, 2012. Dietary heterogeneity among western industrialized countries reflected in the stable isotope ratios of human hair. *PLOS ONE*. 10.1371/journal.pone.0034234
231. Tipple BJ, LA Chesson, BR Erkkila, TE Cerling, JR Ehleringer. 2012. B–HIVE: Beeswax Hydrogen Isotopes as Validation of Environment. Part II. Compound–specific hydrogen isotope analysis. *Food Chemistry* 134: 494–501. doi:10.1016/j.foodchem.2012.02.106
232. Macharia AN, KT Uno, TE Cerling, FH Brown, 2012, Isotopically distinct modern carbonates in abandoned livestock corrals in Northern Kenya*. Journal of Archaeological Science* 39: 2198–2205.
233. Hynek SA, BH Passey, JL Prado, FH Brown, TE Cerling, J Quade. 2012. Small mammal carbon isotope ecology across the Miocene–Pliocene boundary, northwestern Argentina. *Earth and Planetary Science Letters* 321–322: 177–188. doi:10.1016/j.epsl.2011.12.038
234. Blumenthal SA, KL Chritz, JM Rothman, TE Cerling, 2012, Detecting intra–annual dietary variability in wild mountain gorillas by stable isotope analysis of feces. *Proceedings of the National Academy of Science* 109: 21277–21282. doi: 10.1073/pnas.1215782109
235. Cerling TE, FK Manthi, E Mbua, LN Leakey, MG Leakey, RE Leakey, FH Brown, FE Grine, JA Hart, P Kaleme, H Roche, KT Uno, BA Wood. 2013. Stable isotope-based diet reconstructions of Turkana Basin hominins. *Proceedings of the National Academy of Sciences* 110: 10501–10506.
236. Cerling TE, Chitz KL, Jablonski NG, Leakey MG, Manthi FK. 2013. Diet of *Theropithecus* from 4 to 1 Ma in Kenya. *Proceedings of the National Academy of Sciences* 110: 10507–10512.
237. Sponheimer M, Alemsegad Z, Grine FE, Kimbel WH, Leakey MG, Lee-Thorp JA, Manthi FK, Reed K, Wood BA, Wynn JG. 2013. Isotopic Evidence of early hominin diets: past, present, and future. *Proceedings of the National Academy of Sciences* 110: 10513–10518.
238. Uno KT, J Quade, DC Fisher, G Wittemyer, I Douglas–Hamilton, SA Andanje, P Omondi, M Litoroh, TE Cerling. 2013. Bomb–curve radiocarbon (14C) dating of recent biologic tissues and applications to stable isotope (paleo)ecology and wildlife forensics. *Proceedings of the National Academy of Sciences* 110: 11736–11741.
239. Sponheimer M, Alemseged Z, Cerling TE, Grine FE, Kimbel WJ, Leakey MG, Lee-Thorp J, Manthi FK, Reed KE, Wood BA, Wynn JG, 2013, On a reluctance to conjecture about animal food. *Proceedings of the National Academy of Sciences* 110: doi/10.1073/pnas.1314368110.
240. Kimura Y, LL Jacobs, TE Cerling, KT Uno, K Ferguson, LJ Flynn, R Patnaik, 2013. Isotopes of murine rodent molars (13.8 – 6.5 million years old) show niche partitioning and dental morphological evolution driven by C3-C4 vegetation shift. PLoS ONE 8(8): e69308. doi:10.1371/journal.pone.0069308.
241. Cerling TE (Editor) 2014. *Treatise of Geochemistry. Volume 14. Archaeology and Anthropology.* Elsevier, London. 393 p.
242. Cerling TE. 2014. Editor's Volume editor's introduction. In: (Cerling TE, Editor) *Treatise of Geochemistry. Volume 14. Archaeology and Anthropology*. Elsevier, London. p. xxiii-xxiv.
243. Cerling TE. 2014. Stable isotope evidence for hominin environments in eastern Africa. In: (Cerling TE, Editor) *Treatise of Geochemistry. Volume 14. Archaeology and Anthropology.* Elsevier, London. p. 157-167.
244. Chesson LA, BJ Tipple, JD Howa, GJ Bowen, JE Barnette, TE Cerling, JR Ehleringer. 2014. Stable isotopes in forensics applications. In: (Cerling TE, Editor) *Treatise of Geochemistry. Volume 14. Archaeology and Anthropology*. Elsevier, London. p. 285-317.
245. Sponheimer M, TE Cerling, 2014, Investigating ancient diets using stable isotopes in bioapatites. In: (Cerling TE, Editor) *Treatise of Geochemistry. Volume 14. Archaeology and Anthropology*. Elsevier, London. p. 341-355.
246. Blumentahl SA, Chritz KL, Cerling TE, Bromage TG, Kozdon R, Valley JW, 2014. Stable isotope time-series in mammalian teeth: *in situ* δ18O from the innermost enamel layer. *Geochimica et Cosmochimica Acta.* 124: 223–236. http://dx.doi.org/10.1016/j.gca.2013.09.032
247. Marchetti DW, SA Hynek, TE Cerling, 2014, Cosmogenic 3He exposure ages of lava flows in the northwestern Payún Matru volcanic field, Mendoza Province, Argentina. *Quaternary Geochronology* 19: 67-75.
248. Macharia AN, TE Cerling, MJ Jorgensen, JR Kaplan, 2014, The hair-diet 13C and 15N fractionation in *Chlorocebus aethiops sabaeus* based on a controlled diet study. *Annales Zoologici Finnici* 51: 66-72.
249. Patnaik R, Cerling TE, Uno KT, Fleagle JG, 2104, Diet and habitat of Siwalik primates *Indopithecus*, *Sivaladapis* and *Theropithecus*. *Annales Zoologici Finnici* 51: 123-142.
250. Cerling TE, FH Brown, JG Wynn, 2014, On the environment of Aramis: A comment on White in Domínguez-Rodrigo. *Current Anthropology*, 55: 469-470.
251. Remien CH, FR Adler, LA Chesson, L Valenzuela, JR Ehleringer, TE Cerling, 2014, Deconvolution of isotope signals from bundles of multiple hairs. *Oecologia* 175: 781-789. doi 10.1007/s00442-014-2945-3
252. United Nations Office of Drugs and Crime, 2014, *Guidelines for methods and procedures of ivory sampling and laboratory analysis*. Authors: TE Cerling, EO Espinoza, FM Gakuya, GK Bar-Gal, AJ Guithrie, SH Hitchin, K Hornig, RJM Jobin, AMT Linacre, GM Miller, RS Ogden, K Ouitavon, RBPotter, B Van Rensburg, D Schindel, FT Sitam, D Stewart, J Thaler, MV Tien, E Toledo, FD Wamukoya, SK Wasser, B Weir, YC Xu, SA Ziegler. United Nations Office of Drugs and Crime, New York. 119 pp.
253. Miller OL, DK Solomon, DP Fernandez, TE Cerling, DR Bowling, 2014, Evaluating the use of strontium isotopes in tree rings to record the isotopic signal of dust deposited on the Wasatch Mountains. *Applied Geochemistry* 50: 53-65. [doi:10.1016/j.apgeochem.2014.08.004](http://dx.doi.org/10.1016/j.apgeochem.2014.08.004)
254. Brennan SR, DP Fernandez, G Mackey, TE Cerling, CP Bataile, GJ Bowen, MJ Wooller, (2014) Strontium isotope variation and carbonate versus silicate weathering in rivers from across Alaska: implications for provenance studies. *Chemical Geology* 389:167-181. [doi:10.1016/j.chemgeo.2014.08.018](http://dx.doi.org/10.1016/j.chemgeo.2014.08.018)
255. Bender RL, DL Dufour, LO Valenzuela, TE Cerling, M Sponheimer, JC Reina, JR Elheringer (2015) Stable isotopes (carbon, nitrogen, sulfur), diet, and anthropometry in urban Colombian women: Investigating socioeconomic differences. *American Journal of Human Biology* 27: 207–218**.** doi: 10.1002/ajhb.22640
256. Chesson LA, BJ Tipple, JE Barnette, TE Cerling, JR Ehleringer (2015) The potential for application of ink stable isotope analysis in questioned document examination. *Science & Justice* 55: 27–33. doi: [10.1016/j.scijus.2014.05.010](http://dx.doi.org/10.1016/j.scijus.2014.05.010).
257. Brennan SR, DP Fernandez, CE Zimmerman, TE Cerling, RJ Brown, MJ Wooller (2015) Strontium isotopes in otoliths of a non-migratory fish (slimy sculpin): implications for provenance studies. *Geochimica et Cosmochimica Acta* 149: 32-45.
258. Chritz KL, F Marshall, ME Zagal, F Kirera, TE Cerling (2015) Environments and livestock disease risk of early herders in the later Holocene of the Lake Victoria Basin, Kenya. *Proceedings of the National Academy of Sciences* 112: 3674–3679. www.pnas.org/cgi/doi/10.1073/pnas.1423953112
259. Saarinen J, A Karme, T Cerling, K Uno, L Saäilä, S Kasiki, S Ngene, T Obari, E Mbua, FK Manthi, M Fortelius (2015) A new tooth wear-based dietary analysis method for Proboscidea (Mammalia). *Journal of Vertebrate Paleontology*, doi: 10.1080/02724634.2014.918546
260. Brennan SR, CE Zimmerman, DP Fernandez, TE Cerling, MV McPhee, MJ Wooller (2015) Strontium isotopes delineate fine-scale natal origins and migration histories of Pacific salmon. *Science Advances* doi:10.1126/sciadv.1400124
261. Cerling TE, Brown FH, Wynn JG (2015) On the environment of Aramis: Concerning comment and replies of August 2014. *Current Anthropology* 56: 445.
262. Zazzo A, Cerling TE, Ehleringer JR, Moloney AP, Monahan FJ, Schmidt O (2015) Isotopic composition of sheep wool records seasonality of climate and diet. *Rapid Communications in Mass Spectrometry* *29* (15): 1357-1369.
263. Cerling TE, Andanje SA, Blumenthal SA, Brown FH, Chritz KL, Harris JM, Hart JA, Kirera FM, Kaleme P, Leakey LN, Leakey MG, Levin NE, Manthi FK, Passey BH, Uno KT (2015) Dietary changes of large herbivores in the Turkana Basin, Kenya from 4 to 1 million years ago. *Proceedings of the National Academy of Sciences.* 112: 11467-11472.
264. Kusaka S, Uno KT, Nakano T, Nakatsukasa M, Cerling TE (2015) Carbon isotope ratios of human tooth enamel record the evidence of terrestrial resource consumption during the Jomon period, Japan, *American Journal of Physical Anthropology* 158: 300-311. doi:10.1002/ajpa.22775.
265. Eagle RA, Enriquez M, Grellet-Tinner G, Pérez-Huerta A, Hu D, Tütken T, Montanari S, Loyd SF, Ramirez P, Tripati AK, Kohn MJ, Cerling TE, Chiappe LM, Eiler JM (2015) Isotopic ordering in eggshells reflects body temperatures and suggests differing thermophysiology in two Cretaceous dinosaurs. *Nature Communications* 6: article 8296. doi:10.1038/ncomms9296.
266. Garcia N, Feranec RS, Passey BH, Cerling TE, Arsuaga J–L. (2015). Exploring the potential of laser ablation carbon isotope analysis for examining ecology during the ontogeny of Middle Pleistocene hominins from Sima de los Huesos (northern Spain) PLOS ONE. doi:10.1371/journal.pone.0142895
267. Blumenthal SA, Rothman JM, Chritz KL, Cerling TE (2016) Stable isotopic variation in tropical forest plants for applications in primatology. *American Journal of Primatology*. 78: 1041-1054. doi: 10.1002/ajp.22488
268. Cerling TE, Barnette JE, Bowen GJ, Chesson LA, Ehleringer JR, Remien CH, Shea P, Tipple B, West JB. (2016) Forensic stable isotope biogeochemistry. *Annual Reviews of Earth and Planetary Science.* 44:175–206*.*
269. Cotton JM, Cerling TE, Hoppe KA, Mosier TM, Still CJ (2016) Climate, CO2, and the history of North American grasses since the Last Glacial Maximum. *Science Advances*, *2*(3), p.e1501346.
270. Smiley TM, Cotton JM, Badgley C, Cerling TE (2016) [Small-mammal isotope ecology tracks climate and vegetation gradients across western North America](http://www.oikosjournal.org/article/small-mammal-isotope-ecology-tracks-climate-and-vegetation-gradients-across-western-north). *Oikos* 125: 1100-1109. doi: 10.1111/oik.02722.
271. Lifton NA, Phillips FM, Cerling TE (2016) Using Lake Bonneville features to calibrate in situ cosmogenic production rates. In (Oviatt CJ and J Shroder, Eds). *Lake Bonneville: A Scientific Update.* Elsevier Press, New York. pp. 165-183.
272. Chritz KL, Blumenthal SA, Cerling TE, Klingel H. (2016) Hippopotamus(*H. amphibius*)diet change indicates herbaceous plant encroachment following megaherbivore population collapse. *Scientific Reports* 6: 32807. doi: [10.1038/srep32807](https://dx.doi.org/10.1038/srep32807)
273. Cerling TE, Barnette JE, Chesson LA, Douglas-Hamilton I, Gobush KS, Uno KT, Wasser SK, Xu X (2016) Radiocarbon dating of seized ivory confirms rapid decline in African elephant populations and provides insight into illegal trade. *Proceedings of the National Academy of Sciences* 47: 13330-13335.
274. Kampf AR, Cooper MA, Nash BP, Cerling TE, Marty J, Hummer DR, Celestian AJ, Rose, TP, Trebisky TJ (2017) Rowleyite, [Na(NH4,K)9Cl4][V5+,4+2(P,As)O8]6· *n*[H2O,Na,NH4,K,Cl], a new mineral with a mesoporous framework structure. *American Mineralogist* 102:1037–1044.doi: 10.2138/am-2017-5977
275. Chau T, Tipple B, Hu L, Fernandez D, Ehleringer J, Cerling T, Chesson L (2017) Reconstruction of travel history using coupled 18O and 87Sr/86Sr measurements of hair. *Rapid Communications in Mass Spectrometry* 31:583-589. DOI: 10.1002/rcm.7822
276. Pauli JN, SD Newsome, JA Cook, C Harrod, SA Steffan, CJO Baker, M Ben-David, D Bloom, GJ Bowen, TE Cerling, C Cicero, C Cook, M Dohm, PS Dharampal, GR Graves, R Gropp, KS Hopson, C Jordan, BJ MacFadden, SP Birch, J Poelen, S Ratnasingham, L Russell, CA Stricker, MK Uhen, CT Yarnes, B Hayden. (2017)Opinion: Nucleating IsoBank.*Proceedings of the National Academy of Sciences* 114(12): 2997-3001. doi: 10.1073/pnas.1701742114
277. Blumenthal SA, Levin NE, Brown FH, Brugal J-P, Chritz KL, Harris JM, Jehle GE, Cerling TE (2017) Aridity and hominin environments. *Proceedings of the National Academy of Sciences* 114:7331-7336. 10.1073/pnas.1700597114
278. Cook CS, Erkkila B, Chakraborty S, Tipple BJ, Cerling TE, Ehleringer JR (2017) *Stable Isotope Biogeochemistry and Ecology Laboratory Manual*. First Edition. Kindle Direct Publishing, Seattle. Available at Amazon.com. 196 pages.
279. Cerling TE (2017) Francis H Brown (1943 – 2017). *Evolutionary Anthropology* DOI:10.1002/evan.21562
280. Manthi FK, Cerling TE, Chritz KL, Blumenthal SA (2018) Isotopes of the Kanapoi fauna as proxies for paleo-diets and environments. *Journal of Human Evolution*. DOI: [10.1016/j.jhevol.2017.05.005](https://doi.org/10.1016/j.jhevol.2017.05.005)
281. Cerling TE, Andanje SA, Gakuya F, Kariuki JM, Kariuki L, Khayale C, Lekolool E, Macharia AN, Anderson CR, Fernandez DP, Hu L, Thomas SJ (2018) Stable isotope ecology of black rhinos (*Diceros bicornis*) in Kenya. *Oecologia* 187(4):1095-1105.
282. Chesson LA, Barnette JE, Bowen GJ, Brooks GJ, Casale JF, Cerling TE, Cook CS, Douthitt CB, Howa JD, Hurley JM, Kreuzer HW, Lott MJ, Marinelli LA, O’Grady SP, Podlesak, DW, Tipple BJ, Valenzuela LO, West JB (2018) Isotope analysis in plant and animal ecology – with application to forensic science in the Americas. *Oecologia* 187(4):1077-1094.
283. Blumenthal SA, Cerling TE, Brown FH, Chritz, KL, Brugual J-P, Leven NL, 2018 Diet and evaporation sensitivity in African ungulates: A comment on Faith (2018) *Palaeogeography, Palaeoclimatology, Palaeoecology*. 10.1016/j.palaeo.2018.02.022
284. National Academy of Sciences, Engineering, and Medicine. 2018. *Monitoring and Sampling Approaches to Assess Underground Coal Dust Exposures*. (authors: Cerling TE (chair), Dahmann D, Grayson RL, Lusk B, McCawley M, Ramani RV, Rose CS, Sarver E, Sbaffoni J, Wright MJ). National Academy of Science Press. Washington DC. 150 pp.
285. Martin GE, Tacail T, Cerling TE, Balter V. 2018. Calcium isotopes in enamel of modern and Plio-Pleistocene East African mammals. *Earth and Planetary Science Letters* 503: 227–235. <https://doi.org/10.1016/j.epsl.2018.09.026>
286. Hu L, Cerling TE, Fernandez DP. 2018. Longitudinal and transverse variation of trace element concentrations in elephant and giraffe hair: implication for endogenous and exogenous contributions. *Environmental Monitoring and Assessment* 190:644. <https://doi.org/10.1007/s10661-018-7038-z>
287. Marchetti DW, Cerling TE, Reilly BT, Stoner JS, Abbott MB, Bailey CM (2018) Ice at the edge of the Bonneville Basin – Mountain glaciation and paleoclimate of the Upper Fremont River Catchment, Central Utah. 2018 Lake Bonneville Geologic Conference and Short Course Proceedings Volume. 3 pp.
288. Chritz KL, TE Cerling, KH Freeman, EA Hildebrand, A Janzen, ME Prendergast. 2019. Changes in climate but not ecology influenced the spread of early herders in eastern Africa. *Quaternary Science Reviews* 204: 119-132.
289. Huth TE, Cerling TE, Marchetti DW, Bowling DR, Ellwein AL, Passey BH (2019) Bias in soil carbonate formation and its implications for interpreting high-resolution paleoarchives: evidence from southern Utah. *Journal of Geophysical Research:* *Biogeochemistry*. doi.org110.1029/2018JG004496
290. Brennan SR, Fernandez DP, Burns JM, Aswad S, Schindler DE, Cerling TE (2019) Isotopes in teeth reveal a cryptic population of freshwater seals. *Conservation Biology.* doi 10.1111/cobi.13303.
291. Blumenthal SA, Cerling TE, Smiley T, Badgley C, Plummer TW (2019) Isotopic records of climate seasonality in equid teeth. *Geochimica et Cosmochimica Acta* 260: 329–348. doi: [10.1016/j.gca.2019.06.037](http://dx.doi.org/10.1016/j.gca.2019.06.037)
292. Hu L, Fernandez DP, Cerling TE, (2019) **Trace element concentrations in horn: endogenous levels in keratin and susceptibility to exogenous contamination. *Chemosphere* doi.org/10.1016/j.chemosphere.2019.124443**
293. DeSantis LRG, Crites JM, Feranec RS, Fox-Dobbs K, Farrell AB, Harris JM, Gary Takeuchi T, Cerling TE (2019) Pleistocene megafaunal extinctions, climate change, and mesopredator dietary release. *Current Biology* doi.org/10/1016/j.cub.2019.06.059
294. Frederick L, WP Johnson, TE Cerling, DP Fernandez. (2019) Source identification of particulate metals/metalloids deposited in the San Juan River delta of Lake Powell, USA. *Water, Air, & Soil Pollution* 230: 128(18 pp)*.* <https://doi.org/10.1007/s11270-019-4176-z>
295. Tacail T, Martin JE, Arnaud-Godet F, Cerling TE, Braga J, Balter V (2019) Calcium isotopic patterns of weaning behavior in enamel of South African early hominins. *Science Advances* 5(8): eaax3250. doi: 10.1126/sciadv.aax3250
296. DeSantis LRG, Crites JM, Feranec RS, Fox-Dobbs K, Farrell AB, Harris JM, Gary Takeuchi T, Cerling TE (2019) Pleistocene megafaunal extinctions, climate change, and mesopredator dietary release; Reply to Comment. *Current Biology* doi.org/10/1016/j.cub.2019.06.059
297. Marchetti DW, Stork A, Solomon DK, Cerling TE, Mace W (2019) Cosmogenic 3He exposure ages of basaltic flows from Miller Knoll, Panguitch Lake, Utah: using the alternative isochron approach to overcome low-gas crushes*. Quaternary Geochronology*. <https://doi.org/10.1016/j.quageo.2019.101035>
298. Manthi FK, Sanders WJ, Plavcan JM, Cerling TE, Brown FH (2020) Late-middle Pleistocene elephants from Natodomeri, Kenya and the disappearance of *Elephas* (Proboscidea, Mammalia) in Africa. *Journal of Mammalian Evolution.* **27**:483–495. doi.org/10.1007/s10914-019-09474-9
299. Valenzuela LO, Chesson LA, Bowen G, Cerling TE, Ehleringer JR (2020) Spatial distribution of stable isotope values of human hair: Tools for region‐of‐origin and travel history assignment. In: *Forensic Science and Humanitarian Action: Interacting with the Dead and the Living* (Editor(s): Roberto C. Parra Sara C. Zapico Douglas H. Ubelaker), pp. 385-410.
300. Huth TE, Cerling TE, Marchetti DW, Bowling DR, Ellwein AL, Passey BH, Fernandez DP, Valley JV, Orland I (2020) Holocene ecologic change on the Colorado Plateau inferred from a laminated pedogenic carbonate record. *Geochimica et Cosmochimica Acta.* 282: 227–244 doi.org/10.1016/j.gca.2020.05.022
301. Hu Lihai, Fernandez DP, Cerling TE, Tipple BJ (2020) Fast exchange of strontium between hair and ambient water: implication for isotopic analysis in provenance and forensic studies. *PLOS ONE* doi.org/10.1371/jounal.pone.0233712
302. O'Brien K, Patterson DB, Biernat MD, Braun DR, Cerling TE, McGrosky A, Faith JT (2020) Ungulate turnover in the Koobi Fora Formation: Spatial and temporal variation in the Early Pleistocene. *Journal of African Earth Sciences* 161: 103658. [doi.org/10.1016/j.jafrearsci.2019.103658](https://doi.org/10.1016/j.jafrearsci.2019.103658)
303. Martin JE, Balter V, Tacail T, Cerling TE (2020) Calcium isotope ecology of Turkana Basin hominins. *Nature Communications* doi.org/10.1038/s41467-020-17427-7
304. Uno KT, Fisher DC, Wittemyer G, Douglas-Hamilton I, Carpenter N, Cerling TE (2020). Forward and inverse methods for extracting climate and diet information from stable isotope profiles in proboscidean molars. *Quaternary International*, doi.org./10.1016/j.quaint.2020.06.030.
305. Ehleringer JR, Avalos SC, Tipple BJ, Valenzuela LO, Cerling TE (2020). Hair isotopes reveal correlations among dietary protein source, socioeconomic status, and health across the USA. *Proceedings of the National Academy of Sciences* 117(33): 20044- 20051.doi/10.1073/pnas.1914087117
306. Uno KT, Fisher DC, Schuster G, Wittemyer G, Douglas-Hamilton I, Omondi P, Litoroh M, Cerling TE (2020) High-resolution stable isotope profiles from elephant (*Loxodonta africana*) ivory and tail hair: Multiyear records of seasonal diet and climate variability. *Paleogeography, Palaeoclimatology, Palaeoecology.* [doi.org/10.1016/j.palaeo.2020.109962](https://doi.org/10.1016/j.palaeo.2020.109962)
307. Yang D, Uno KT, Souron A, McGrath K, Pubert E, Cerling TE (2020) Intra-tooth stable isotope profiles in warthog canines and third molars: Implications for paleoenvironmental reconstructions. *Chemical Geology*. doi.org/10.1016/j.chemgeo.2020.119799
308. Tejada JV, Flynn JJ, Antoine P-O, Pacheco V, Salas-Gismondi R, Cerling TE (2020) Comparative isotope ecology of western Amazonian rainforest mammals. *Proceedings of the National Academy of Sciences* 117(42):26263-26272. [doi.org/10.1073/pnas.2007440117](https://doi.org/10.1073/pnas.2007440117)
309. Lyons WB, Foley KK, Carey AE, Diaz MA, Bowen GJ, & Cerling TE (2021) The isotopic geochemistry of CaCO3 encrustations in Taylor Valley, Antarctica: implications for their origin. *Acta Geographica Slovenica* 60(2):125-139. doi.org/10.3986/AGS.7233
310. Lazagabaster IA, Cerling TE, Faith JT (2021) A new hypsodont species of *Hylochoerus* (Suidae, Mammalia) from the Late Pleistocene of Rusinga, Kenya. *Historical Biology.* DOI: 10.1080/08912963.2021.1887861
311. Cerling TE, Bernasconi SM, Hofstetter LS, Jaggi M,Wyss F, Rudolf von Rohr C, Clauss M (2021). CH4/CO2 ratios and carbon isotope enrichment between diet and breath in herbivorous mammals. *Frontiers of Ecology and Evolution*. doi: 10.3389/fevo.2021.638568
312. Tejada JV, Flynn JJ, O’Connell T, Bermudez L, Capuñay C, Cerling TE, MacPhee R, Wallsgrove N, Popp BN. (2021) Isotope data from amino acids indicate Darwin’s ground sloth was not an herbivore. *Scientific Reports.* doi.org/10.1038/s41598-021-97996-9.
313. Hopley P, Cerling TE, Crete L, Werdelin L, Mwebi O, Manthi FK, Leakey MG, Leakey L. (2022) Stable isotope analysis of carnivores from the Turkana Basin, Kenya: evidence for temporally-mixed fossil assemblages. *Quaternary International* doi.org/10.1016/j.quaint.2022.04.004.
314. Lehmann SB, Levin NE, Passey BH, Hu H, Cerling TE, Miller JH, Arppe L, Beverly EJ, Huth TE, Kelson JR, Hoppe KA, Luyt, J, Sealy J. (2022) Triple oxygen isotope distribution in modern mammal teeth and potential geologic applications. *Geochimica et Cosmochimica Acta* doi.org/10.1016/j.gca.2022.04.033
315. Behrensmeyer AK, Cerling TE, Fortelius M, Gathogo P, Harmand S, Martin L, Miller E, Pilbeam D, Ungar P, Wood BA (2022) In Memorium: Richard Erskine Frere Leakey (1944-2022). *Evolutionary Anthropology* doi: 10.1002/evan.21947
316. Cerling TE, Brown JE, Hoareau Y, Kahumbu P, Odhacha T, Southon JR, Wasser SK (2022) 14-Carbon demonstrates that some illegal ivory is being taken from government stockpiles. *Proceedings of the National Academy of Sciences.* 119(44) e2211550119 https://doi.org/10.1073/pnas.2211550119
317. DeSantis LRG, Feranec RS, Southon J, Cerling TE, Harris JM, Binder W, Cohen JE, Farrell AB, Lindsey E, Meachen J, O'Keefe FR, Takeuchi GT, 2022, On the relationship between collagen- and carbonate-derived carbon isotopes with implications for the inference of carnivore dietary behavior. *Frontiers in Ecology and Evolution*. doi: 10.3389/fevo.2022.1031383
318. Şekercioğlu ÇH, Newsome SD, Fullwood MJ, Cerling TE, Oviedo F, Daily GC, Ehrlich PR, Chamberlain P (2023) Using stable isotopes to measure the dietary responses of Costa Rican forest birds to agricultural countryside, *Frontiers in Ecology and Evolution*. doi: 10.3389/fevo.2023.1086616
319. Phillips D, Matchan E, Gleadow A, Brown F, McDougall I, Cerling TE, Leakey M, Hergt J, Leakey L (2023) Revised paleoclimate model and older hominin fossils from ultra-precise dating of Turkana tuffs. *Journal of the Geological Society of London.* <https://doi.org/10.1144/jgs2022-171>.
320. Gill BA, Wittemyer G, Cerling TE, Musili PM, Kartzinel TR (2023) Foraging history of individual elephants using DNA metabarcoding. *Royal Society Open Science*, *10*(7), 230337. doi.org/10.1098/rsos.230337
321. Yang D, Bowen GJ, Uno KT, Podkovyroff K, Carpenter N, Fernandez DP, Cerling TE. (2023) BITS: a Bayesian Isotope Turnover and Sampling model for strontium isotopes in proboscideans and its potential utility in movement ecology. *Methods in Ecology and Evolution*. [doi.org/10.1111/2041-210X.14218](https://doi.org/10.1111/2041-210X.14218).
322. The Cenozoic CO2 Proxy Integration Project (CenCO2PIP) Consortium (2023) Towards a Cenozoic History of Atmospheric CO2. *Science*. 382:6675. doi: 101126/science.adi5177 Author list: Hönisch B, DL Royer, DO Breecker, PJ Polissar, GJ Bowen, MJ Henehan, Y Cui, M Steinthorsdottir, JC McElwain, MJ Kohn, A Pearson, SR Phelps, KT Uno, A Ridgwell, E Anagnostou, J Austermann, MPS Badger, RS Barclay, PK Bijl, TB Chalk, CR Scotese, E de la Vega, RM DeConto, KA Dyez, V Ferrini, PJ Franks, CF Giulivi, M Gutjahr, DT Harper, LL Haynes, M Huber, KE Snell, BA Keisling, W Konrad, TK Lowenstein, A Malinverno, M Guillermic, Luz Mara Meja, JN Milligan, JJ Morton, L Nordt, R Whiteford, A Roth-Nebelsick, JKC Rugenstein, MF Schaller, ND Sheldon, S Sosdian, EB Wilkes, CR Witkowsk, YG Zhan, L Anderson, DJ Beerling, C Bolton, TE Cerling, JM Cotton, J Da, DD Ekart, GL Foster, DR Greenwood, EG Hyland, EA Jagniecki, JP Jasper, JB Kowalczyk, L Kunzmann, WM Kürschner, CE Lawrence, CH Lear, MA Martinez-Bot, DP Maxbauer, P Montagna, BDA Naafs, JWB Rae, M Raitzsch, GJ Retallack, SJ Ring, O Seki, J Seplveda, A Sinha, TF Tesfamichael, A Tripati, J van der Burgh, J Yu, JC Zachos, L Zhang
323. Kappelman J, Todd CL, Cavis Ca, Cerling TE, Feseha M, Getahun A, Johnsen R, Kay M, Kocurek GA, Nachman BA, Negash A, Negash T, O’Brien K, Pante M, Ren M, Smith EI, Tabor NJ, Tewabe D, Wang H, Yang D, Yirga S, Crowell FW, Fanuka MD, Habtie T, Jackson JM, Klehm C, Loewen NK, Sahleselasie M, Melton Sm, Myers TS, Millonig S, Plummer MC Riordon KJ, Rosenau NA, Skinner A, Thompson AK, Trombetta LM, Witzel A, Desta AA, Campisano CJ, Endalamaw M, Getachew T, Himiak J, Ingram BH, Marean CW, de al Cruz Medina K, Robests A, Valdes J, Wuman L, Yaketa M, Yanny S, (2024), Middle Stone Age riverine-based foragers in the Horn of Africa during the Toba eruption and the out of Africa dispersal. *Nature.* *In press.*
324. O’Brien K, Podkovyroff K, Fernandez DP, Tryon CA, Cerling TE, Ashioya L, Faith JT, Herbivore migration during the Last Glacial Period of Kenya, in review
325. Patterson DB, Negash E, Uno KT, Malasek T, Cerling TE, The isotopic context of *Paranthropus* within the East African Rift System (in review).
326. Yang D, Uno KT, Cerling TE, Mwebi O, Leakey LN, Grine FE, Souron A, (in review) Intra-tooth stable isotope analysis reveals seasonal dietary variability and niche partitioning among bushpigs/red river hogs and warthogs. *Current Zoology*,
327. Cerling TE, Behrensmeyer AK, Nelson SV, Morgan ME, Quade J (in review). Stable isotopes in carbonates and fossil teeth as record of ecological change in the Siwalik Group of Pakistan. In (eds., Badgley C, Pilbeam D, Behrensmeyer AK, Barry J) *Siwaliks: Paleontology, Geology.* (in review).
328. Fannin LD, Seyoum CM, Venkataraman VV, Yeakel JD, Janis CM, Cerling TE, Dominy NJ, Behavioral drive during human evolution, *Science Advances,* in review.
329. Blumenthal SA, Chritz KL, Manthi FK, Strum S, Ditchfield PW, Dumouchel L, Wambua F, Cerling TE, Lee-Thorp JA, Isotopic evidence for dietary variation within the lifetimes of australopiths, *Paranthropus*, and *Homo*. *Science*. In review
330. Grine FE, Balter V, Braga J, Bromage TG, Brown FH, Cerling TE, de Vries D, Dupont-Nivet G, Feibel CS, Gathogo PN, Martin JE, Mongle C, Patel BA, Spoor G, Tacail TJG. Wood BA, Yang D, Leakey MG, Leakey L, (in review) New 3.6-million-year-old species of *Paranthropus* from West of Lake Turkana, Kenya and implications for the age of the *Homo* lineage. *Nature.*
331. Kelson JR, TE Huth, K Andrews, MN Bartleson, TE Cerling, L Jun, MP Salinas, NE Levin, (in review), Pedogenic carbonate as a transient soil component in a humid, temperate forest (Michigan, USA), *Quaternary Research*. In review.
332. Huth TE, B Young, TE Cerling, MA Chan, DW Marchetti. (in press). Geological map of the Torrey Utah 7.5’ Quadrangle. *Utah Geological Survey Geological Map Series*. Utah Geological Survey, Salt Lake City.
333. Newton PN, Chesson LA, Mayxay M, Dondorp A, Tabernero P, Howa JD, Cerling TE, Forensic investigation of falsified antimalarials using isotope ratio mass spectrometry – a pilot investigation. *Scientific Reports*, (in press)

**Patents**

1. US Patent No. 8,725,428. Device and system to reconstruct travel history of an individual. DW Podlesak, JR Ehleringer, TE Cerling. Issued 13 May 2014 to the University of Utah.

**Reports to Congress as member of the US Nuclear Waste Technical Review Board**

1. NWTRB, 2003, *Report to the Secretary of Energy and the Congress. April 2003*, Government Printing Office, 159 pp.
2. NWTRB, 2003, *Board Technical Report on Localized Corrosion. November 25, 2003*, Government Printing Office, 22 pp.
3. NWTRB, 2004, *Report to Congress and the Secretary of Energy. May 2004*, Government Printing Office, 152 pp.
4. NWTRB, 2005, *Report to Congress and the Secretary of Energy. May 2005*. Government Printing Office, 172 pp.
5. NWTRB, 2006, *Report to Congress and the Secretary of Energy. June 2006.* Government Printing Office, 134 pp.
6. NWTRB, 2007, *Technical Evaluation of U.S. Department of Energy Yucca Mountain Infiltration Estimates: A Report to Congress and the Secretary of Energy.* Government Printing Office, 22 pp.
7. NWTRB, 2008, *Report to Congress and the Secretary of Energy, September 2008*. Government Printing Office, 231 pp.
8. NWTRB, 2009, *Survey of National Programs for Managing High–Level Radioactive Waste and Spent Nuclear Fuel*. Government Printing Office, 63 pp.
9. NWTRB, 2011, *Technical Advancement and Issues Associated with the Permanent Disposal of High Activity Wastes: Lessons Learned from Yucca Mountain and Other Programs*. Government Printing Office,130 pp.
10. NWTRB, 2011, *Experience Gained From Programs to Manage High–Level Radioactive Waste and Spent Nuclear Fuel in the United States and Other Countries*. Government Printing Office, 72 pp.

**Book Reviews**

1. Cerling TE, 1980, *Modern and Ancient Lake Sediments*. Jour. Sed. Petrol. 50: 668-669.
2. Cerling TE, 1982, *Absorption from Aqueous Solutions*, Jour. Geol. Education 30: 326.
3. Cerling TE, 1983, *Climate in Earth History*, Jour. Geol. Education 31: 399-400.
4. Cerling TE, 1983, *Trace Element Speciation in Surface Waters*, Jour. Geol. Education 31: 399.
5. Cerling TE, 1983, *Trace Metals in Sea Water,* Jour. Geol. Education 31: 399.
6. Cerling TE, 1984, *New Interpretations of Ape and Human Ancestry*, Jour. Geol. Education 32: 341.
7. Cerling TE, 1992, *Miocene Paleosols and Ape Habitats of Pakistan and Kenya.* Geoarcheology 7: 494-497.
8. Cerling TE, 1992, *Proceedings of a U.S. Geological Survey Workshop on Environmental Geochemistry*. Geochimica Cosmochimica Acta 56: 1423.
9. Cerling TE, 1993, *Stable Isotope Geochemistry: A Tribute to Samuel Epstein*. Geochimica Cosmochimica Acta 57: 500.

**PAPERS AND LECTURES PRESENTED**

**Lectures - 1979**

Use of Fe-Mn coated stream gravels as radionuclide monitors in streams. Geological Society of America, Annual Meeting, San Diego. 8 November

Hydrogeochemistry of the Lake Turkana Basin, Eastern Rift Valley, Kenya. Geological Society of America, Annual Meeting, San Diego. 8 November

Geochemical evidence for Lake Pleistocene climatic change in East Africa. SIG-UNEP Workshop on African Limnology. Nairobi, Kenya. 17 December

Stable isotopes and anthropological studies. The International Louis Leakey Memorial Institute for African Prehistory. Nairobi, Kenya. 21 December

**Lectures - 1980**

Potassium loss from rhyolite volcanic glass and its relation to oxygen isotope exchange and apparent K-Ar age. American Geophysical Union, Fall Meeting, San Francisco. 12 December

**Lectures - 1981**

Sodium and chloride balance in an alkaline lake, American Geophysical Union, Fall Meeting, San Francisco. 10 December

**Lectures - 1982**

Geochemical processes in East African Lakes. University of Wyoming. 18 February

Isotopes as geochemical tracers. University of Wyoming. 19 February

Effects of mining on health: non-fibrous minerals. Conference on health issues related to metal and non-metallic mining, Park City, Utah. 7 April

**Lectures –1983**

Recent history of an African lake: geochemical processes. University of Massachusetts. 17 March

Recent history of the Nile River: mass balance and geochemical constraints. Yale University, 19 March

The course of the Nile during the Holocene: geochemical and mass balance constraints. University of Utah, 12 May

The isotopic composition of soil and paleosol carbonate as a paleoclimatic indicator. Geological Society of America, Annual Meeting, Indianapolis, 30 October

Calcite deposition in modern soils: some isotopic evidence. American Geophysical Union, Fall Meeting, San Francisco, 6 December

**Lectures – 1984**

The climatic record of terrestrial environments: isotopic evidence from the Plio-Pleistocene. Chapman Conference, Tarpon Springs, Florida, 9 Januar

Climates and soil carbonate: isotopic evidence. U.C.L.A., 14 March

Changing the course of the Nile: mass balance constraints, U.C.L.A., 15 March

Calcretes and climate: the isotopic evidence. Yale University, 31 July

Calcretes and climate: the isotopic evidence. University of Melbourne, 17 September

The stable isotopic composition of modern soil carbonate and its relationship to climate. SLEADS Workshop. Picnic Point, Victoria, Australia. 25 September

A mass balance approach to basin sedimentation: constraints on the recent history of the Turkana Basin, Kenya. SLEADS Workshop. Picnic Point, Victoria, Australia. 27 September

Interaction of radionuclides between sediment and water in a fluvial watershed. American Geophysical Union, Fall Meeting, San Francisco, 6 December

**Lectures – 1985**

Mass balance constraints on the recent history of the Lake Turkana Basin, Kenya and Ethiopia. Duke Marine Laboratory, 28 January

Soils, climate, and geochemistry. Duke Marine Laboratory, 28 January

Climates and soil carbonate: the isotopic evidence. Oak Ridge National Laboratory, 30 January

Soils, climate, and geochemistry. University of Illinois, 18 February

Soils, climate, and geochemistry. State University of New York at Stony Brook, 4 March

Geochemical processes in arid environments: soils and closed basin lakes. Penrose Conference, Lake Havasu City, Arizona, 15 April

Geochemical indicators of climatic change in continental sequences. Institute for the Study of Earth and Man Workshop. Fort Burgwin, New Mexico, 26 August

Pore water chemistry of an alkaline Rift Valley lake: Lake Turkana, Kenya. Geological Society of America, Annual Meeting, Orlando, 28 October

Use of gravel to monitor active stream contamination. American Geophysical Union, Fall Meeting, San Francisco, 13 December

**Lectures – 1986**

Radionuclide and metal contamination in a small watershed: a case study. University of Utah. 16 January

Active contamination of radionuclides and metals in White Oak Creek Basin. Oak Ridge National Laboratory. 7 February

Geochemical indicators of paleoclimate. Geologic Survey of Pakistan. 1 March

Problems in isotopic studies of soils. University of Alberta, Edmonton. 26 March

Paleo-environmental Studies in East Africa. University of Alberta, Edmonton. 27 March

Sediment-water interaction in a low-order stream: studies with 137-Cs. American Geophysical Union. Fall Meeting, San Francisco, 11 December

**Lectures – 1987**

Continental Pleistocene paleoclimates -- isotopic evidence in soils. University of Chicago. 10 April

Use of tritium and helium isotopes in the study of a shallow unconfined aquifer. American Geophysical Union. Spring Meeting, Baltimore. 18 May.

Sediment-water interaction in White Oak Creek: the bedload transport problem. Oak Ridge National Laboratory. 22 May

Calcretes and climate: the isotopic evidence. University of Utah. 4 June

Isotopic evidence of paleoclimate: relationships of calcrete formation. North Dakota State University. 23 July

Calcretes and climate: the isotopic evidence. Augustana College. 24 July

**Lectures – 1988**

Chemistry of East African lakes. Scripps Institution of Oceanography. 19 January, 1988

Isotopes in soils: cleaning up a dirty business. UCLA. 20 March, 1988

Isotopic composition of soils: paleoclimates and paleoecology. Scripps Inst. Oceanography. 29 April

Carbon isotopes in soils and paleosols. SUNY Binghamton. 21 October, 1988

Bedload transport in a gravel-bottomed stream using radioisotopes as tracers. SUNY Binghamton, 22 October, 1988

Systematic variations in the stable isotopic composition of pedogenic carbonate along elevation transects in the southern Great Basin, U.S.A. Geological Society of America Annual Meeting, Denver, Colorado 3 November 1988

Forever amber: but what about oxygen? University of Utah (Dept. Biology). 14 November .

Monsoons at 7 Myr? Isotopic evidence from paleosols. 16 November, Scripps Institution of Oceanography

Dating geomorphic surfaces using cosmogenic 3He. 17 November, Scripps Institution of Oceanography

**Lectures – 1989**

Dating geomorphic surfaces using cosmogenic 3He. University of Utah. 16 February

Carbon isotopes in paleosol carbonates as paleoecologic indicators. American Association of Physical Anthropologists. Annual Meeting. San Diego, California. 6 April

Carbon in soils and paleosols: ecologic and paleoecologic implications. University of Utah (Biology Department). 21 April

Isotopic evidence for ecologic change in the Siwaliks. Peabody Museum, Harvard University. 8 April

Carbon in soils and paleosols: a guide to continental climates and ecosystems. Harvard University. 10 April

**Lectures – 1990**

Asian monsoons started seven million years ago—so say carbon isotopes in paleosols. Yale University. 22 January

Asian monsoons started seven million years ago—so say carbon isotopes in paleosols. Cornell University. 25 January

Asian monsoons started seven million years ago—so say carbon isotopes in paleosols. University of Rochester. 26 January

Fire, flood, and ice: ages of geomorphic surfaces using cosmogenic helium isotopes. Yale University. 31 January

Exchangeable sodium in soils, sediments, and rivers. Yale University. 2 February

Correlation and chronology of East African hominid localities. Yale University. 15 February

Forever Amber: The Tears of the Heliades. Yale University. 12 March.

Strange Bed(load) Fellows: Cesium, Sediments, and Serendipity. Yale University. 14 March

Paleosolidarity: P(CO2) in the Mesozoic and Cenozoic atmosphere. Yale University. 16 March

Carbon isotopes in soils and global climatic change. Utah State University. 24 April

Carbon isotopes in soils and global climatic change. Universität Bern, Switzerland. 26 June

Glabal ecologic and climatic change during the Neogene: stable isotopic evidence from soils. International Association of Geochemistry and Cosmochemistry. Aix-en-Provence, France. 2 July, 1990

Large lakes: the inorganic record. Penrose Conference on the Stratigraphic Record of Large Lakes. Tahoe City, California. 11 September

Application of 3He to dating geomorphic surfaces. Penrose Conference on New Methods for Dating Geomorphic Surfaces. Mammoth, California. 13 October

Stable isotopes in soils: modeling, monsoons, and paleo-atmospheres. Utah State University. 12 November

**Lectures – 1991**

Stable isotopes in soils. National Academy of Sciences - National Research Council. Panel on Hydrologic/Tectonic/ Hydrothermal Processes. Las Vegas, Nevada. 1 February

Carbon dioxide in the atmosphere: evidence from Cenozoic and Mesozoic paleosols. Penn State University. 14 February

Asian monsoon begins 7 million years ago: so say carbon isotopes in soils. Penn State University. 15 February

Isotopic indicators of changes in climate, ecology, and diet in the Old World in the late Neogene. Symposium on Light Stable Isotope Uses in the Natural and Social Sciences. American Association for the Advancement of Science. 19 February

Geopolitics and the origin of carbonates at Yucca Mountain. University of Utah. 14 March

Origin of carbonates at Yucca Mountain. University of Nevada-Reno. 22 April

Cosmogenic 3He and the dating of geomorphic surfaces. University of Nevada-Reno. 23 April

Stable isotopic constraints on atmospheric P(CO2) from paleosols. Special session: Atmospheric CO2 variability throughout geologic time. American Geophysical Union Spring Meeting, Baltimore. 31 May

Using light stable isotopic tracers to distinguish between groundwater discharge and vadose zone carbonates. Special Session: The potential of tectonism and volcanism for producing significant excursions of the water table. American Geophysical Union Spring Meeting, Baltimore. 29 May

Stable isotopes in soils. Chapman Conference on Continental Isotopic Indicators of Climate. Jackson, Wyoming. 10 June

Trench warfare at Yucca Mountain. Chapman Conference on Continental Isotopic Indicators of Climate. Jackson, Wyoming. 11 June

Did early man evolve in a grassland or woodland setting? Carbon isotope evidence. XIII INQUA. Beijing, People's Republic of China. 4 August.

In situ production rate of 3He in olivine and the ages of geomorphic surfaces. XIII INQUA. Beijing, People's Republic of China. 8 August

The history of monsoons, P(CO2) of the atmosphere, and the evolution of man: Paleosols tell all. Southern Methodist University. 13 September

Dating catastrophic flood events using cosmogenic He and Ne isotopes. Geological Society of America annual Meeting. San Diego, California. 21 October

Dating geomorphic surfaces using cosmogenic 3He. Los Alamos Scientific Laboratory. Los Alamos, New Mexico. 25 November

**Lectures – 1992**

Climate change: the terrestrial record. YMP-USGS Workshop on Climate Change in the Yucca Mountain region. Las Vegas, Nevada. 1 April

The history of monsoons, P(CO2) of the atmosphere, and the evolution of man: Paleosols tell all. University of New Mexico. 16 April

Atmospheric CO2 through geologic time: measurements, guesses, and meaning. University of Utah. 1 May

Global change during the late Neogene: isotopic records from four continents. 1992 Goldschmidt Conference, Washington DC, 9 May

Isotopic evidence for climatic, ecologic, and faunal change in the Siwaliks of Pakistan. 5th North American Paleontological Convention, Chicago, Illinois. 30 June

Paleosols: global ecologic change in the Neogene. Scripps Institution of Oceanography. 10 July

The isotopic composition of paleosols: global climate change, evolution of man, and history of CO2 in the atmosphere. University of Reading, United Kingdom. 17 July

Global Change. (Plenary talk). American Institute of Professional Geologists. 27 September

Global change, paleosols, and atmospheric P(CO2). New Mexico State University. 19 October

Global change, paleosols, and atmospheric P(CO2). University of Texas at El Paso. 20 October

Carbon isotopic composition of fossil tooth enamel and global change in the late Miocene. Society of Vertebrate Paleontologists, Toronto, Ontario. 28 October

Global change, paleosols, and atmospheric P(CO2). Massachusetts Institute of Technology. 29 October

Carbon isotopic composition of fossil tooth enamel and global change in the late Miocene.. Harvard University. 30 October

Atmospheric CO2 levels from fossil soils and horses. American Geophysical Union 9 December

**Lectures – 1993**

You are what you eat (+ a few ‰): the evolution of the atmosphere, grasslands, and man. University of Utah. 8 January

Global ecosystem change and the evolution of man. University of Lausanne, Switzerland, 15 February

Isotope geochemistry of African Lakes. IDEAL Symposium on the Limnology, Climatology, and Paleoclimatology of the East Africa Lakes. Jinja, Uganda. 18 February

Pore water geochemistry of Lakes Turkana and Malawi. IDEAL Symposium on the Limnology, Climatology, and Paleoclimatology of the East Africa Lakes. Jinja, Uganda. 18 February

Global ecologic and climate change in the Neogene and the evolution of mammals. University of Texas at Austin. 20 April

Atmospheric CO2, global ecosystem change, and the evolution of man. Rutgers University. 22 April

Atmospheric CO2 and global ecosystem change: the terrestrial record. Lamont-Doherty Geological Observatory, Columbia University. 23 April

Global change, paleosols, and atmospheric P(CO2). International Association of Geochemistry and Cosmochemistry. Geochemsitry of the Earth's Surface. 3rd Symposium. Penn State University. 2 August

Stable isotopes and absolute estimates of MAT, MAP, and MAE from continental deposits. SEPM symposium. Penn State University. 9 August

Mesozoic and Cenozoic atmospheric CO2 content from paleosols. SEPM symposium. Penn State University. 10 August

Atmospheric CO2 and global ecosystem change: the terrestrial record. University of California, Berkeley. 16 September

Stable isotopic composition of fossil horse teeth: implications for the evolution of grasslands, the atmosphere, and humans. Institute for Human Origins. Berkeley, California. 16 September

Chemistry of East African lakes. University of Utah. 15 October

Global change using carbon isotopes in paleosols and fossil tooth enamel. Geological Society of America Annual Meeting. Boston. 26 October

Siwalik sedimentology: evidence for Neogene global change. Geological Society of America Annual Meeting. Boston. 26 October

Atmospheric CO2 and global change: the terrestrial record. University of Chicago. 29 October

Geomorphology and in situ 3He and 21Ne. University of Arizona, Tucson. 18 November

**Lectures – 1994**

Atmospheric and global ecologic change: stable carbon isotopes in soils. Panjab University, Chandigarh, India. 24 January

Atmospheric CO2 and global change: the terrestrial record. UC Santa Barbara . 24 May

Geomorphology and in situ 3He and 21Ne. UC Santa Barbara . 24 May

In situ cosmogenic noble gases: production rates and applications to geomorphology, Quaternary Research Center Symposium:University of Washington. 26 May

Cosmogenic 3He and 21Ne from Tioga age surfaces, Sierra Nevada, California. ICOG-8. Berkeley, CA. 8 June

Global change at the end of the Miocene: the terrestrial and continental record. Goldschmidt Conference, Edinburgh, Scotland. 1 September

Geomorphology and in situ cosmogenic isotopes. Université de Lausanne, Switzerland. 3 November

Geomorphology and in situ cosmogenic isotopes. Free University, Amsterdam, Netherlands. 23 November

Global ecologic change from paleosols. Free University, Amsterdam, Netherlands. 24 November

Mesozoic and Cenozoic atmospheric CO2 content from paleosols. Free University, Amsterdam, Netherlands. 24 November

Geomorphology and in situ cosmogenic isotopes. Hebrew University, Jerusalem, Israel. 26 December

Global ecologic change from paleosols. Hebrew University, Jerusalem, Israel. 27 December. .

**Lectures – 1995**

Mesozoic and Cenozoic atmospheric CO2 content from paleosols. Geological Survey of Israel. 1 January

Geochemistry of East African lakes. Weizmann Institute, Rehovot, Israel. 3 January

Stable isotope chemistry of lakes. Université de Lausanne, Switzerland. 13 January

Geomorphology and in situ cosmogenic isotopes. Université de Paris 7, Paris 18 January

Global ecologic change from paleosols. Museé de Histoire Naturelle. Paris. 19 January

Mesozoic and Cenozoic atmospheric CO2 content from paleosols. École de Mines. Fontainebleau, France. 20 January

Global ecologic change in the Miocene. ETH, Zurich, Switzerland. 27 January

Environmental Geochemistry I. Chemistry of natural waters. Université de Lausanne, Switzerland. 8 March

Environmental Geochemistry II. Diffusion and advection. 9 March. Université de Lausanne, Switzerland

Environmental Geochemistry III. Stable Isotopes. 10 March. Université de Lausanne, Switzerland

Stable carbon and oxygen isotope analysis of fossil tooth enamel using laser ablation. EUG-8. Strasbourg, France. 4 April

Global change in the Miocene: the terrestrial and ocean record. CNRS-Nancy, France. 4 May

Geomorphology and in situ cosmogenic isotopes. University of Bern, Switzerland. 12 May

Dietary change in equids from Central to Western North America: Great Plains, Rocky Mountains, and Western Deserts. Society of Vertebrate Paleontologists. Pittsburg, PA. 4 November

Cosmogenic 3He exposure ages of debris flows and lava dam outburst floods in the Grand Canyon, USA. Fall AGU, San Francisco. 14 December

**Lectures - 1996**

Geomorphology and in situ cosmogenic isotopes. Dept. Geography. Univ. Utah. 26 January.

Paleodiets and global change. Geochemistry of Everything Symposium (GOES). Scripps Institution of Oceanography. 14 March.

Straight from the horses' mouth(s): stable isotopes in tooth enamel, evolution of mammals, and global ecologic change. University of Riverside. 19 April.

Geomorphology and in situ cosmogenic isotopes. SUNY Stony Brook. 23 April. .

Straight from the horses' mouth(s): stable isotopes in tooth enamel, evolution of mammals, and global ecologic change. SUNY Stony Brook. 23 April. .

Global change: straight from the horses' mouth. Yale University. 24 April. .

Straight from the horses' mouth(s): stable isotopes in tooth enamel, evolution of mammals, and global ecologic change. California Institute of Technology. 29 April.

Paleosols, fossil teeth, and the development of C4 ecosystems. Association of Applied Biologists. Newcastle, England. 11 July.

Stable isotopes and paleoenvironments of terrestrial deposits. Mongolian Academy of Science. Ulaan Baatar, Mongolia. 3 September.

New plants, animals, and soils: an exmpale of global change in the Neogene. Geological Society of America. Denver. 27 October .

Soils, paleosols, and the history of atmospheric CO2. Geological Society of America. Denver. 28 October .

Rates of Geologic Processes in the Holocene: Introduction. Geological Society of America. Denver. 29 October .

Geomorphology and in situ cosmogenic isotopes. Brigham Young University. Provo, Utah. 21 November .

**Lectures - 1997**

Global change: straight from the horses' mouth. Harvard University. 3 February .

History of atmospheric CO2 from paleosols. Harvard University. 3 Feb .

Global change: straight from the horses' mouth. Univ. Texas, Austin. 17 February .

Isotopes and diets: where next? Univ. Texas, Austin. 18 Feb .

Carbon isotopes in soils and paleosols. Univ. Texas, Austin. 18 Feb .

Straight from the horses' mouth(s): stable isotopes in tooth enamel, evolution of mammals, and global ecologic change. Utah State University. 22 April.

Geological record of C4 ecosystems. Royal Society, London. 22 May .

Citation for Ken Farley for the 1997 F. G. Houtermans award. Goldschmidt Conference, Tuscon, Arizona. 2 June.

Citation for Edouard Bard for the 1997 Donath Medal award. Geological Society of America Annual Meeting. Salt Lake City. 17 October .

Quaternary C3 and C4 ecosystem response to changes in atmospheric CO2. Geological Society of America Annual Meeting. Salt Lake City. 18 October.

Tooth enamel as a recorder of hydrologic and climate change. Geological Society of America Annual Meeting. Salt Lake City. 18 October.

Why don't elephants eat grass? Wildlife Conservation Society. New York. 20 Nov.

Global change: straight from the horses' mouth. Lamont-Doherty Geological Observatory. 21 November

Aridity, temperature, and CO2 in paleoclimate interpretations in tropical to subtropical regions. American Geophysical Union. Annual Meeting. 11 December.

**Lectures - 1998**

Global change: straight from the horses' mouth. Los Angeles County Museum. 12 February.

Stable isotope ecology. Centre Austral de Investigaciones Cientific. Ushuaia, Tierra del Fuego, Argentina. 2 April.

Global change: straight from the horses' mouth. University of New Mexico. 24 April. .

Why don't elephants eat grass? Applications in Stable Isotope Ecology Conference, Saskatoon, Saskatchewan. 20 April.

Stable isotope ecology: straight from the horses' mouth. UU Biology Dept. 10 September.

Carbon isotopes in bioapatite of ungulate mammals: implications for ecological and paleoecological studes. Society for Vertebrate Paleontology. Snowbird, Utah. 30 September.

Carbon isotopes in soils and paleosols as (paleo)pCO2, climate and ecological indicators. University of Tennessee. Klepser Lecture. 8 October.

Stable Isotope Ecology Short Course. University of Tennessee. 9 October.

Carbon dioxide starvation, the development of C4 ecosystems, and mammalian evolution. Yale University. 19 October.

Paleosol CO2 barometers and Phanerozoic atmospheric CO2. Yale University. 19 October.

Global Biogeochemistry. Geological Society of America. 27 October .

Grand Canyon - Grand Events. Geological Society of America. 28 October

Global ecological change - straight from the horse’s mouth. University of Kansas. 19 November.

**Lectures - 1999**

Stable isotope ecology: straight from the horses' mouth. Dept. Fish and Wildlife, Utah State Univ. 13 January.

Global change: straight from the horses' mouth. BYU. 18 Feb.

Noble gases. Workshop on in situ cosmogenic nuclides. Purdue 27 February

Global change in the Miocene: straight from the horses' mouth. SUNY Binghamton. 9 April .

Development of neotropical C4 savannas. Evolución Neotropical del Cenozoico. La Paz, Bolivia. 21 May.

Plenary Lecture: Atmospheric CO2, terrestrial ecology, and mammalian evolution. INQUA, Durban, South Africa.

Plenary Lecture: Atmospheric CO2, terrestrial ecology, and mammalian evolution. International Geochemical Society Meeting. Reykavic, Iceland.

Terrestrial ecology and mammalian evolution in the late Neogene. Geological Society of America. Denver. .

 **LECTURES (2000)**

Welcome to the C4 World. Paleodiet Conference. Albarraccin, Spain.

Isotope ecology of elephants. 2nd International Conference on Stable Isotope Ecology. Braunschwieg, Germany.

Isotope ecology and paleoecology in the Turkana Basin. Royal Academy of Sweden, Stockholm.

The development of C4 grasslands. Paleoecology of Grasslands. Wesleyn College. 2 June.

Stable isotope ecology. Kenya Wildlife Service, Nairobi, Kenya 1 Aug.

Stable isotope ecology. National Museums of Kenya. Nairobi, Kenya 4 Aug.

Welcome to the C4-world. Paleontology Society Short Course on Phanerozoic Ecosystems. 11Nov. Reno GSA meeting

 **LECTURES (2001)**

Stable isotope ecology: straight from the horses' mouth. Carleton College. 24 Jan.

Global change: straight from the horses' mouth. Univerity of Wyoming 29 Jan.

Cosmogenic isotopes. Physics Department, Univ Utah.7 March

Stable isotope ecology and global change in the Miocene. Stanford University 23 April

Stable isotope ecology. University of Cape Town. 17 July.

Stable isotopes and elephant ecology. Save-the-Elephants Foundation. Nairobi. 20 July.

Stable isotope ecology of East Africa. Mpala Research Center, Kenya. 25 July.

Stable isotopes and sourcing of poached ivory. Kenya Wildlife Service. 2 August.

Scale Effects of global climate change on mammalian herbivores. International Mammal Congress, Sun City, South Africa. 13 August.

Dietary preferecnes of East African bovidae based on stable isotope analysis. International Mammal Congress, Sun City, South Africa. 16 August.

An orphan’s tale: seasonal diet changes of elephants based on stable isotope analyses of hair International Mammal Congress, Sun City, South Africa. 16 August.

LeHigh University. Of Pigs, Elephants, and Men: Stable Isotope Ecology and Paleoecology in Africa. 18 October.

Yale University. Welcome to the C4-World. 25 October.

 **LECTURES (2002)**

You are what you eat (+ a few ‰). Distinguished Professor Lecture. Rosenblatt House, May.

Stable isotopes: applications to forensics. Forensic Short Course for Law Enforcement. U Utah. 4 Sept.

Stable isotopes in human tissues. Forensic Short Course for Law Enforcement. U Utah. 5 Sept.

Stable isotope signatures in forensic applications. CIA, Washington DC. 16 October

Ecological and evolutionary change in East Africa during the Neogene. Yale University. 9 Nov.

Stable isotopes of hair. Los Alamos National Laboratory. 6 November.

 **LECTURES (2003)**

Ecological and evolutionary change in East Africa during the Neogene. University of Southern California. 18 February.

Lava dams and outburst floods in the Grand Canyon. UC Santa Barbara. 19 Feb.

Trends in extant and fossil East African mammalian diets from stable isotopes. International Symposium on Human Origins and Environmental Backgrounds. Kyoto, Japan. 21 March

Welcome to the C4-World: ecological and evolutionary change in East Africa during the Neogene. 11 April. University of Colorado.

Stable isotopes in Hair. European Academy of Forensic Science. Istanbul. 24 Sept.

Isotopes and Ivory. European Academy of Forensic Science. Istanbul. 25 Sept.

Ecological and evolutionary change in East Africa during the Neogene. Columbia University. 3 October.

Ecological and evolutionary change in East Africa during the Neogene. Purdue University. 23 October.

Lava dams and outburst floods in the Grand Canyon. Purdue University 24 October

C4 grasses and mammalian evolution: the East African evidence (Pardee Symposium). GSA Annual meeting, Seattle. 3 November.

Ecological and evolutionary change in East Africa during the Neogene. 20 November. University of Illinois, Chicago.

Ecological and evolutionary change in East Africa during the Neogene. 8 December. Smithsonian

Stable Isotopes in Forensics:. 10-11 December. FBI Academy. (1. Isotope gradients in O and H; 2. Humans: bones, hair, teeth; 3. Instrumentation; 4. Movements of humans and other animals; 5. Arts: gems, marble, ivory)

Interpretation of stable isotope profiles in mammals. 12 December. Harvard University.

 **LECTURES (2004)**

Ecological and evolutionary change in East Africa during the Neogene. 12 Feb. University of Florida

Ecological and evolutionary change in East Africa during the Neogene. 13 Feb. Florida State University

Stable isotopes as natural tracers in forensic sciences. NITECRIME Workshop. Wellington, New Zealand. 2 April, 2004.

Stable Isotope Ecology and Paleoecology in East Africa. Princeton University. 3 May, 2004

Isotopes and Elephants: the potential for ivory sourcing, diet changes, and elephant ecology. Save-The-Elephants Foundation. Samburu Reserve. 6 July 2004

Isotopes and Elephants: the potential for ivory sourcing, diet changes, and elephant ecology. Kenya Wildlife Service. Nairobi. 16 July 2004.

Ten million years of ecological change in East Africa. University of Cape Town. 4 October 2004

Surface exposure dating using cosmogenic isotopes. University of Cape Town. 12 October 2004

The disposal of nuclear waste. Koeburg Power Station, Koeburg, South Africa. 8 October 2004

The disposal of nuclear waste. The Owl Club, Cape Town, South Africa. 19 Oct. 2004.

Geology of East African hominid sites: problems and prospects. INQUA Workshop 1 December, 2004. Pretoria, South Africa.

**LECTURES (2005)**

10 million years of diet history in East Africa. University of Addis Ababa. 4 January 2005.

Stable isotope wildlife ecology. University of Addis Ababa. 5 January, 2005.

Ethiopia: two Christmases in seven years in one month – and thirteen months of sunshine. Community lecture, Kalk Bay, South Africa. 25 January 2005.

Stable Isotopes in Paleosols: the Good, the Bad, and the Ugly. University of Cape Town. 21 Feb 2005.

Isotope Ecology in Africa. National Center for Scientific Research – Lwiro. Democratic Republic of Congo. 18 March. 2005.

10 million years of ecological change in East Africa. SUNY Stony Brook. 7 May 2005

Living with a volcano and wildlife conservation in a failed state: report from DR Congo. Community lecture. Kalk Bay, South Africa. 15 May 2005.

Stable Isotopes in Paleosols: the Good, the Bad, and the Ugly. University of Utah. 8 Sept 2005.

Isotopes in Forensic Science. Sackler Symposium. National Academey of Science. 17 Novemeber 2005. Washington DC

Paleo-aridity index using stable isotopes in mammals. Smithsonian workshop. 18 Nov. 2005. Washington DC.

Paleo-aridity index using stable isotopes of mammals. American Geophysical Union. 6 Dec. 2005. San Francisco.

Stable isotopes in Terrestrial environments as climate proxies. NSF Workshop. 9 Dec 2005, San Francisco.

**LECTURES (2006)**

History of Animals using Isotope Records: 10 days to 10 million years of elephant history. University College Dublin. Dublin Ireland. 8 March 2006

Nuclear Waste: Science and Society. University College Dublin, Dublin, Ireland. 9 March 2006.

HAIR: History of Animals from Isotope Records. BASIN Workshop. Tome, Portugal. 14 March 2006.

HAIR (History of Animals from Isotope Records): From 10 days to 10 million years. Princeton Universty. 21 April 2006

Stable isotope short course: University of Helsinki 2-6 May

1. Stable isotopes in Ecology and Paleoecology: Introduction

2. Stable isotopes in plants: Plants: fractionation, photosynthesis, and respiration.

3. O and H isotopes in water.

4. Stable isotopes in geology.

5. Stable isotope fractionation in large mammals

6. Stable Isotopes in Soils and Paleosols: the Good, the Bad, and the Ugly

7. Stable isotopes in ecology and paleoecology: welcome to the C4 world.

8. Stable isotopes in forensics.

Isotope turnover in animal tissues: the reaction progress variable. Stable Isotope in Ecology. Belfast, Northern Ireland. 11. August 2006.

Whole animal studies and the History of Animals using Isotope Records (HAIR). University of Michigan. 15 September 2006

HAIR (History of Animals from Isotope Records): Elephant diets on times scales of 10 days to 10 million years. University of Michigan. 16 Sept 2006

HAIR: History of Animals from Isotope Records. Elephant diets on times scales of 10 days to 10 million years. University of Minneapolis-Duluth. 29 November 2006

HAIR: History of Animals from Isotope Records. Elephant diets on times scales of 10 days to 10 million years. University of Minneapolis-Minneapolis. 30 November 2006

 **LECTURES (2007)**

HAIR (History of Animals from Isotope Records): Examples from African Ecology. 11 Feb 2007. Mpala Research Center. Kenya.

HAIR (History of Animals from Isotope Records): applications to anthropology. 29 Mar. University of Utah. Department of Anthropology.

HAIR (History of Animals from Isotope Records). 18 May. Dartmouth College

HAIR (History of Animals from Isotope Records). 29 June. Yale University.

HAIR (History of Animals from Isotope Records). 9 July. Kenya Wildlife Service.

HAIR (History of Animals from Isotope Records). 11 July. National Museums of Kenya

Isotopes as tracers of ivory origins. Geological Society of America. 29 October. Denver

Dick Hay: a retrospective. Geological Society of America. 30 October. Denver

The reaction progress variable in ecological isotope studies. Geological Society of America. 30 Oct. Denver.

Cosmogenic isotopes and evolution of landscapes in the Western USA. University of Utah. Department of Geography. 2 November.

 **Lectures (2008)**

HAIR (History of Animals from Isotope Records). Columbia University. 31 March

ISCOSCAPES: stable isotope patterns on temporal, regional, and global scales. Goddard Institute, 1 April

The reaction progress variable and its implications for stable isotope ecology turnover. Columbia University. 2 April

The reaction progress variable: sensitivity studies. Biosphere-Atmosphere Stable Isotope Network meeting. Santa Barbara. 9 April.

HAIR (History of Animals using Isotope Records). University of Potsdam (Germany). 19 May.

Stable Isotopes in Paleosols. University of Potsdam (Germany). 22 May

Insights into ecology and paleo-ecology using stable isotopes. 18 August. US International Univeristy. Nairobi (Kenya)

Some thoughts on climate change from a geology perspective. 19 October. Society for Vertebrate Paleontology.

HAIR (History of Animals using Isotope Records). 7 November. University of Rochester.

 **Lectures (2009)**

HAIR (History of Animals from Isotope Records). University of Cape Town. 10 January

African climates and isotopes. 5th Int. Humboldt Conf. on climate. Cape Town, 16 January

HAIR (History of Animals from Isotope Records). Utah Valley University. April 7

HAIR (History of Animals from Isotope Records). UU alumni. Denver. April 8

Topography, isotopes, and climate. WHOI, Woods Hole, Mass. April 24

A Royal Diet: A 6-year history of one elephant family. National Museums of Kenya. 5 May

Future directions in temporal studies in mammals. 5th International Meeting on Bone Diagenesis. Bonn, Germany. 21 September

 **Lectures (2010)**

HAIR (History of Animals from Isotope Records). Northwestern University. Chicago. 15 January

HAIR (History of Animals from Isotope Records). University of Western Michigan. Kalamazoo. 15 March

HAIR (History of Animals from Isotope Records). University of Utah – Biology. 16 Sept.

HAIR (History of Animals from Isotope Records). New York Univ. 7 October

Paleoecology and Human Evolution. New York Univ. 8 October

HAIR (History of Animals from Isotope Records). SUNY – Stony Brook. 15 October

Stable Isotopes and environmental interpretations of African mammal sites. Symposium on Neogene Paleontology. Cape Town, South Africa. 16 November.

Paleo-shade. AGU, San Francisco. 16 Dec 2010.

 **Lectures (2011)**

Hair: History of Animals Using Isotope Records. Los Alamos National Lab. 8 Feb

Hair: History of Animals Using Isotope Records. Geriatrics Department. UU. 21 Feb.

Isotopes and animal behavior. Hogel Zoo, Salt Lake City. 24 February

Environments of human evolution: stable isotope evidence. Stanford University. 28 Feb.

Hair: History of Animals Using Isotope Records. Stanford University. 1 March

Stable isotopes as indicators of hominin environments in Africa over the past 6 million years. Cairns, Australia. 14 July.

Diet of Paranthropus boisei. Addis Ababa. EAAPP. 9 August

Determination of woody cover in hominin environments. Addis Ababa, EAAPP. 11 August

Paleoecology and human evolution. Amsterdam, Free University 29 August

Isotopes and anthropology. Turkana Basin Institute, Lodwar. 8 November

 **Lectures (2012)**

Nuclear power: mining, power production, and waste in Utah's future. Engineering Forum of Utah. Alta Club. 19 Jan.

Environments of human evolution: stable isotope evidence. Cal Tech. 13 Feb.

HAIR: History of Animals using Isotope Records. Cal Tech. 29 Feb.

Isotopes and forensics: clumped isotopes and site‑specific information. Cal Tech. 8 March.

Physiological and ecological aspects of plants and animals in the context of C4 and C3 plants. Natural History Museum of Los Angeles. 9 March.

Environments of human evolution: stable isotope evidence. U Virginia. 15 March

HAIR: History of Animals Using Isotope Records. U Virginia. 16 March

Reaction Progress - Isotope speedometers and other things. Carlton College. 2 April.

Iso-Forensics. Or, NCIS (Never Contest Isotope Science). Carlton College. 3 April.

Environments of Human Evolution: The Isotope Evidence. Carlton College. 3 April.

Cosmic rays and landscape change in Western USA. Carlton College. 4 April.

Environments of Human Evolution: The Isotope Evidence. U Southern California. 9 April.

Environments of Human Evolution: The Isotope Evidence. UCLA 11 April.

HAIR: History of Animals Using Isotope Records. UCLA 11 April.

A day in the life of a hominid. Lamont‑Doherty Earth Observatory. 19 April.

HAIR: History of Animals Using Isotope Records. U Utah - Math. 17 October.

 **Lectures (2013)**

Environments of Human Evolution: The Isotope Evidence. U Utah – Geology. 28 Feb

The real paleo-diet. Arizona State University. Tempe AZ. 27 April.

Environments of Human Evolution: The Isotope Evidence. NSF. 3 May.

The Chemistry of Australopithecine Foods. Cleveland Museum of Natural History. 20 Sept.

Mixing of isotope signals due to sampling and physiology: deconvolution. Geological Society of America, Denver. 30 October.

Carbon isotope record of Plio-Pleistocene diet change in East African herbivores. Society for Vertebrate Paleontology. Los Angeles, 1 November.

Isotopes and forensics. UN Office on Drugs and Crime, Vienna, Austria. 5 December

 **Lectures (2014)**

HAIR: History of Animals Using Isotope Records. UC Riverside. 22 January

Environments of Human Evolution: The Isotope Evidence. UC Riverside. 23 January

Environments of Human Evolution: The Isotope Evidence. U Utah. Frontiers of Science Lecture. 5 February.

Isotope Ecology and Paleoecology (9 lectures - U Helsinki, Finland). Introduction; Water; Plants; Atmosphere; Oceans; Animals; Fossils; Soils; Environments. 10-14 February

A puzzle for Mikael. Mikael Fortelius Fête. U Helsinki, Finland. 12 Feb

HAIR: History of Animals Using Isotope Records. U Washington. 12 March

Environments of Human Evolution: The Isotope Evidence. U Washington. 13 March

How does ecology drive diet change in East African herbivores over the past 4 Ma? U Washington. 13 March

Environments of Human Evolution: The Isotope Evidence. U Utah. NAKAMA Lecture. 4 April.

Environments of Human Evolution: The Isotope Evidence. Yale University. 7 April.

Environments of Human Evolution: The Isotope Evidence. Harvard University. 9 April.

HAIR: History of Animals Using Isotope Records. Harvard University. 10 April.

How "Old" is the Earth's Surface? Utah Geology and Cosmic Ray Dating. OSHER. 16 April.

Environments of Human Evolution: The Isotope Evidence. Stony Brook University. 24 April.

HAIR: History of Animals Using Isotope Records. Chinese Academy of Sciences, Beijing. 9 May.

HAIR: History of Animals Using Isotope Records. Northwest University, Xi'an. 12 May.

Isotope evidence for diet of early hominins. The African Human Fossil Record: a Symposium in honor of Meave Leakey, Paul Sabatier University, Toulouse. 27 September.

Diet and ecological change in the Turkana Basin over the past 4 Ma. Geological Society of America. Vancouver. 23 October.

Early Hominin Diets - the stable isotope evidence. Columbia University. 5 November.

Environments of Human Evolution: The Isotope Evidence. Baylor University. 21 November.

Ecological Change in the Turkana Basin Over the Past 4 Ma. American Geophysical Union. San Francisco.

**Lectures (2015)**

Stable isotopes in ecology. Turkana Basin Institute Field School. 10 February

Environments of Human Evolution: The Isotope Evidence. TBI Field School. 11 February

Early hominin diets - the stable isotope evidence. National Museums of Kenya. 12 March.

Early hominin diets. National Academy of Sciences. Washington. 26 April.

HAIR – History of Animals using Isotope Records. National Research Council. 5 May.

Early hominin diets. SMU, Meave Leakey Symposium. 15 May.

Environments of human evolution: the isotope evidence. UC Santa Cruz. 26 May.

HAIR – History of Animals using Isotope Records. UC Santa Cruz. 27 May.

Isotopes in Wildlife Forensics - Migration and movement. Society for Wildlife Forensics Science. Missoula Montana. 23 June

Isotopes in Wildlife Forensics - Dating using 14C. Society for Wildlife Forensics Science. Missoula Montana. 23 June

Training program for research in hominin evolution. African Rift Valley Research Consortium. Cleveland. 26 Sept.

IVORY: Isotope Verification Of Region and Year. Elephant Conservation Summit, Jackson Hole. 29 Sept.

Isoscapes of North America - Evolution of grazing, mixed feeding, and browsing in Africa over 4 Ma. Grasslands Workshop. Santa Fe Institute. 1 October

NEXUS 1492: Diet change through time. Quai Branley Museum, Paris. 8 October.

How hot is it, anyway? Temperatures of early hominid environments in East Africa. Geological Society of America Annual Meeting, Baltimore. 2 November.

Environments of Human Evolution: The Isotope Evidence. King Abdullah University of Science and Technology (KAUST), Jeddah, Saudia Arabia. 8 December.

**Lectures (2016)**

Environments of human evolution: the isotope evidence. Iowa State University. 3 March.

HAIR – History of Animals using Isotope Records. Iowa State University. 3 March.

Environments of human evolution: the isotope evidence. Arizona State University. 30 March.

HAIR – History of Animals using Isotope Records. Arizona State University. 30 March.

Tracking salmon using strontium isotopes. Vernal Community Center. 21 April.

Environments of human evolution: the isotope evidence. École Normale Supérieure - Lyon, France. 16 May.

Environments of human evolution: the isotope evidence. CEREGE – Aix-en-Provence, France. 27 May.

Isotopes in wildlife forensics – Dating using 14C. INTERPOL. Lyon, France. 31 May.

History of Animals using Isotope Records. École Normale Supérieure - Lyon, France. 2 June

Isotopes forensics – dating ivory with 14C. CITES – CoP17. Johannesburg. 29 September

Isotopes forensics – geolocation using Sr-isotopes. INTERPOL. Johannesburg. 2 October.

Environments of human evolution: the isotope evidence. Utah Paleontological Society. 10 Nov

Environments of human evolution: the isotope evidence. University of Nebraska. 18 Nov

Geological evidence for C4 photosynthesis. American Geophysical Union. 16 December.

**2017**

Isotope forensics and the illegal trade in ivory. Houston Museum of Natural History. 22 February

Environments of human evolution: the isotope evidence. Texas A & M. 24 February.

Environments of human evolution: the isotope evidence. U California Davis. 31 May.

Stable isotope answers to problems of biological and terrestrial records. HiRes17. Madison, Wisconsin. 19 June.

Exploring human origins using stable isotopes. Isotopes 2017**:** The Cross-Disciplinary Conference on Stable Isotope Sciences. Ascona, Switzerland. July 11.

Stable isotopes in the Turkana Basin. ECHOES Workshop. Helsinki, Finland. 3 September

New approaches to understanding early hominin diets. Finnish Academy of Science and Letters. Helsinki, Finland. 4 September.

Collaborative Science – some thoughts on practice. President’s Medal – Geological Society of America. 25 October, Seattle.

Cosmic ray dating in Western USA. Department of Physics and Astronomy. U Utah. 2 November.

Diet Changes in the Plio-Pleistocene of East Africa. American Geophysical Union. 11 December.

**2018**

Isotopes in Environmental Forensics. Plenary Lecture. International Network of Environmental Forensics – 2018. Salt lake City. 25 June

Monitoring and Sampling Approaches to Assess Underground Coal Mine Dust Exposures. NIOSH and MSHA. National Academies of Science, Engineering, and Medicine. Washington DC. 27 June.

Monitoring and Sampling Approaches to Assess Underground Coal Mine Dust Exposures. U.S. House of Representatives – Committee on Education and the Workforce. Washington DC. 28 June.

Monitoring and Sampling Approaches to Assess Underground Coal Mine Dust Exposures. U.S. Senate – Committee on Heath, Education, Labor and Pensions. Washington DC. 28 June.

Kids and Goats for Elephants. MPESA Academy. Thika, Kenya. 11 July

HAIR – History of Animals using Isotope Record: Ecology and Forensics. Turkana Basin Institute – Turkwel. 27 July 2018

Monitoring and Sampling Approaches to Assess Underground Coal Mine Dust Exposures. Committee of Earth Resources – National Academies of Science, Engineering, and Medicine. Washington DC. 17 October.

Holocene ecologic change on the Colorado Plateau inferred from a laminated pedogenic carbonate record. American Geophysical Union. Washington DC. 10 December

Ivory, Isotopes, Interpol – a detective story. US Fish and Wildlife. Falls Church, Virginia. 12 December.

**2019**

Ivory, Isotopes, Interpol – a detective story. U Utah. Frontiers of Science. 17 January

Ivory, Isotopes, Interpol – a detective story. U Utah. Department of Chemistry. 7 June.

Ivory, Isotopes, Interpol – a detective story. U Utah. Taft-Nicholson Center. Lakeview, Montana. 11 July.

Yellowstone – Geology and Art. U Utah. Taft-Nicholson Center. Lakeview, Montana. 13 July.

New archive of Holocene and Pleistocene climate and ecologic change. ETH – Zurich. 28 October.

Environments of human evolution: the isotope evidence. ETH - Zurich. 29 October

**2020**

Elephants: Ecology and Forensics. ZOOM lecture. Arizona State University. 20 April

New archive of Holocene and Pleistocene climate and ecologic change. Geochemical Society (ZOOM lecture). 25 June.

CH4/CO2 ratios and isotope enrichment between diet and breath in mammals. Society for Vertebrate Paleontology (ZOOM Poster and discussion). 13 October.

HAIR: History of Animals using Isotope Records. ZOOM lecture. Carleton College. 3 November

HAIR: History of Animals using Isotope Records. ZOOM lecture. University of Delaware. 4 November

**2021**

The C3-C4 transition: Challenges and Opportunities. (ZOOM lecture). Ancient Trails Symposium. Deccan College postgraduate & Research Institute, Pune, India. 7 January

New archive of Holocene and Pleistocene climate and ecologic change. (ZOOM lecture) Texas A& M. 20 January.

An elephant’s tail . . . continued. (ZOOM lecture). University of Utah – School of Biological Sciences. 23 February.

New archive of Holocene and Pleistocene climate and ecologic change. (ZOOM lecture) Utah Valley University. 3 March.

CH4/CO2 ratios and isotope enrichment between diet and breath in mammals. IsoEcol–2021 (ZOOM Poster and discussion). Gaming, Austria. 27 May.

Ecological and physiological considerations related to C3 and C4 photosynthesis in Neogene ecosystems (ZOOM lecture). Seminar Series on Siwalik Geology. Geological Survey of Pakistan – Quetta, Pakistan. 15 June.

Isotope Incorporation into Animal Tissues. Stable Isotope Ecology Short Course, University of New Mexico. 3 August

Isotopes in carnivores as an integrator of ecological change through time (ZOOM lecture). Symposium in honor of Julia Lee-Thorp. Oxford, United Kingdom. 29 September.

Insights from isotopes into mammalian physiology (ZOOM lecture). Max-Planck Institute for the Science of Human History. Jena, Germany. 15 October

**2022**

Isotope Incorporation into Animal Tissues. Stable Isotope Ecology Short Course, University of New Mexico. 23 June

Rosenblatt Prize Acceptance Speech. Salt Lake City, Utah. 20 October.

Isotopes, improbable questions, an unexpected journey. First 100 Geoheritages Sites, IUGS Meeting, Zumaia, Spain. 26 October.

**2023**

Ecological and physiological considerations related to C3 and C4 photosynthesis in Neogene ecosystems (ZOOM lecture). Seminar Series on Monsoon. Woods Hole Oceanographic Institution – Monsoon working group. 22 February.

Soil carbonate pendants: new archive of detailed climate records in the Holocene and Pleistocene. University of British Columbia. 9 March.

From the illegal ivory trade to nuclear waste – an improbable journey by an accidental geologist. GCSC Seminar 4 April. University of Utah.

Fifty years of progress in understanding environments of human evolution in Africa: Some answers to difficult, improbable, and (at times) impossible questions. (Keynote). Africa: The Human Cradle: An International Conference Paying Tribute to Richard E Leakey. Stony Brook University. 8 June.

Isotope Incorporation into Animal Tissues. Stable Isotope Ecology Short Course, University of New Mexico. 24 June

Soil carbonate pendants: new archive of detailed climate records in the Holocene and Pleistocene. Goldschmidt Conference, Lyon France. 12 July.

Fifty years of progress in understanding environments of human evolution in Africa: Some answers to difficult, improbable, and (at times) impossible questions. University of Utah. Department of Anthropology. 5 October.

Condon Lecture: Isotopes, Ivory, Interpol: isotopes in forensic science. Oregon State University. 1 November.

Environments of human evolution in Africa: Some isotopic answers to intriguing, improbable, and (at times) impossible questions. Oregon State University 2 November.

Environments of human evolution in Africa: Some isotopic answers to intriguing, improbable, and (at times) impossible questions. University of Oregon. 3 November

Isotope forensics - past, present, future. Agouron Symposium. California Institute of Technology. 9 Nov.

Environments of human evolution in Africa: Some isotopic answers to intriguing, improbable, and (at times) impossible questions. University of California –Berkeley. 16 November.

Unscrambling the omelette – addressing the time-space problem in ecology and paleoecology. University of California –Berkeley. 17 November.

**GRANTS**

National Science Foundation

Plio-Pleistocene Paleoclimatology and Correlation between East Africa Hominid Localities. $149,118. July 1980 to June 1982. (F.H. Brown Co.-P.I.)

Foundation for Research on the Origin of Man

Climatic Change in the East African Pleistocene: Isotopic Evidence. $3,000. July 1980 to June 1981.

LSB Leakey Foundation

Geologic studies of the Olorgesailie Beds $3,000. July 1981-June 1982.

National Science Foundation

Stratigraphic studies in the Turkana Basin with emphasis on the Koobi Fora region. $135,256. July 1982 to June 1984. (F.H. Brown Co.-P.I.)

National Science Foundation

Continued stratigraphic studies in the Turkana Basin, Kenya. $110,780. July 1984 to June 1986. (F.H. Brown Co.-P.I.).

University Research Committee

The seasonal CO2 cycle in soils. $1,000. June 1984 to June 1985.

Research Corporation

Seasonal CO2 cyclic processes in soils. $7,000. Oct. 1984 to Oct. 1986.

Oak Ridge National Laboratory (Martin Marrietta)

Investigation of Bedload Transport of Contaminated Gravel in the White Oak Creek Drainage. $53,988. July 1985 to July 1986.

Amoco Research

Grant for lacustrine research. $2500. January 1986.

Miffilin and Associates, Inc.

Isotopic studies in the Great Basin (J. R. Bowman, Co-P.I.). $20,900. October 1986 to July 1987.

Oak Ridge National Laboratory (Martin Marrietta)

Investigation of bedload transport of contaminated gravel in The White Oak Creek Drainage. Continuation. $174,000. July, 1986 to September, 1987.

National Science Foundation

3He as an indicator of the terrestrial exposure age of minerals and implications for surface processes. $60,900. July 1987 to December, 1988.

National Science Foundation

Paleosols as indicators of paleoclimates:oxygen and carbon isotopes in pedogenic carbonates. $125,000. July 1987 to June 1989.

Oak Ridge National Laboratory

Tritium and helium isotopes as hydrologic tracers. $120,000. January 1988 to December 1990.

National Science Foundation. Continued studies of the exposure ages of geomorphologic surfaces using cosmogenic 3He. $105,000. July 1989 to June 1991.

National Science Foundation. Continued studies using the isotopic composition of paleosol carbonates and organic matter as paleoecologic and paleoclimatic indicators. $160,000. July 1989 to June 1991.

National Science Foundation. Carbon dioxide content of Mesozoic and Cenozoic atmospheres using paleosols. $175,000. July 1991 to June 1993.

Lawrence Berkeley Laboratory. $15,261. Study of secondary minerals associated with the Yucca Mountain proposed nuclear waste repository. August 1991 to October 1991.

National Science Foundation

 Absolute dating of limestone scarps created by paleoearthquakes using cosmogenic 14C. $176,468. July 1992 to January 1996. (R.L. Bruhn co P.I)

National Science Foundation

 Continued use of cosmogenic 3He and 21Ne for dating geomorphic surfaces. $77,000. March, 1993 to July, 1996.

University of Utah Research Committee

 Study of pore fluids from Lake Malawi, Africa. $5000. January to December, 1993.

National Science Foundation

 Carbon isotopic composition of fossil tooth enamel and the development of global ecosystems. $198,000. August, 1993 to Jan 97.

Oak Ridge National Laboratory

 Noble gas tracers of hydrology. $183,997. September 1993 to August 1995. (D.K. Solomon, co-P.I.)

 National Science Foundation:

 Isotopic studies of global change on continents: atmospheric CO2. $140,000. February 1994 to February 1997

National Science Foundation:

 Radiogenic helium as a chronologic tracer for younger groundwater.

 $160,000 (EAR-9628627), 1 Sept 1996 to 31 August 1999, D.K Solomon (co PI)

National Science Foundation

 Studies of carbon and oxygen isotopes in fossil and modern tooth enamel. $120,000. April 1997 to March 1999.

National Science Foundation.

 Noble gas mass spectrometer purchase $228,704. Sept 1996 to Aug 1998. (with D. K. Solomon)

National Park System

 Paleontological resources and their management in natural areas and other components of the National Park System. $30,000. May 1996 to May 1997.

National Science Foundation

 Stable isotope mass spectrometer purchase. $129,000. Jan 1998 to Dec 1999 (with J. R. Ehleringer.

National Science Foundation

 4He concentrations in enamel apatite for dating fossils. $90,000. July 1999 to December 2002.

National Science Foundation

 Lava-Dam Outburst Floods and Related Volcanic Features in Western Grand Canyon. $160,000. Jan 2000 to Jan 2003

National Science Foundation

 Test of the synchronicity of alpine glacial responses to regional high amplitude climate reversals: Southern Andes. $177,000. (Collaborative Research with John Gosse, Univ. Kansas). Jan 2000 to Dec 2003

Packard Foundation.

 Atmospheric CO2 Controls Over Animal Evolution and Extinction.

 $960,000. July 1999 to Dec 2003.

 (T.E. Cerling, J. R. Ehleringer, D. M. Dearing, J. M. Harris)

National Science Foundation 0129299

 Proposal for Conference on the History of Atmospheric CO2 and its Effect on the Evolution of Plants, Animals, and Ecosystems.

 $25,000. Dec 2001 – Dec 2002

 M. Denise Dearing CO-PI(s) James Ehleringer, Thure Cerling

Natoinal Science Foundation 0125663

 Ecological Diversity of Miocene Mammals of Pakistan

 $20,000. Feb 2002 – Feb 2005

 Principal Investigator Catherine Badgley CO-PI(s) John Barry, Anna Behrensmeyer Thure Cerling

National Science Foundation

 Stable isotope mass spectrometer purchase.

 $196,000. May 2001 to April

 PI: J. R. Ehleringer. co-PI T. E. Cerling

National Science Foundation.

 Stable Isotope Studies of Vegetation Change and Mammal Evolution in Australia. $240,000. July 2002-June 2005.

 PI: L. Ayliffe. co-PI: T. E. Cerling

National Science Foundation 0309695

 Stable Isotopes in Archaeological Research: An Experimental Study of Diet-Tissue Fractionation

 $138,282. Aug 2003 – July 2005.

 Principal Investigator Matt Sponheimer, CO-PI(s) Thure Cerling

National Science Foundation. 0345693

 Enamel Maturation in Mammals and Implications for Stable Isotope Analysis for Diet and Climate Signals

 $180,000. June 2004 – May 2007

 Principal Investigator Thure Cerling

USGS. EDMAP

 Constructing surficial geologic maps of the Government Point and Blind Lake quadrangles (Utah) with emphasis on landslide hazards.

 $15,000. May 2004 – April 2005

 Principal Investigator Thure Cerling

TSWG. Technical Science Working Group

Stable Isotope Analysis of Hair.

$309,000. March 2004 – March 2006.

(Ehleringer, Cerling. co-PIs)

National Geographic Society.

Stable Isotope Ecology of Central African Rain Forests..

$19,000. (March 2004-Feb 2005).

Thure Cerling, John Hart and Nick van der Merwe, co-PIs

LSB Leakey Foundation.

 Isotopic study of paleosols from the Shungura Formation, Ethiopia. $15,000.

 Nov. 2004 – Nov 2005

National Science Foundation

 *“Graduate Student Training Grant:* ***“WEST”*** *(****W****ater, the* ***E****nvironment,and* ***T****eaching) GK-12 Project”*

Principal Investigator: David Chapman.

Co-Principal Investigators: Thure Cerling, Margaret Chan, Jaimie Creola, Denise Dearing, Scot Sampson, Kip Solomon, Edward Zipster.

 Total Costs: $1,500,000. Start date: 5/01/04 Duration 4 yrs.

National Science Foundation

 Hominids, geology, geochronology, and isotope ecology in the Omo-Turkana Basin, East Africa.

 $2,500,000. August 2006 – July 2011.

 Brown, Cerling, and Bruhn, co-PIs.

National Science Foundation.

 Quantitative estimates of paleo-aridity using stable isotopes

 $180,000. August 2006 – August 2008.

National Science Foundation

 Isotope Ratio Mass Spectrometers for Environmental Research

 $420,000. August 2007-August 2008

 Cerling, Ehleringer, Bowling. co-PIs.

National Science Foundation.

 Life history of elephants using stable isotopes.

 $200,000. August 2008-July 2010.

 Cerling, Podlesak, co-PIs.

IsoForensics

 Analytical Support for Geochemistry

 $200,000. April 2009-April 2012.

 Cerling, PI.

National Science Foundation.

 Multi-Collector ICPMS for Geology/Geophysics

 $740,048. Jan 2010 – Dec 2012

 Cerling, Fernandez, Johnsons, co-PIs.

National Science Foundation.

 Integrated Training for Continental Ecology (ITCE): Bridging scales and systems

 with isotopes

 $2,187,251. Jan 2012‑Dec 2017.

 Ehleringer, Cerling co‑PIs.

IsoForensics

 Analytical Support for Geochemistry

 $200,000. April 2012-April 2015.

 Cerling, PI.

National Science Foundation: Major Research Instrumentation Program

 Acquisition of Isotope Ratio Mass Spectrometers for Environmental Research

 $350,000. Oct 2013-Oct 2017

 GJ Bowen, D Bowling, TE Cerling, JR Ehleringer, D Pataki, co-PIs

National Science Foundation

 Late Pleistocene paleoclimatology from soil carbonate pendants in the Colorado Plateau

 $425,219. 1 Sept 2013 to 31 Aug 2017.

 Cerling Fernandez, co-PIs.

LSB Leakey Foundation

 Stable isotopes in the Turkana Basin

 $18,410. Jan-Dec 2015.

EDMAP

 Geologic map of the Torrey Utah 7.5' Quadrangle.

 $16,962. April 2014 - March 2015.

 Cerling, Chan, PIs.

IsoForensics

 Analytical Support for Geochemistry

 $120,000. April 2015-April 2018.

 Cerling, PI.

U Utah Seed Grant

 Mg and Zn isotopes as environmental indicators

 $33,105. Jan 2016 – Jan 2017.

 Cerling, PI.

National Science Foundation

Isotope ecology and paleoecology in East Africa in the past 4 Ma

$608,204. February 2018 – January 2023

Cerling, PI.

Elephant Crisis Fund

Age of ivory from 2017-2019 Seizures.

$25,000. December 2020 – December 2021

Cerling, PI.

National Science Foundation

 Collaborative Research: Laminated soil carbonate rinds as a tool for investigating late Quaternary climate-vegetation links

$153,380. August 2021 – July 2023

Cerling, PI.