

Department of Anthropology
 University of New Mexico
 MSC01-1040, 1 University of New Mexico
 Albuquerque, NM
 svnelson@unm.edu
<http://svnelson.wix.com/svnelson>

Education

- 2002 Harvard University, Ph.D. Anthropology, (“Faunal and Environmental Change Surrounding the Extinction of *Sivapithecus*, a Miocene Hominoid, in the Siwaliks of Pakistan,” David Pilbeam, advisor)
- 1994 Duke University, B.S. Biology (with a concentration in evolutionary biology) / Biological Anthropology and Anatomy, *cum laude*

Recent and Current Positions

- 2015-current Associate Professor, University of New Mexico, Department of Anthropology
- 2007-2015 Assistant Professor, University of New Mexico, Department of Anthropology
- 2005-2007 Assistant Professor, Boston University, Department of Anthropology
- 2004-2007 Department Affiliate, Harvard University, Department of Anthropology
- 2002-2004 Postdoctoral research associate, University of Michigan, Museum of Paleontology

Grants, Fellowships, and Awards

- 2017 Resource Allocations Committee Grant, University of New Mexico, Modeling early human paleoecology through stable isotope analyses of chimpanzee habitats and forest stratification, \$9,755
- 2016 Nominated, Outstanding Teacher of the Year, University of New Mexico
- 2015 Office of the Vice President of Research Equipment Fund, University of New Mexico, Equipment Request Paleoecology Laboratory, \$15,000
- 2014-2017 National Science Foundation, Developmental integration and the ecology of life histories in phylogenetic perspective, M.N. Muller (PI), S.V. Nelson (co-PI), M. Emery Thompson (co-PI), and R.W. Wrangham (co-PI), \$221,004
- 2013 University of New Mexico 2013 Top-Ten Research Stories
- 2012 Research Allocations Committee grant University of New Mexico, Isotopic and phytolith analyses of chimpanzee foods, \$8000
- 2011 Research Semester Fellowship University of New Mexico
- 2009 Subcontract with Hans-Walter Mittmann, Staatliches Museum fur Naturekunde Karlsruhe, Stable isotopic analyses of Hoewenegg, \$4000
- 2007 Teaching Allocations Subcommittee grant University of New Mexico, \$4980
- 2006 International Travel Award Boston University Graduate School of Arts and Sciences, \$2210
- 2004 International Travel Award University of Michigan Museum of Paleontology, \$1000

- 2003 Women's International Science Collaboration (underwritten by NSF), Dental microwear analyses of Hadza diets, \$5000
- 2003 Scott Turner Award in Earth Science, Intra-tooth isotopic variability of modern equid teeth, \$3000
- 2003 American School of Prehistoric Research, Isotopic analyses of fauna from Kibale National Park, Uganda, \$4000
- 2002 American School of Prehistoric Research Award for Outstanding Ph.D. Thesis, \$1000
- 2001 Mellon Dissertation Completion Fellowship, \$8674
- 2000 Cora DuBois Fellowship, \$8000
- 1999 American School of Prehistoric Research Grant, Training in stable isotope ecology, \$2490
- 1998 American School of Prehistoric Research Grant, Training in dental microwear and analysis of Siwalik fauna, \$571
- 1997 Distinction in Teaching Award, Harvard University
- 1996 Distinction in Teaching Award, Harvard University
- 1995 Mellon Research Grant, Excavation of Kromdraai, a fossil hominid locality, \$3000
- 1994-1997 National Science Foundation Graduate Research Fellowship, \$43,200 plus tuition
- 1994 Undergraduate Research Fellowship, Diet and behavior of howler monkeys, Costa Rica, \$2500 plus travel
- 1993 Pew-Cosen Research Fellowship, Behavior of Black-and-white ruffed lemurs, Duke University Primate Center, \$3200
- 1990 Delta-Kappa Educational Foundation Scholarship Grant for Prospective Educators

External Funding of Students:

- 2016 Wenner-Gren Foundation, Tracking dispersal and home range size with environmental and faunal strontium isotopes, Marian Hamilton, \$19,980
- 2016 Leakey Foundation, Assessing philopatry and range size with strontium isotopes, Marian Hamilton, \$14,875
- 2012-2015 National Science Foundation Graduate Research Fellowship, Marian Hamilton

Books Authored

- 2003 Nelson, S. The Extinction of *Sivapithecus*: Faunal and Environmental Changes Surrounding the Disappearance of a Miocene Hominoid in the Siwaliks of Pakistan. *American School of Prehistoric Research Monograph* 1. Boston: Brill Academic Publishers.

Articles in Refereed Journals

- 2019 Hamilton, M., S. Nelson, D. Fernandez, and K. Hunt. Detecting riparian habitat preferences in "savannah" chimpanzees and associated fauna with strontium isotope ratios: implications for reconstructing chimpanzee-human last common ancestor habitat use. *American Journal of Physical Anthropology*.

- 2016 Nelson, S. and L. Rook. Isotopic reconstructions of habitat change surrounding the extinction of *Oreopithecus*, the last European ape. *American Journal of Physical Anthropology* 160: 254-271.
- 2014 Nelson, S. The Paleoecology of early Pleistocene *Gigantopithecus blacki* inferred from stable isotopic analyses. *American Journal of Physical Anthropology* 155: 571-578.
- 2013 Nelson, S. Chimpanzee fauna isotopes provide new interpretations of fossil ape and hominin ecologies. *Proceedings of the Royal Society B* 280: 20132324.
- 2011 Bernor, R., T. Kaiser, S. Nelson, and L. Rook. Systematics and paleobiology of *Hippotherium malpassii* n. sp. (Equidae, Mammalia) from the latest Miocene of Baccinello V3 (Tuscany, Italy). *Bollettino della Societa Paleontologica Italiana* 50:175-208.
- 2010 Wolf, D. S. Nelson, H. Schwartz, G. Semprebon, T. Kaiser, and R. Bernor. Taxonomy and paleoecology of the Pleistocene Equidae from Makuyuni, Northern Tanzania. *Palaeodiversity* 3: 249-269.
- 2010 Kaiser, T., C. Seiffert, C. Hertler, L. Fielder, H. Schwartz, S. Frost, L. Giemsch, R. Bernor, D. Wolf, G. Semprebon, S. Nelson, F. Schrenk, K. Harvati, T. Bromage, and C. Sanaane. Makuyuni, a new Lower Paleolithic hominid site in Tanzania. *Mitteilungen Hamburgisches Zoologisches Museum und Institut* 106: 69-110.
- 2010 Nelson, S. The cooking hypothesis revisited: fresh food for thought. *Evolutionary Psychology* 8: 340-342.
- 2009 Morgan, M, A. Behrensmeyer, C. Badgley, J. Barry, S. Nelson, D. Pilbeam. Lateral trends in carbon isotope ratios reveal a Miocene vegetation gradient in the Siwaliks of Pakistan. *Geology* 37: 103-106.
- 2008 Badgley, C., J. Barry, M. Morgan, S. Nelson, A. Behrensmeyer, T. Cerling, and D. Pilbeam. Ecological changes in Miocene mammalian record show impact of prolonged climatic forcing. *Proceedings of the National Academy of Sciences* 105: 12145-12149.
- 2007 Nelson, S. Isotopic reconstructions of habitat change surrounding the extinction of *Sivapithecus*, a Miocene hominoid, in the Siwalik Group of Pakistan. *Palaeogeography, Palaeoclimatology, Palaeoecology* 243: 204-222.
- 2005 Nelson, S. Paleoseasonality inferred from equid teeth and intra-tooth isotopic variability. *Palaeogeography, Palaeoclimatology, Palaeoecology* 222: 122-144.
- 2005 Nelson, S., C. Badgley, and E. Zakem. Microwear in modern squirrels in relation to diet. *Paleontologica Electronica* vol 8, issue 1, 14A, 15p.

Articles in Edited Volumes

2017 Nelson, S. and M. Hamilton. Evolution of the human dietary niche initial transitions. In *Chimpanzees and Human Evolution*. Editors M. Muller, R. Wrangham, and D. Pilbeam. Boston: Harvard University Press.

2005 Nelson, S. Habitat requirements and the extinction of the Miocene ape, *Sivapithecus*. In *Interpreting the Past: Essays on Human, Primate and Mammal Evolution in Honor of David Pilbeam*. *American School of Prehistoric Research Monograph*. Boston: Brill Academic Publishers.

2005 Badgley, C., S. Nelson, J. Barry, A. Behrensmeyer, and T. Cerling. Testing models of faunal turnover with Neogene mammals from Pakistan. In *Interpreting the Past: Essays on Human, Primate and Mammal Evolution in Honor of David Pilbeam*. *American School of Prehistoric Research Monograph*. Boston: Brill Academic Press.

2004 Bernor, R., T. Kaiser, and S. Nelson. The oldest Ethiopian Hipparion (Equinae, Perissodactyla) from Chorora: systematics, paleodiet, and paleoclimate. *Senckenberg Courier Special Volume 246*: 213-226.

Invited Talks and Conferences Attended

2019 “Differentiating frugivore and folivore diets using Sr/Ca ratios and non-destructive XRF analysis.” American Association of Physical Anthropologists, Cleveland, Ohio

2018 “Strontium isotopes as indicators of philopatry/ dispersal patterns.” M. Hamilton and S. Nelson; American Association of Physical Anthropologists, Austin, Texas

2016 “Stable isotopes as a species and anthropogenic indicator in a Gold Rush-era Galapagos tortoise and sea turtle from San Francisco, California.” Conrad, Barcelo, Jones, Newsome, Nelson, Seminoff, Bruner, and Pastron. *Stable Isotopes in Zooarchaeology*, Athens, Georgia

2015 “Paleoecology of *Oreopithecus* faunas based on stable isotope analyses.” Southwestern Association of Biological Anthropologists, Albuquerque, New Mexico

2014 “The use of Bayesian-inference stable isotope mixing models to infer niche breadth in the fossil record: an extant study from Kibale National Park.” Hamilton and Nelson. American Association of Physical Anthropologists, Calgary, Canada

2014 “How did Late Miocene rodents respond to changes in the grassland biome of southern Asia?” Flynn, Kimura, and Nelson. North American Paleontological Convention, Gainesville, Florida.

2013 “Paleoecology of *Gigantopithecus blacki* based on stable isotope analyses.” Southwestern Association of Biological Anthropologists, Tempe, Arizona

- 2011 “Stable Isotopic Analyses of New Mexico Mummies with Multiple Tissues.” Mitchell, Kieffer, Kitagawa, Mosley, Naranjo, Nelson, Atudorei, and Edgar. American Association of Physical Anthropologists, Minneapolis, Minnesota.
- 2010 “Paleoecology of *Oreopithecus* faunas based on stable isotopic analyses.” Nelson and Rook. American Association of Physical Anthropologists, Albuquerque, New Mexico.
- 2009 “Miocene: Dawn and demise of the apes.” Seminar series, Department of Earth and Planetary Sciences, University of New Mexico.
- 2009 “Systematics and paleoecology of diverse species of Equidae from the Pleistocene locality of Makayuni, Northern Tanzania.” Wolf, Bernor, Kaiser, Nelson, and Semprebon. Society of Vertebrate Paleontology, Great Britain.
- 2009 “Paleoecology of *Oreopithecus bambolii* faunas (Tuscany and Sardinia): stable isotopic analyses results.” Rook and Nelson. Regional Committee on Mediterranean Neogene Stratigraphy, Italy.
- 2008 “Reconstructing *Oreopithecus*’ paleoecology by means of stable isotopic analyses. Preliminary data.” Nelson and Rook. European Fossil Primates Colloquium, Italy.
- 2008 “Reconstructing Miocene hominoid paleoecology.” SIBBS (Seminar in Biological and Biomedical Sciences) lecture series, University of New Mexico.
- 2008 “*Sivapithecus*: the life and death of a Miocene ape.” Ancestors Lecture, Maxwell Museum of Anthropology, University of New Mexico.
- 2007 “The extinction of *Sivapithecus*: Faunal and environmental changes surrounding its disappearance in the Siwaliks of Pakistan.” University of New Mexico Department of Anthropology.
- 2007 “Dietary reconstructions of the Middle and Late Miocene ungulate communities in the Siwaliks, Pakistan.” Belmaker, Nelson, Morgan, Flynn, Barry, Pilbeam, and Badgley. Paleoanthropology Society.
- 2007 “Mesowear analysis of selenodont ungulates in the Middle to Late Miocene of the Siwaliks, Pakistan: dietary and paleoenvironmental implications.” Belmaker, Nelson, Morgan, Barry, and Badgley. Society of Vertebrate Paleontology.
- 2006 “Isotopic reconstructions of Late Miocene climate, vegetation, and faunal change in the Siwaliks of Pakistan.” International Paleontological Congress, Beijing, China.

- 2006 “Evidence for habitat gradients using lateral variation in stable carbon isotope ratios within the Miocene Siwalik Sequence of Pakistan.” Morgan, Behrensmeyer, Badgley, Nelson, and Barry. Society of Vertebrate Paleontology.
- 2004 “A comparison of *Sivapithecus* and modern chimpanzee habitats, and environmental changes associated with the extinction of *Sivapithecus*.” International Geological Congress. Florence, Italy.
- 2004 “Dental microwear analyses of *Sivapithecus* and contemporaneous fauna.” American Association of Physical Anthropologists.
- 2004 “Testing models of faunal turnover with Neogene mammals from Pakistan.” Badgley, Nelson, Barry, Behrensmeyer, and Cerling. Society of Vertebrate Paleontology.
- 2003 “Miocene paleoseasonality inferred from equid teeth and intra-tooth isotopic profiles.” Society of Vertebrate Paleontology.
- 2003 “The preferred habitats of *Sivapithecus* in the Siwaliks of Pakistan and paleoenvironmental changes leading to its extinction.” Asian Paleoprimateology Symposium. Primate Research Institute of Kyoto University, Japan.
- 2002 “Paleoenvironmental reconstructions with respect to the extinction of *Sivapithecus* in Pakistan.” American Association of Physical Anthropologists.
- 2002 “Reconstruction of paleoprecipitation regimes, and associated forests inhabited by *Sivapithecus*.” New England Biological Anthropology Symposium.

Field Research

- 2019 Faunal isotopes, Kibale Forest, Uganda
- 2018 Faunal isotopes, Kibale Forest, Uganda
- 2017 Isotopic stratification in rainforest canopy and strontium variability of plants, Kibale Forest, Uganda
- 2016 Isotopic stratification in rainforest canopy, Kibale Forest, Uganda
- 2015 Isotopic stratification in rainforest canopy and strontium variability of plants, Kibale Forest, Uganda
- 2014 Isotopic stratification in rainforest canopy and strontium variability of plants, Kibale Forest, Uganda
- 2004 Chimpanzee behavior and isotopic analyses of fauna, Kibale Forest, Uganda
- 2003 Dental microwear analyses of Hadza diets, Tanzania
- 2002 Chimpanzee behavior and isotopic analyses of fauna, Kibale Forest, Uganda
- 2000 Paleontological survey Siwalik sediments, Pakistan
- 1996 Paleontological excavation Sinap and Pasalar, Turkey
- 1996 Paleontological excavation Can Llobateres, Spain
- 1996 Paleontological survey Siwalik sediments, Pakistan

- 1995 Paleontological excavation Kromdraai, South Africa
- 1994 Diet and behavior of howler monkeys, Costa Rica
- 1994 Communication in Carolina Chickadees, North Carolina
- 1994 Behavior of Black-and-White Ruffed Lemurs, Duke University Primate Center (Natural Habitat Enclosures)
- 1993 Behavior of Black-and-White Ruffed Lemurs, Duke University Primate Center (Natural Habitat Enclosures)

Teaching

- 2007-current Courses at University of New Mexico – Human Emergence; Human Origins; Paleoecology Lab; Paleoanthropology; Primate Evolution; Human Behavioral Evolution; Topics in Paleoecology; Humans and the Environment; Topics in Interdisciplinary Biology and Biomedical Sciences; Guest lectures in -- Chimpanzees and Human Evolution; Elemental Ecology; Science in Archaeology; Seminar in Interdisciplinary Biology and Biomedical Sciences; Topics: Career Planning
- 2005-2007 Courses at Boston University – Human Behavior and Evolution; Human Origins; Primate Evolution and Anatomy; Advanced Topics in Human Behavioral Evolution; Graduate Proseminar in Anthropology
- 2003 Instructor at University of Michigan -- Undergraduate Research Opportunity Program
- 1999 Instructor, University of Connecticut “Aquanaut” Whale Communication and Oceanography Program
- 1996-1998 Teaching Fellow, Harvard University Department of Anthropology -- Human Evolution

Undergraduate Student Mentoring:

- 2019-current Honor’s thesis -- Kathryn Sokolowski, Ecological factors affecting nursing in wild chimpanzees
- 2018-current Laboratory internship -- Teah Amirkabirian
- 2017-2018 Honor’s Thesis – Shayne Halter, Determining relevance of gallery forest chimpanzee habitat to early human evolution through stable isotope analyses
- 2017 Laboratory internship – Danielle Sanchez-Combs
- 2015-2016 Honor’s Thesis – Angela Combs, Determining weaning behaviors in wild chimpanzees through stable isotope analyses
- 2015 Laboratory internship – Emma Lathrop
- 2014 Laboratory internship – Uphoria Blackham

- 2013-2014 Honor's Thesis – Cybele Carpenter, Measuring Craniofacial Development in Wild Chimpanzees Using Photogrammetry, with Implications for Reconstructing Hominin Life History Evolution
- 2013 Laboratory internship – Sonee Swisley
- 2013 Laboratory internship – Melissa Sheldahl
- 2011 Laboratory internship – Nicholas Zamora
- 2011 Laboratory internship – Jada Patterson
- 2010-2011 Honor's Thesis – Clayton Pilbro, Comparison of Early Eocene San Juan Basin, NM *Phenacolemur jepseni* with *Phenacolemur citatus* and *Phenacolemur praecox* from Bighorn Basin, WY – a study of variation and validity of these *Phenacolemur* species.
- 2009-2010 Honor's Thesis – Joshua Vallejos, Dental microwear of Kibale primates.
- 2010 Laboratory internship – Thera McAvoy
- 2010 Laboratory internship – Oceana Ortiz
- 2010 Laboratory internship – Kamden Cornell
- 2009 Laboratory internship – Celeste Schwartz
- 2008-2009 Honor's Thesis – Judy Hartline, Dental microwear of South African australopithecines.
- 2007 Laboratory internship – Catherine Mitchell, Boston University
- 2003-2004 Undergraduate Research Opportunity – Emily Zakem, University of Michigan, Dental microwear of rodents.

Graduate Student Mentoring:

Dissertation advisor:

- 2012-2018 Marian Hamilton (NSF Graduate Research Fellowship)
- 2009-2013 Diana Rabenold
- 2008-2012 Catherine Mitchell (PIBBS scholar)

Master's advisor:

- 2019-current Joshua Vallejos (co-advising with Bruce Huckell)

Dissertation committee member:

- 2018-present Stephanie Fox
- 2018-present Milena Carvalho
- 2017-present Jessica Gross
- 2016-present Cyler Conrad
- 2015-current Katlin Schroeder (Biology)
- 2014-current Catalina Tome (Biology)
- 2014-current Kristen Sabbi
- 2013-current Diana Rabenold
- 2011- 2015 Muhammad Tariq (Government College University, Lahore, Pakistan)
- 2011- 2016 Melissa Pardi (Biology)
- 2001-current Sarah Joyce
- 2010-2014 Crystal Kieffer

2009 Tim Petersen
2008- 2015 Shawn Whiteman (Biology)
2008-2010 Keiko Kitagawa

Professional and Community Service

2019 Content advisor, bipedalism display, Maxwell Museum
2019 Human evolution presentation, Albuquerque preschool
2019 STEM mentorship mix and match event for undergraduates
2018 Lead content advisor, human evolution exhibit NSF grant proposal Maxwell Museum
2018-2019 Panelist, National Science Foundation Graduate Research Fellowship, Ecology
2018-2019 Search committee, assistant professor position, Department of Anthropology
2018 “Chimpanzees, isotopes, and the transition from ape to human.” New Mexico Museum of Natural History and Science, Albuquerque, New Mexico
2018 Principles of evolution presentation – five Biology classes, Albuquerque middle school
2018 STEM mentorship mix and match event for undergraduates
2017-2018 Search Committee, assistant professor position, Dept. Anthropology
2017-2018 Sabbatical Committee, University of New Mexico
2017-2018 Panelist, National Science Foundation Graduate Research Fellowship, Ecology
2017 Fossil presentation – Albuquerque preschool
2016-2017 Panelist, National Science Foundation Graduate Research Fellowship, Anthropology
2016 Human evolution and fossil presentation – five Earth Science classes, Albuquerque middle school
2015-2016 Panelist, National Science Foundation Graduate Research Fellowship, Ecology
2015-current Advisory Group, Department of Anthropology
2015-current Convener, Evolutionary Anthropology
2014-current Advisory Committee, Center for Stable Isotopes
2013-current Continuing non-tenure track faculty review committee
2013 Fossil presentation – Maxwell Museum summer camp
2013 Teeth and Skulls presentation. Albuquerque elementary school
2013-2014 Consultant for documentary “Life Force – Borneo,” Natural History New Zealand
2012-2013 Search Committee, assistant professor position, Dept. Anthropology
2012 Science fair. Albuquerque elementary school
2012 Fossil presentation. Albuquerque elementary school
2011- current Resource Allocations Committee, Department of Anthropology, University of New Mexico
2011 “What makes us human? Inferences from the fossil record.” Summer Science Program, Socorro, New Mexico
2011 Fossils presentation. Albuquerque elementary school

- 2010 Café Scientifique. “The human fossil record: interpreting behavior from bones.” Four presentations to high school students in Los Alamos, Espanola, Albuquerque, and Santa Fe, New Mexico.
- 2010 Radio interview for NPR, Pasadena. The discovery of *Australopithecus sediba*.
- 2008 “*Sivapithecus*: Reconstructing the life of a Miocene ape.” Summer Science Program, Socorro, New Mexico.
- 2008 Consultant in workshop to develop new Maxwell Museum human evolution exhibit.
- 2007 – 2009 University of New Mexico Anthropology departmental seminar series coordinator
- 2007-2015 Affiliated faculty, Program in Interdisciplinary Biological and Biomedical Sciences (PIBBS), University of New Mexico
- 2007-current Manager of the University of New Mexico Anthropology cast collection
- 2006 Mentor, Weston High School Senior Internship Program
- 2003 Consultant for television series “Miracle Planet – the Evolution of Our World”
- 1999 Instructor, University of Connecticut “Aquanaut” Whale Communication and Oceanography Program
- 1995-1999 Earth History and Paleontology (EHAP) seminar series coordinator, Harvard University

Peer reviews:

Granting agencies: National Science Foundation, National Geographic Society, Academy of Finland and the National Natural Science Foundation of China, Petroleum Research Fund (American Chemical Society), Leakey Foundation

Journals: *Proceedings of the National Academy of Sciences*; *Current Biology*; *PLOS ONE*; *Palaeogeography*, *Palaeoclimatology*, *Palaeoecology*; *Paleobiology*; *Journal of Human Evolution*; *International Journal of Primatology*; *Human Nature*; *Journal of Anthropological Research*; *Journal of Mammalogy*; *Mammalian Biology*; *Quaternary International*; *Anthropological Science*; *Naturwissenschaften*; *Journal of Mountain Science*; *International Journal of Biodiversity and Conservation*; *The Journal of Animal and Plant Sciences*; *Pakistan Journal of Zoology*