

## Caroline A. E. Strömberg

Estella B. Leopold Professor in Biology and Curator of Paleobotany

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### Education

- 2003 Ph.D., University of California at Berkeley, Department of Integrative Biology.  
Dissertation: *The origin and spread of grass-dominated ecosystems during the Tertiary of North America and how it relates to the evolution of hypsodonty in equids*, 779 pp.
- 1997 B.A./M.S., Lund University, Sweden, Dept. of Historical Geology & Palaeontology. M.S. thesis: *The conodont genus Ctenognathodus in the Silurian of Gotland, Sweden*, 56 pp.

### Employment

- Sept 2017- Estella B. Leopold Professor, Department of Biology, University of Washington. Curator of Paleobotany, Burke Museum of Natural History & Culture (UWBM).
- April 2011- Adjunct Assistant/Associate Professor, Earth and Planetary Sciences, University of Washington.
- Sept. 2013- Estella B. Leopold Associate Professor (with tenure), Department of Biology, University of Washington. Curator of Paleobotany, UWBM.
- Dec. 2007- Estella B. Leopold Assistant Professor, Department of Biology, University of Washington. Curator of Paleobotany, UWBM.
- Sept. 2013- Estella B. Leopold Assistant Professor, Department of Biology, University of Washington. Curator of Paleobotany, UWBM.
- Dec. 2007- Research Collaborator, U.S. National Museum of Natural History (USNMNH), Smithsonian Institution.
- 2006- Research Associate, Denver Museum of Nature and Science (DMNS).
- 2007 Post-doctoral researcher, Department of Paleobiology, USNMNH.
- 2004-2006 Post-doctoral researcher, Depts. of Palaeobotany and Palaeozoology, Swedish Museum of Natural History.

### Grants

- 2017 Small grant from the Quaternary Science Center for organizing ICPT workshop in Seattle (April 2-7). \$2,000.
- 2017-2019 Supplemental REU for EAR-1253713: *CAREER: Tracking the evolution of grasses and grasslands: using phytoliths to explore evolution-ecology links in deep time*. \$12,520, sole PI.
- 2017-2019 Supplemental request for CAREER grant (EAR-1253713). \$66,515, sole PI.
- 2015-2017 Senior personnel on NSF Award EAR-1423058: *Can habitat and elevation explain mid-Miocene Neotropical mammal provinciality?* ~\$6,500 for fieldwork and processing. PI Darin Croft.
- 2014-2017 NSF Award EAR-1349530: *Collaborative Research: Calibrating mid-Miocene greenhouse climate and ecology in a key high southern latitude locale*. \$65,000, co-PI (with M. Kohn, R. Kay).
- 2013-2014 National Science Foundation (NSF), Career-Life Balance supplement to EAR 1024681. \$11,232.
- 2013-2018 NSF Faculty Early Career Development (CAREER) Program (EAR-1253713): *CAREER: Tracking the evolution of grasses and grasslands: using phytoliths to unravel evolution-ecology links in deep time*. \$525,000. Sole PI.
- 2011-2012 NSF Doctoral Dissertation Improvement Grant (DEB-1110354) to R. Dunn: *Phytolith Undulation Index: Developing a new proxy for tracking habitat openness in the Eocene-Miocene of Gran Barranca, Argentina*. \$12,450.
- 2011-2013 Royalty Research Fund, UW: *Tracking the origins of C<sub>4</sub> grasses and grasslands: a phytolith key to PACMAD grass phylogeny and ecology*. \$40,000. Sole PI.
- 2010 National Evolutionary Synthesis Center (NESCent) Award: *Earth surface processes in the evolution of mammalian tooth shape*, co-PI (with R. Madden, M. Kohn).

- 2010-2013 NESCent Award *Origins of C<sub>4</sub> grasslands: a new synthesis of phylogeny, ecology and paleobiology*, co-PI (with C. Osborne, C. Still).
- 2010-2014 NSF Award EAR-1024681: *Collaborative Research: A combined phytolith-isotope geochemistry approach to Cenozoic paleo-vegetation reconstruction in Montana*. \$149,434, co-PI (with N. Sheldon, S. Smith).
- 2008 NESCent Award: *Toward a new synthesis of the evolutionary history and ecology of C<sub>4</sub> grasses*, co-PI (with E. Edwards, C. Osborne).
- 2008-2013 NSF Award EAR-0819910: *Collaborative research: How did the grassland biome evolve in South America?: Integrating Cenozoic climate, floral and faunal records from Patagonia, Argentina*. \$149,573, Lead PI (with co-PIs M. Kohn, R. Madden).
- 2008-2012 Committee for Research and Exploration of the National Geographic Society Grant #8384-08: *The evolution of Late Cretaceous mammals and plants on the drifting Indian subcontinent*, \$24,770, senior personnel (PI, G. Wilson).
- 2006 Marcus Wallenberg Foundation for International Scientific Collaboration Award, \$35,000; Wennergren Foundation Award, \$6,000; Swedish Research Council Award, \$6,000: *International symposium for Else Marie Friis' 60<sup>th</sup> birthday: In search of the earliest flower*, co-PI (with J. Schönenberger, M. von Balthazar, T. Denk).
- 2006-2007 Smithsonian Postdoctoral Fellowship: *Vegetation structure in Late Cretaceous ecosystems in North America and the role of angiosperms*. \$37,000.
- 2006 Riksmusei Vänner Foundation Travel Grant. \$1,000.
- 2001-2003 NSF Dissertation Improvement Grant DEB-1-0104975: *The origin and spread of grass-dominated ecosystems during the Tertiary of North America and how it relates to the evolution of hypsodonty in equids*. \$8,967.
- 2000 Sigma Xi Research Grant. \$500.
- 2000 Paleontological Society of America Grant. \$500.
- 2000, 2001 Geological Society of America Research Grant. \$2,000.
- 1999, 2000, 20001, 2002 Small Research Grant (University of California Museum of Paleontology). \$500.
- 1999, 2000, 2001 Integrative Biology Departmental Summer Block Grants (UC Berkeley). \$4,000.

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### **Awards, Honors, Scholarships, and Professional Offices**

#### *Awards, honors, scholarships*

- 2017-2017 Paleontological Society Fellow
- 2017 [Charles Schuchert Award](#) (Paleosociety) for a person "early in his or her career whose paleontological work reflects excellence and quality" (awarded at GSA, 2017)
- 2017 Paleosociety Distinguished Lecturer for 2017-2018
- 2014 Ecological Society of America's Cooper Award for Wing, Strömberg et al. (2012) in *Ecological Monographs* for an "outstanding contributor to the fields of geobotany, physiographic ecology, plant succession, or the distribution of plants along environmental gradients."
- 2007 Elsevier honor: Strömberg (2004) in *Top-50 most cited articles*, Palaeo-3 (2003-2007).
- 2004 Science & Technology Web Award: *Understanding Evolution* (<http://evolution.berkeley.edu/>). (science advisor, content provider, designer.)
- 2004 Alfred Sherwood Romer Prize: Best Student Paper, Society of Vertebrate Paleontology Meeting, Denver, Colorado.
- 2004 Isabel Cookson Award: Best Student Paper in Paleobotanical Section at the Botanical Society of America Meeting, Snowbird, Utah.
- 2002 Society for Phytolith Research Award: Best Student Paper at the 4<sup>th</sup> International Meeting for Phytolith Research, Cambridge, England.
- 2003 Annie Alexander Fellowship (University of California Museum of Paleontology).
- 2002 University of California at Berkeley: Outstanding Graduate Student Instructor Award
- 2000-2001 International House Grant-In-Aid

- 2000 F.E. Peabody Fellowship (University of California Museum of Paleontology)  
 1998-2000 P.E.O. International Chapter Sisterhood Scholarship  
 1998-1999 Swedish-American Foundation Scholarship  
 1997-1998 Swedish scholarships for graduate studies at UC Berkeley: Gyllenstiernska Krapperup Foundation Scholarship, Helge Ax:son Johnson Scholarship, Anna Whitlock Foundation Scholarship, Crafoord Foundation Scholarship, von Beskow's Fund; Royal Academy of Science Fellowship  
 1997-2002 Fulbright Commission Scholarship: doctoral studies, UC Berkeley  
 1996 University of California at Berkeley Dean's list  
 1995-1996 California Scholarship, Lund University (one year at a UC Campus)  
 1993-1995 Swedish scholarships for undergraduate studies in Sweden: Crafoord Foundation Scholarship (for apprenticeship in scientific illustration), Fredrika Bremer Society Scholarship and several other small stipends (study in geology/biology)

#### *Professional offices*

- 2018-present Managing Board for Peer Community in Paleontology ([PCI Paleo](#))  
 2017-present Member-At-Large and member of Pojeta Award Committee, Paleontological Society  
 2015-present Member of the Committee on Committees, Botanical Society of America.  
 2015-present Member of the International Committee for Phytolith Taxonomy.  
 2014 Member of selection committee for STEPPE student travel awards, 4<sup>th</sup> International Palaeontological Congress, Mendoza, Argentina, 28 September – 3 October 2014.  
 2014 Scientific committee, International Meeting for Phytolith Research, Brussels, Belgium, September 2014.  
 2013-2014 Chairperson, Paleobotanical Section of the Botanical Society of America.  
 2013-present Associate Editor, *Palaeos*.  
 2011-2016 Romer Prize Committee Member, Society for Vertebrate Paleontology.  
 2011-2013 Section Co-Editor, *Foundations of Paleoecology* (currently in review; University of Chicago Press), USNMNH, Smithsonian Institution.  
 2010-2012 Joint Technical Program Committee, Geological Society of America, Representative for the Paleontological Society.  
 2010 Selection committee for Bibliography Editor for the Paleobotanical section, Botany meetings, Providence, RI.  
 2008 Scientific Committee, 7<sup>th</sup> International Meeting for Phytolith Research, Mar del Plata, Argentina.  
 2007 Isabel Cookson Award Committee, Botany 2007 Meeting, Chicago, IL.  
 2006-2014 Committee for the International Code for Phytolith Nomenclature.  
 2006-present Secretary Treasurer of the (International) Society for Phytolith Research.  
 2005-2006 Associate Board Member of the Fulbright Alumni Association, Stockholm, Sweden.  
 2003 Faculty search committee, Integrative Biology, UC Berkeley (graduate student representative).  
 2001-2002 Berkeley Natural History Museum Graduate Student Committee, UC Berkeley.  
 2000-2002 Associate Editor, *PaleoBios*.  
 2000-2001 Organizing committee for North American Paleontological Convention 2001, UC Berkeley.  
 2000-2001 Student representative, University of California Museum of Paleontology.

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#### ***Other Professional Service/Activity***

- 2017 Invited participant to workshop organized by NSF RCN "Dynamic landscapes and mammalian evolution" (1<sup>st</sup> workshop October 26-27, Seattle).  
 2017 Organizer and host of workshop for the *International Committee on Phytolith Taxonomy*, Quaternary Research Center, UW, Seattle, WA.  
 2017 Participant/presenter, [Digital Data in Paleontological Research](#) workshop, iDigBio, Berkeley, CA.  
 2017 Co-organizer, topical session (*The Role of Silica in the Earth System: From Organisms to Global Biogeochemical Cycles*), Geological Society of America (GSA) Meeting, Seattle, WA.

- 2017 Co-organizer, topical session (*Natural history museums in the 21st century - programming for the future while preserving the past*), Geological Society of America (GSA) Meeting, Seattle, WA.
- 2017 Co-organizer, topical session (*Cenozoic Paleoclimates and Ecosystems*), Geological Society of America (GSA) Meeting, Seattle, WA.
- 2016 Invited participant/presenter, *Silicon Fluxes ITN meeting* workshop, Lund University, Sweden.
- 2015-2016 Participant in workshops (x3) for the *International Committee on Phytolith Taxonomy*, Barcelona, Spain and Aix-en-Provence, France.
- 2015-2016 Invited participant/presenter, "[Coupled Grasslands and Mammalian Evolution](#)" Working Group at the Santa Fe Institute.
- 2015-2016 Member of scientific committee for the [10<sup>th</sup> International Meeting for Phytolith Research](#), Aix-en-Provence, France.
- 2015 Participant in short course, "R without fear: Applied R for biologists", [Transmitting Science](#), Barcelona, Spain.
- 2015 Participant in short course, "Geometric morphometrics and phylogeny", [Transmitting Science](#), Barcelona, Spain.
- 2015 NSF panel member.
- 2015 External reviewer, tenure case of Assistant Professor.
- 2014 Co-organizer, symposium (*C<sub>4</sub> photosynthesis in the Earth system*), American Geophysical Union, San Francisco, CA, 9-13 December.
- 2014 Co-organizer, symposium (*The Miocene vegetation and environment of Western North America*), Botany, Boise, ID, 26-30 July.
- 2014 Invited participant, NESCent catalysis meeting (*The co-evolution of plants and fire and consequences for the Earth system*), Durham, NC, 18-21 February.
- 2014 External reviewer, reappointment of Assistant Professor.
- 2013-2014 Co-organizer, symposium (*The Cenozoic assembly of the grassland biome: pattern and process in ecosystem evolution*), North American Paleontological Convention (NAPC), Gainesville, FL, 15-18 February.
- 2012 Doctoral Dissertation Defense Committee, CEREGE, Aix-en-Provence, France.
- 2011-2013 Co-organizer, National Evolutionary Synthesis Center (NESCent) working group (*Origins of C<sub>4</sub> grasslands: a new synthesis of phylogeny, ecology and paleobiology*), Durham, NC.
- 2011 Co-organizer NESCent catalysis meeting (*Earth surface processes in the evolution of mammalian tooth shape*), Durham, NC.
- 2010 Co-organizer, topical session (*Cenozoic terrestrial environmental change in North America: From paleosols to paleobotany*), Geological Society of America (GSA) Meeting, Denver, CO.
- 2009-2010 GrassPortal Development Team Collaborator, consultant, *GrassPortal* ([www.grassportal.org](http://www.grassportal.org)), University of Sheffield, UK.
- 2008-2009 Co-organizer, field trip, GSA Meeting, Portland, Oregon.
- 2009 Co-organizer NESCent catalysis meeting (*Toward a New Synthesis of the Evolutionary History and Ecology of C<sub>4</sub> Grasses*), Durham, NC.
- 2008 Co-organizer, topical session (*What good are (fossil) plants anyway? New methods for investigating old problems*), GSA Meeting, Houston, TX.
- 2008 Participant, workshop (*Stranger than we can suppose: Evaluating ecological possibilities – past, present, and future*), USNMNH, Smithsonian Institution.
- 2007 Moderator, GSA Meeting, Denver, CO.
- 2007 Moderator, Society of Vertebrate Paleontology Meeting, Austin, TX.
- 2006, 2007 Participant and moderator, NSF workshop (*Sino-US Critical Transitions in the History of Life*), Beijing, China (2006); DMNS, Denver, CO (2007).
- 2007 Participant, workshop (*Powers of Ten*), USNMNH, Smithsonian Institution.
- 2007 Co-organizer, international paleobotanical symposium (*In search of the earliest flowers*) honoring the 60<sup>th</sup> birthday and work of Prof. Else Marie Friis, Swedish Museum of Natural History, Stockholm, Sweden.
- 2005-2006 Co-organizer, symposium (*Neogene climatic and biotic change in Eastern Eurasia in the global context*), 2<sup>nd</sup> International Palaeontological Congress, Beijing, China.

- 2006-present Ad hoc grant proposal reviewer for NSF's Sedimentary Geology and Paleobiology (1-2 per year), National Geographic Society Committee on Research and Exploration (2), University of Washington Royalty Research Fund (3).
- 2005 Committee, licenciat defense, Dep. of Zoology, Stockholm University.
- 2005 Participant, workshop (*The boundary effect: What happens in the meeting between scientists and journalists?*), Swedish Museum of Natural History, Stockholm, Sweden.
- 2004- Co-chair, Paleoecology Analytical Working Group, Revealing Hominid Origins Initiative (RHOI: <http://rhoi.berkeley.edu/>). Workshop, Aix-en-Provence, France, 2005.
- 2004 Romer Prize evaluator, Society of Vertebrate Paleontology Meeting, Denver.
- 2003-present Ad hoc reviewer for journals, e.g., *Science*, *Paleobiology*, *Journal of Mammalian Evolution*, *Canadian Journal of Forest Research*, *Palaeogeography Palaeoclimatology Palaeoecology*, *Annals of Botany*, *PALAIOS*, *Antarctic Science*, *Journal of Zoology*, *Journal of Ecology*, *PLoS ONE*, *Palaeontologia Electronica*, *Quaternary International*, *Quaternary Research*, *Geology*, *Madroño*, *International Journal of Plant Sciences*.
- 2002-2003 Guest co-editor, thematic issue of *Palaeogeography*, *Palaeoclimatology*, *Palaeoecology* (2004: vol. 207, issue 3-4: *Special Issue: Evolution of Grass-dominated Ecosystems*).
- 2001 Symposium organizer, North American Paleontological Convention, UC Berkeley.

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**Publications** (\*corresponding author if not first author; *graduate student author*, *undergraduate student author*)

*Peer-reviewed publications*

Thummel, R.V., Brightly, W.B., Strömberg, C.A.E., in review. The evolution of phytolith deposition in modern bryophytes and implications for early land plant evolution. *New Phytologist*.

Hyland, E.G., Sheldon, N.D., Smith, S.Y., and Strömberg, C.A.E., in review. Late Miocene rise and fall of C<sub>4</sub> grasses in the western United States. *Palaeogeography, Palaeoclimatology, Palaeoecology*.

Strömberg C.A.E., Dunn R.E., Crifò C., Harris E.B., accepted. Phytoliths in paleoecology: Analytical considerations, current use, and future directions. In: Croft DA, Simpson S, Su DF (eds), *Methods in reconstructing Cenozoic terrestrial environments and ecological communities. Vertebrate Paleobiology and Paleoanthropology Book Series*. Springer Publishers. Manuscript 160 pages, 8 figures, 3 tables, 4 appendices.

Song, Z.\*, Liu, H.\*, Strömberg, C.A.E.\*, Wang, H., Strong, P.J., Li, B., Xu, C., 2018. Contribution of forests to the carbon sink via biologically-mediated silicate weathering: A case study of China. *Science of the Total Environment* 615: 1-8.

2017

Griffith, D.M., Lehmann, C.E.R., Strömberg, C.A.E., Parr, C.L., Pennington, R.T., Sankaran, M., Ratnam, J., Still, C.J., Powell, R.L., Hanan, N.P., Nippert, J.B., Osborne, C.P., Good, S., Anderson, T.M., Holdo, R.M., Veldman, J.W., Durigan, G., Tomlinson, K.W., Hoffmann, W.A., Archibald, S., Bond, W.J. 2017. Comment on "The extent of forest in dryland biomes". *Science* 358: 1-3.

Song, Z.\*, Liu, H.\*, Strömberg, C.A.E.\*, Yang, X., Zhang, X., 2017. Phytolith carbon sequestration in global terrestrial biomes. *Science of the Total Environment* 603-604: 502-509.

Harris, E.B.\*, Strömberg, C.A.E.\*, Sheldon, N.D., Smith, S.Y., Vilhena, D., 2017. Vegetation response during the lead-up to the middle Miocene warming event in the Northern Rocky Mountains. *Palaeogeography, Palaeoclimatology, Palaeoecology* 485: 401-415.

Harris, E.B., Strömberg, C.A.E., Sheldon, N.D., Smith, S.Y., Ibañez-Mejía, M., 2017. Revised chronostratigraphy and biostratigraphy of the early-middle Miocene Railroad Canyon Section of central-eastern Idaho. *GSA Bulletin* 129(9-10): 1241-1251.

Badgley, C., Smiley, T.M., Terry, R., Davis, E.B., DeSantis, L.R.G., Fox, D.L., Hopkins, S.S.B., Jezkova, T., Matocq, M.D., Matzke, N., McGuire, J.L., Mulch, A., Riddle, B.R., Roth, L., Samuels, J.X., Strömberg, C.A.E., Yanites, B.J., 2017. Biodiversity and topographic complexity: Modern and geohistorical perspectives. *Trends in Ecology & Evolution* 32(3): 211-226.

2016

Strömberg, C.A.E., Di Stilio, V.S. & Song, Z., 2016. Functions of phytoliths in vascular plants: An

evolutionary perspective. *Functional Ecology* 30: 1286–1297. DOI: 10.1111/1365-2435.12692. (Cover photo)

Panadès i Blas, X., Bartolomé i Filella, J., **Strömberg, C.A.E.**, Soriano i Tomàs, I., Buckland, P., Serieyssol, K.K., Bach i Plaza, J., Arillo Aranda, A., Lozar, F., Stevenson, T., Chamorro i Lorenzo, L., Ditchfield, P., 2016. The utility of livestock dung for reconstructing recent ethnological and environmental histories. *Environmental Archaeology*. DOI 10.1080/14614103.2016.1142630.

2015

**Dunn, R.E.**, **Le, T.-Y.**, **Strömberg, C.A.E.**, 2015. Light environment and epidermal cell morphology in grasses. *International Journal of Plant Sciences* 176: 832-847.

**Chen, S.T.**, Smith, S.Y., Sheldon, N.D., **Strömberg, C.A.E.**, 2015. Regional-scale variability in the spread of grasslands in the late Miocene. *Palaeogeography, Palaeoclimatology, Palaeoecology* 437: 42-52.

Kohn, M.J., **Strömberg, C.A.E.**, Madden, R.H., **Dunn, R.E.**, Evans, S., **Palacios, A.**, Carlini, A.A., 2015. Quasi-static Eocene-Oligocene climate in Patagonia promotes slow faunal evolution and mid-Cenozoic global cooling. *Palaeogeography, Palaeoclimatology, Palaeoecology* 435: 24-37.

Selkin, P.A., **Strömberg, C.A.E.**, **Dunn, R.E.**, Kohn, M.J., Carlini, A.A., Davies-Vollum, K.S., Madden, R.H., 2015. Climate, dust, and fire across the Eocene-Oligocene Transition, Patagonia. *Geology* G36664.1: 1-4.

**Dunn, R.E.**, **Strömberg, C.A.E.**, Madden, R.H., Kohn, M.J., Carlini, A.A., 2015. Linked canopy, climate and faunal evolution in the Cenozoic of Patagonia. *Science* 347(6219): 258-261.

2014

**Griffith, D.M.**, Anderson, T.M., Osborne, C.P., **Strömberg, C.A.E.**, **Forrestel, E.J.**, and Still, C.J., 2014. Biogeographically distinct controls on C<sub>3</sub> and C<sub>4</sub> grass distributions: merging community and physiological ecology, *Global Ecology and Biogeography*.

Dillhoff, R.M.\*, Dillhoff, T.A.\*, **Jijina, A.P.**, **Strömberg, C.A.E.\***, 2014. The Vasa Park flora, King County, Washington, USA – a window into the late Miocene of the Pacific Northwest, in: Stevens, W.D., Montiel, O.M., Raven, P.H. (Eds.), *Paleobotany and Biogeography, A Festschrift for Alan Graham in His 80th Year*. Missouri Botanical Garden Press, St. Louis, Missouri., pp. 64-97. (\* corresponding authors that contributed equally to this publication)

**Benca, J.P.\***, Carlisle, M., Bergen, S., **Strömberg, C.A.E.\***, 2014. Applying morphometrics to early land plant systematics: A new *Leclercqia* (Lycopsida) species from Washington State. *American Journal of Botany* 101(3): 510–520. (Cover illustration)

2013

Christin, P-A, Spriggs, E., Osborne, C.P., **Strömberg, C.A.E.**, Salamin, N., Edwards, E.J., 2013. Molecular dating, evolutionary rates, and the age of the grasses. *Systematic Biology* 63 (2): 153-165.

**Vilhena, D.A.**, **Harris, E.B.**, Bergstrom, C.T., **Maliska, M.E.**, Ward, P.D., Sidor, C.A., **Strömberg, C.A.E.**, Wilson, G.P., 2013. Bivalve modular selectivity implies multiple causes in the end-Cretaceous mass extinction. *Scientific Reports*. DOI: 10.1038/srep01790

**Strömberg, C.A.E.**, **Dunn, R.E.**, Madden, R.H., Kohn, M.J., Carlini, A.A., 2013. Decoupling the spread of grasslands from the evolution of grazer-type herbivores in South America. *Nature Communications* (12 February 2013). DOI: 10.1038/ncomms2508

**Dunn, R.E.**, Schmitz, M.D., Madden, R.H., Kohn, M.J., **Strömberg, C.A.E.**, Carlini, A.A., 2013. A New High Precision U/Pb Geochronology for middle Eocene–early Miocene South American Land Mammal Ages of the Sarmiento Formation, Gran Barranca, Chubut Province, Argentina. *GSA Bulletin* (online: DOI: 10.1130/B30660.1).

2012

**Cotton, J.M.**, Sheldon, N.D., **Strömberg, C.A.E.**, 2012. High-resolution isotopic record of C<sub>4</sub> photosynthesis in a Miocene grassland. *Palaeogeography Palaeoclimatology Palaeoecology* 337-338: 88-98.

**Miller, L.A.**, Smith, S.Y., Sheldon, N.D., **Strömberg, C.A.E.**, 2012. Eocene vegetation dynamics in Montana inferred from a high-resolution phytolith record. *GSA Bulletin* 124(9-10): 1577-1589.

Wing, S.L., **Strömberg, C.A.E.**, Hickey, L.J., Tiver, F., Willis, B., Burnham, R.J., Behrensmeier, A.K.

2012. Floral and environmental gradients on a Late Cretaceous landscape. *Ecological Monographs* 82(1): 23-47. (Cover photo)

2011

Prasad, V. **Strömberg, C.A.E.\***, Leache, A., Samant, B., Patnaik, R., Tang, L., Mohabey, D.M., Ge, S., Sahni, A., 2011. Late Cretaceous origin of the rice tribe. *Nature Communications* DOI: 10.1038/ncomms1482, Published 20 September 2011.

**Strömberg, C.A.E.**, 2011. Evolution of grasses and grassland ecosystems. *Annual Reviews of Earth and Planetary Sciences* 39: 517-544.

**Strömberg, C.A.E.**, McInerney, F.A., 2011 The Neogene transition from C<sub>3</sub> to C<sub>4</sub> grasslands in North America: Assemblage analysis of fossil phytoliths. *Paleobiology* 37: 50-71.

McInerney, F.A., \* **Strömberg, C.A.E.\***, White, J.A., 2011 The Neogene transition from C<sub>3</sub> to C<sub>4</sub> grasslands in North America: Stable carbon isotope ratios of fossil phytoliths. *Paleobiology* 37: 23-49. (\* corresponding authors that contributed equally to this publication)

2010

Edwards, E.J.\*, Osborne, C.P.\*, **Strömberg, C.A.E.\***, Smith, S.A., C<sub>4</sub> Grasses Consortium, 2010, The origins of C<sub>4</sub> grasslands: Integrating evolutionary and ecosystem science. *Science* 328: 587-591. (\* corresponding authors that contributed equally to this publication)

2009

Dillhoff, R.M., Dillhoff, T.A., **Dunn, R.E.**, Myers, J.A., and **Strömberg, C.A.E.**, 2009, Cenozoic paleobotany of the John Day Basin, central Oregon, in O'Connor, J.E., Dorsey, R.J., and Madin, I.P., eds., Volcanoes to Vineyards: Geologic Field Trips through the Dynamic Landscape of the Pacific Northwest: Geological Society of America Field Guide 15, p. 135–164.

Bennington, J. B., W. DiMichele, C. Badgley, R. Bambach, P. M. Barrett, A. K. Behrensmeier, R. Bobe, R. Burnham, T. Daeschler, J. van Dam, J. Eronen, D. Erwin, S. Finnegan, S. Holland, G. Hunt, D. Jablonski, S. Jackson, B. F. Jacobs, S. Kidwell, P. L. Koch, M. Kowalewski, C. Labandeira, C. Looy, K. Lyons, P. Novack-Gottshall, R. Potts, P. Roopnarine, **C. A. E.**

**Strömberg**, H. D. Seus, P. Wagner, P. Wilf, S. L. Wing., 2009. Paleontological powers of ten: issues of scale in paleoecology. *Palaios* 24: 1-4.

**Strömberg, C.A.E.**, 2009. Methodological concerns for analysis of phytolith assemblages: Does count size matter? *Quaternary International* 93: 124-140.

**Strömberg, C.A.E.**, 2009. Reply to comment on the paper in *Quaternary International*: "Methodological concerns for analysis of phytolith assemblages: Does count size matter?" (A. Alexandre and L. Bremond) *Quaternary International* 93: 143-145.

2007

**Strömberg, C.A.E.**, Werdelin, L., Friis, E. M., Saraç, G, 2007b. The spread of grass-dominated habitats in Turkey and surrounding areas during the Cenozoic: phytolith evidence. *Palaeogeography, Palaeoclimatology, Palaeoecology* 250: 18-49.

**Strömberg, C.A.E.**, Friis, E.M., Liang, M.-M., Werdelin, L., Zhang, Y-l., 2007a. Palaeoecology of an Early-Middle Miocene lake in China: preliminary interpretations based on phytoliths from the Shanwang Basin. *Vertebrata Palasiatica* 45(2): 145-160.

**Strömberg, C.A.E.**, 2007. Can slide preparation methods cause size biases in phytolith assemblages?: Results from a preliminary study. In Madella, M., Zurro, D. and Jones, M. K. (eds.): *Places, People and Plants: Using Phytoliths in Archaeology and Palaeoecology*. Oxbow Books. Pp. 1-12.

2006

**Strömberg, C.A.E.**, 2006. The evolution of hypsodonty in equids: Testing a hypothesis of adaptation. *Paleobiology* 32(2): 236-258.

2005

Prasad, V., **Strömberg, C.A.E.\***, Alimohammadian, H., Sahni, A., 2005. Dinosaur coprolites and the early evolution of grasses and grazers. *Science* 310: 1177-1180.

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### Mentoring

#### Postdoctoral researchers

2011-2012: Lloyd Rossouw  
 2011-2012: Avery Cook Shinneman  
 2013-2015: Georgina Erra  
 2013-2014: Zhaoliang Song (visiting Associate Professor, School of Environment and Resources, Zhejiang A & F University, Zhejiang, China, learning phytolith methods)  
 2014-2016: Ethan Hyland (Future of Ice Postdoctoral Fellowship)  
 2016-2018: Alice Novello (Marie Curie Postdoctoral Fellowship, European Commission)  
 2016-2018: Tim Gallaher

#### Graduate students (and their awards/honors)

2008-Dec. 2013: **Regan Dunn**  
 Evolving Earth Foundation (2009)  
 NSF DDIG (see above) (2011)  
 Sargent Award (2011)  
 GSA research grant (2011)  
 Melinda Denton Writing Fellowship (2012)  
 2010-March 2016: **Elisha Harris**  
 Honorable mention for NSF GFRP proposal (2012)  
 Admittance to Iso-camp + stipend, University of Utah (2013)  
 Evolving Earth Foundation (2013)  
 Sargent Award (2014)  
 louvo Award (2014)  
 GSA research grant (2014)  
 Frye-Hotson-Rigg Writing Fellowship (2014)  
 2013-present: **Camilla Crifò**  
 Admittance to OTS course in Costa Rica (2014)  
 WRF-Hall fellowship (2014)  
 Honorable mention for best OTS student paper (2015)  
 GSA Research Award (2015)  
 OTS Research Award (2015)

Lewis and Clark Fund (2015)  
 Stephen C. Porter QRC Student Research Award (2017)  
 WRF-Hall Fellowship (2017)  
 2015-present: [William Brightly](#)  
 WRF-Hall Fellowship (2017)  
 2016-present: [Paige Wilson](#) (ESS; deferred for a year)  
 Best poster figure prize, ESS gala (2017)  
 Colorado Scientific Society (2017)  
 Jody Bourgeois Endowed Fellowship, ESS (2017)  
 Lewis and Clark Fund (2017)  
 QRC Research Grant Fund (2017)

#### Graduate Student Committees (\*chaired by CAES):

*Current:* Biology: Melissa Lacey (2012-), Laura Frost (2012-), Audrey Ragsac (2012-), Yue Shi (2012-), Camilla Crifò\* (2013-), Ana Maria Bedoya (2016-), William Brightly\* (2016-), Luke Weaver (2016-). ESS: Paige Wilson\* (co-chaired) (2016-). School of Environmental and Forest Sciences: Paulina Llamas (2017-).

*Past:* Biology: Pat Lu-Irving (2007-2013), Regan Dunn\* (2008-2013), Meng Chen (2008-2015), Lauren Berg (2008-2015), Elisha Harris\* (2010-2016); Jonathan Calede (2010-2016), Brandon Peacock (2010-2016), Stephanie Smith (2012-2017), ESS/College of the Environment: Adelina Prentice (2007-2011), Caroline Pew (2008-2013); Archaeology: Lisbet Louderback (2009-2014); CEREGE, Aix-en-Provence, France: Alice Novello (2012, dissertation reading committee).

#### Post-graduate researchers

2008-2010: Julie Nicol (BSc, Research Assistant and Lab Manager)  
 2010-2011: Marijana Surkovic (BSc, Research Assistant and Lab Manager)  
 2009-2011: Stephanie Zaborac-Reed (non-matriculated graduate student)  
 2009-present: Ieshita Biswas (post-MSc volunteer)  
 2011-2014: Sutapa Dutta (post-PhD volunteer)  
 2017: Matt Butrim (post-BSc, volunteer)

#### Undergraduate researchers (and their awards/honors)

2008: [Cynthia Gentry](#)  
 2008: [Travis Murins](#)  
 2008-2013: [Jeff Paul Benca](#)  
 Mary Gates Research Scholarship (2009)  
 Mary Gates Travel Award (2011)  
 Pteridology Society Travel Award (2011)  
 Isabel C. Cookson Award, Botany meetings (2011)  
 George and Barbara Akers Scholarship (2011)  
 Casey Award (2011)  
 National Geographic Young Explorer Grant (2011-2012)  
 Levinson Emerging Scholar (2011)  
 NSF GFRP for graduate school at UC Berkeley (2012-)  
 Future Timeless Award (2012)  
 (Triarch Botanical Images Student Travel Awards, Botany meetings (2013, for research conducted while in my lab at UW))  
 2009: [Sheridan Alaina Mack](#)  
 2<sup>nd</sup> prize, Northwest Geological Society poster competition (2010)  
 2009-2014: [Thien-Y Le](#)  
 UW-HHMI Research Internship (2010)  
 EOP Boeing Research Scholarship (2010)  
 1<sup>st</sup> poster prize, UW-HHMI Biology Undergraduate Research Symposium (2010)  
 BSA Women in Science Travel Grant (2011)  
 GO! Global Scholarship (2011)

- Frye-Hotson-Rigg award (2011)  
2012 Emerging Researchers National Conference in STEM (ERN) Travel Award (2012)  
UW Undergraduate Research Conference Travel Award (2012)  
2<sup>nd</sup> prize, Plant Sciences Undergraduate Poster, ERN Conference (2012)
- 2010: [Jennifer Burger](#)  
2010: [Kate Sitko](#)  
2010-2013: [Anthony Jijina](#)  
    UW-HHMI Research Internship (2011)  
    Mary Gates Scholarship (2012)
- 2010: [Darshi Banan](#)  
2010: [Ross Fletcher Hill](#)  
2010-2011: [Terence Huang](#)  
2010-2012: [Joshua Johnson](#)  
2010-2012: [Aidan Loeser](#)  
2011-2017: [Erik Fredrickson](#)  
    Mary Gates Research Scholarship (2011)  
    Tied for 1<sup>st</sup> prize for best student talk at ESS gala (2012)  
    Douglas E. Merrill Prize for Excellence (2012)  
    Joseph A. Vance Endowed Student Support grant (2012)  
    PIRE (Panama Canal Project) Internship (2013)
- 2011-present: [Kim Smith](#)  
    Tied for 1<sup>st</sup> prize for best student talk at ESS gala (2012)  
    Evolving Earth Foundation research grant (2012)  
    Joseph A. Vance Endowed Student Support grant (May, 2012)  
    Mary Gates Research Scholarship (2012)
- 2012: [Ellen Van Wyk](#)  
2012: [Cassandra Trinh-Le](#)  
2012-present: [Ryan Thummel](#)  
    Casey Award (2015)  
    Presenter at UW URS (2015)  
    Travel award, Paleobotanical Section, Botany meetings (2015)  
    Guest lecture in BIOL 447 (2016)
- 2013-2014: [Michael Schmidt](#)  
2014 (2 quarters): [Megan Denis](#)  
2014-2015: [Richard Buzard](#)  
    Presenter at GSA (2014)  
    Presenter at UW URS (2015)
- 2014-2015: [Nik Pershing](#)  
2015-2016: [Anna Schorr](#)  
    Presenter at UW URS (2016)
- 2015-2016: [Elie Aboulafia](#)  
    Presenter at UW URS (2016)
- 2015-2016: [Brittany McManus](#)  
    Presenter at UW URS (2016)
- 2015-2016: [Casey O'Keefe](#)  
    Presenter at UW URS (2016)
- 2015 (2 quarters): [Tanvi Dhigde](#)  
2015-2016: [Erin Sofinowski](#)  
2015 (2 quarters): [Thy Huyhn](#)  
2015-2017: [Ashly Senske](#)  
    Presenter at UW URS (2016, 2017)  
    Biology Department Scholarship (2017)  
    NSF REU (2017)
- 2016-present: [Jacqueline Sherburne](#)  
    Vance Endowed Student Support Fund, ESS (2017)
- 2016 (2 quarters): [Sarah Larson](#)



2016-2017: [Claire Marvet](#)  
 Presenter at UW URS (2017)  
 NSF REU (2017)  
 2017-2017: [Brian Desmond](#)  
 Presenter at UW URS (2017)  
 2017: [Matthew Bloch](#)  
 2017-present: [Sultan Akbar](#)  
 Presenter at UW URS (2017)  
 2017-present: [Claire Grant](#)  
 2017: [Una O'Connell](#)  
 2017: [Joel Jacobsen](#)  
 2017-present: [Kari Jessett](#)  
 2017: [Tingting Hsu](#)  
 2017: [Silishia Wong](#)  
 2017: [Mara Page](#)  
 2017: [Sarah Reza](#)  
 2017: [Aida Rusman](#)  
 2017-present: [Kirstin Olson](#)  
 2017-present: [Kristen Hamel](#)  
 2017-present: [Tran Do](#)  
 2017-present: [Gabriella Alampay](#)  
 2017-present: [Callie Zender](#)  
 2017-present: [Maura Kilpatrick](#)  
 2018-present: [Yutaro Sakairi](#)  
 2018-present: [Walter Tomberlin](#)  
 2018-present: [Angel Alcaraz](#)  
 2018-present: [Oakley Reid](#)  
 2018-present: [Gwen Xiao](#)

#### *Other student mentoring*

2010: Supervision of one postgraduate research assistant: Jeremy Riedel  
 2008-present: Supervision of 18 workstudy students (Biology Department, UWBM):  
 Alex Fisher, Travis Murins, Amanda Dopps, Traevis Field, Katie Paige, Emily Thornes, Anna Hopkins, Tiffany Lai, Luu Phan, Daniela Ramos, Stephanie Annis, Megan Ellingwood, Laura Hall, Taidja DeSalvo, Vannarith Khov, Alaina Harmon, Jacob Bridy, Joshua Handjojo.  
 2013-present: Supervision of three highschool students: Michael Kim (2013-2014), Sonia Ionescu, Willie Shih (2014-2015)

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### **Teaching**

#### *Regular Courses*

2014- *Quantitative Approaches in Paleobiology, Morphology, & Systematics* (BIOL 438; 10/24 students) students  
 2012- *Introduction to Paleo Research* (BIOL 555; Variable number of graduate students).  
 2011- *Basic Phytolith Analysis: phytolith research application and morphology* (BIOL 399 B; 2011, 2012, later taught as part of BIOL 499; variable (2-4) number of undergraduate students).  
 2009- *Greening of the Earth: Influence of Plants on the Evolution of Terrestrial Ecosystems* (BIOL 447, Autumn, 2009, 2011, 2013, 2016, 2017; 21-32 undergraduate/graduate students). Fieldtrip and lab added in 2011.  
 2008 *Introductory Biology: Evolution and Ecology* (BIOL 180, Autumn: 700 students). Only taught once because of parental leave in 2010 and 2012.  
 2008- *Paleo Lunch/Senior Seminar in Paleobiology* (BIOL 550 B/BIOL 483, instructor 1 qtr/year; 15-20 graduate and undergraduate students, 5-15 other participants).

#### *Additional Teaching at University of Washington*

- 2015- *Biogeography and Evolution of South American Biotas* seminar (BIOL 551 E, co-instructor)
- 2015 *Introduction to Laboratories* (ESS 119; Hosted lab tour and answered questions).
- 2013 *Research Exposed!* (GEN ST 391; Invited lecturer).
- 2009 *The Changing Dynamics of Curation* (Museology 588B; Invited panel member).
- 2009 *Palyology* (ESS 450; ~30 students; Invited lecturer).
- 2009 *Evolution of Mammals & Their Ancestors* (BIOL 443; 24 students; Invited lecturer).
- 2009 *Morphology and Anatomy of Land Plants* (BIOL 441; 48 students; Invited lecturer).
- 2008 *Parade of Stars* (BIOL 490 C, Spring; Instructor).

#### *Teaching Experience Prior to Arriving at University of Washington*

- 2007 *The Paleobiology of Plant-Animal Associations*, University of Maryland (Invited lecturer).
- 2007 Internship program, Paleobiology, USNMNH (2 students; assisted in mentoring).
- 2002 Undergraduate Research Apprenticeship Program, UC Berkeley (1 student; mentor).
- 1999, 2000 Geological/paleontological field research, 6-8 weeks, UC Berkeley (2 students; mentor).
- 1999 *Evolution of Vertebrates*, UC Berkeley (IB 183/L; ~40 students; Teaching Assistant).
- 1998, 2001 *Plant Morphology*, UC Berkeley (IB 107/L; ~30 students; Teaching Assistant).

#### *Curriculum Development*

- 2016-2017 Science curriculum for after-school program for high school girls (*Girls in Science High School*, UWBM).
- 2014 *Quantitative Approaches to Paleobiology, Morphology, and Systematics* (BIOL 438; co-designed with G. Wilson, C. Sidor).
- 2013-2015 Science curriculum for the after-school program for middle school girls (*Girls in (Geo)sciences*, UWBM), I have launched as part of my NSF CAREER grant.
- 2012 *Introduction to Paleo Research* (BIOL 555; co-designed with G. Wilson, C. Sidor).
- 2012 Helped design and provided data for lab exercise (BIOL 180).
- 2011 *Basic Phytolith Analysis: phytolith research application and morphology* (BIOL 399 B)
- 2010 Interdisciplinary Undergraduate Paleobiology Minor (Designed w/ C. Sidor, G. Wilson).
- 2009, 2011
- 2013 *Greening of the Earth: Influence of Plants on the Evolution of Terrestrial Ecosystems* (BIOL 447; designed). Lab and field trip added in 2011; experience-based field and lab components added in 2013.
- 2004-2005 Educational web-based material, University of California Museum of Paleontology (UCMP) (Advised as Assistant Specialist).
- 2002-2003 Understanding Evolution (<http://evolution.berkeley.edu/>), UCMP (Designer, content provider, editor).
- 1999-2001 Several educational web pages (e.g., <http://www.ucmp.berkeley.edu/taste/>), UCMP. (Author, editor, illustrator, and developer of science curriculum).
- 1998 Virtual Paleobotanical Laboratory, online course manual (<http://www.ucmp.berkeley.edu/IB181/HpageIB181.html>), UC Berkeley (IB 181/L; author, content-provider, designer, illustrator).

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#### **Academic Service, University of Washington (see also Museum Service)**

- 2017- Pod Captain for the Paleo Pod, helping planning for layout and move to LSB
- 2017- Faculty Postdoc Liaison
- 2017 Faculty Search Committee
- 2014-2015, Royalty Research Fund Committee, UW
- 2016-2017 Quaternary Research Center Resources Committee, UW
- 2014-2015 Executive Staff Committee, UWBM
- 2013-2014 Collections Manager hiring committee, UWBM.
- 2013, 2015 Faculty judge, Graduate Student Symposium, Biology Department, UW.
- 2012, 2017 Visitor Experience Study working group, UWBM.
- 2012
- 2012, 2014,

- 2017 Moderator, UW Undergraduate Research Symposium.  
 2011-2013, 2016-present Graduate and Postdoc Program Committee, Biology Department.  
 2009-2010 Introductory Biology Task Force, Biology Department.  
 2008- 2011, 2014, 2017 Faculty host for invited speakers.  
 2009-present Faculty merit reviews and promotion/tenure, Biology Department.  
 2008-2012 Advisory committee on revising the exhibit *Life and Times of Washington State*, UWBM.  
 2008-2011 Technology Advisory Group (TAG), UWBM.  
 2008 Participation in SafeZone Workshop (Qcenter, University of Washington).

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### **Museum Service (UWBM)**

- 2017 Providing phytolith images for a textbook on “Practical applications of microfossils”, Wiley.  
 2016 Provided fossils for the “Moving the Giants Planting Event” organized by Archangel Ancient Tree Archive, Seattle, WA.  
 2016-2017 Consulted and provided phytolith images for paleontological exhibit, USNMNH, Smithsonian Institution.  
 2014 Provided content and fossils/materials for UWBM temporary exhibit (*Imagine that!*).  
 2014-present Overseeing creation of online access of UWBM paleobotany collections (launched in spring 2015). Currently nearly 15,000 images of paleobotany specimens can be accessed via online specimen records.  
 2014-present Architectural and exhibit planning and advising (along with all other curators) for the New Burke Museum.  
 2013-2014 Created database of ~400 images of phytoliths from modern South American plants and contributed these to online reference phytolith database; [PhytCore](#).  
 2013-present Overseeing imaging of UWBM paleobotany specimens; images to be linked to specimen records in FilemakerPro and accessible online.  
 2013 Provided photo for course book in Paleoanthropology, Mohawk College, Pearson Learning Solutions.  
 2013 Provided photo for book (“Biodiversity and Earth history”) by Drs. Jens Boenigk and Sabina Wodniok.  
 2013 Provided photo for book (“A History of Life in 100 fossils”) edited by Drs. Aaron O’Dea and Paul Taylor.  
 2012-present Overseeing creation and data import to new digital UWBM paleobotany collections database (FilemakerPro).  
 2012-2013 Curated display in the *Why Study Evolution?* series on research on the evolution of grasslands in South America: *Burke Scientists Investigate... What Came First, Grasses or Teeth to Eat it with?* (2013-2016).  
 2012 Consulted, book on horse evolution, Scientific American/Farrar Straus Giroux.  
 2012 Consulted, Earth history exhibit, Graphics News Service.  
 2012 Consulted, Cenozoic exhibit, New Mexico Museum of Natural History, Albuquerque, NM.  
 2012 Provided specimens for GiveBig campaign.  
 2011 Consulted, paleobotany exhibit, Pratt Museum, Homer, Alaska.  
 2011 Curated temporary display on Dr. Estella Leopold’s life and work: *Conservation Informed by Science: The Work of Dr. Estella Leopold* (2011-2012).  
 2010-present Development of Paleobotany web content ([Explore Your World](#), [Burke Blog](#)).  
 2010-2012 Consulted, TV series (*How to Grow a Planet*), BBC, UK.  
 2010 Consulted, Science Club for K-12, Republic, Ferry County, WA.  
 2010 Provided fossil photos for Cenozoic mammal exhibit, Los Angeles County Museum, CA.  
 2010 Consulted, TV series (*Living With Dinosaurs*), Renegade Pictures, UK.  
 2010-2011 Consulted, lent fossils for dinosaur exhibit, National Science Museum, Tokyo, Japan.  
 2009-2011 Coordinated FEMA-sponsored capital improvement to UWBM paleontology collections (\$583,641).

- 2009 Provided fossil photos for educational web pages, American Museum of Natural History and New York College of Osteopathic Medicine.
- 2009 Consulted, provided fossils for UWBM exhibit (*Cruisin' the Fossil Freeway*).
- 2009 Consulted, National Geographic TV documentary (*Supercontinent*), NHNZ Television Production ([www.nhnz.tv](http://www.nhnz.tv)), New Zealand.
- 2009 Provided fossil illustration for information brochure for schoolteachers, Bavarian State Ministry for Environment, Germany.
- 2008-present Overseeing acquisition of >35,000 fossils to the UWBM paleobotany collections.
- 2008 Consulted for New Scientist feature (*Petal Power*, published 1 Nov. 2008).
- 2008 Provided content, *Understanding Science* (<http://undsci.berkeley.edu/index.php>).
- 2008 Curated temporary display: *Big Cedar Ridge: Cretaceous Pompeii*, UWBM (2008-2009).
- 2008-present Organized and led paleobotanical field trips to Republic, WA, for donors.
- 2007-2008 Consulted, Miocene exhibit, American Museum of Natural History.
- 2007 Consulted for Icon Films documentary (*A Brief History of Crap*), British History Channel.
- 1997-8, 2002 Curatorial assistant, paleobotanical collection and cleared leaf collection (UCMP).

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### **Community Service and Educational Outreach**

- 2017 Panel member (along with two other Biology Department faculty) discussing evolution (as opposed to Intelligent Design) with high school students from The Oaks Christian Academy in Spokane, WA.
- 2017 Interview for podcast [In defense of plants](#).
- 2017 Lead instructor for *High School Girls in Science*, an evening (6 ~consecutive Mondays during January and February), hands-on (geo)science program for 8<sup>th</sup>-10<sup>th</sup> grade girls, UWBM.
- 2016 Development of Paleobotany web content ([Burke Blog](#) featuring postdoc Ethan Hyland).
- 2016 Introduced Estella Leopold at booksigning event, UWBM.
- 2016 Participated in *Creepy Crawly Cocktails* evening outreach event, UWBM.
- 2016 Consulted on article about the C<sub>4</sub> revolution for Forskning & Framsteg, Swedish popular science magazine.
- 2016 Development of Paleobotany web content ([Burke Blog](#) featuring graduate student Camilla Crifò).
- 2015 Provided images for *American Scientist* article on phytolith science, later also reprinted in the German version (*Spektrum der Wissenschaft*).
- 2015 Interview about photosynthesis for article in *The Atlantic*.
- 2015 Interview about Stonerose fossils and Burke paleobotany for an article in the Washington Park Arboretum Bulletin.
- 2015 Member of committee judging children and youth dinosaur drawings in a contest in the Museu de l'Institut Català de Paleontologia Miquel Crusafont.
- 2015 Presenter at ADVANCE Pre-tenure CAREER Workshop about grant proposal writing.
- 2015 Presenter at donor event: *Biological Responses to Climate Change Past, Present and Future* for the new Life Sciences building.
- 2015- Contributor to The Bearded Lady Project (<http://thebeardedladyproject.com/>). Planning stages.
- 2015 Provided content and images for UWBM blogposts on *Girls in Science*.
- 2014-2015 Providing content and text for new collections web pages (UWBM).
- 2014-present Co-creator (with Burke Education staff) of and contributor to the *Girls in Science* blog (<http://blogs.uw.edu/burked/>), providing a way to stay in touch with the girls in the *Girls in Science* (see below).
- 2014 Provided content for the [Washington Informal Science Education \(WISE\) Consortium](#) programming at UWBM about informal K-12 STEM education.
- 2014 Interviewed for [Crosscut News](#) about paleobotany at the Burke Museum.
- 2014 Participated in the Chocolate Fair outreach event (UWBM) for incoming UW undergraduate students.
- 2014, 2015 Provided content, images, and text for the new [Burke Research Newsletter](#).

- 2014 Provided content for article on grasses in Swedish consumer magazine, Råd & Rön.
- 2014 Interviewed for Columbia College Chicago's weekly newspaper, The Chronicle about the UWBM's Devonian fossils.
- 2014-present Creator/lead instructor for *Girls in Science*, a weekend (9 Saturdays, once a month throughout the academic year) hands-on (geo)science program for 6<sup>th</sup>-8<sup>th</sup> grade girls, UWBM. Program now expanded to include 9+ other female faculty, as well as postdocs, graduate, and undergraduate students from across UW (e.g., chemistry, computer science, molecular biology, oceanography). Program run so far: 2014, 2014/15, 2015/16, 2016/17.
- 2014 Faculty 'speaker' in Tribeta Hot Chocolate Social
- 2013 Provided content and images for a UWBM blogpost accompanying "Why Study Evolution?" exhibit (<http://burkemuseum.blogspot.com/2013/08/which-came-first-grass-or-teeth-to-eat.html>)
- 2013- Behind the Scences tours of the Paleontology collections, UWBM.
- 2012 SACNAS students, UWBM (Showcased UWBM paleobotany).
- 2012 Mentor for female undergraduates through WitsOn (<https://piazza.com/witson>).
- 2012 MESA K-12 students, UWBM (Showcased paleobotanical research).
- 2011 Co-creator of Montana project webpage (<http://www.earth.lsa.umich.edu/~sysmith/Montana/Montana/Welcome.html>).
- 2011-2013 Participated in *National Lab Day* (Host 8-10 5<sup>th</sup> grade students in lab activities).
- 2011, 2012 Public lecture, *National Fossil Day* celebration, Republic, WA.
- 2011 Interviewed for an ADVANCE Women Faculty profile (<http://advance.washington.edu/news/womenfaculty.html>)
- 2011 Interviewed for *PaleoPortal* as one of the "paleo people" (<http://www.paleoportal.org/index.php?globalnav=paleopeople>).
- 2011, 2013, 2016 *Girls in Science*, UWBM (Presented lab research, did activity with 21 7<sup>th</sup>-9<sup>th</sup> grade girls).
- 2011 Wyoming Native Plant Society and Buffalo Bill Museum (Tour of fossil sites, Wyoming).
- 2010 Public lecture, UWBM lecture series (*A Hitchhikers Guide to the Fossil Freeway*).
- 2009 *Darwin Day* event, UWBM (Showcased paleobotany).
- 2009 Burke Museum Docents, UWBM (Tour of exhibits, Q&A).
- 2009 Interview on KUOW about extinction (<http://kuow.org/program.php?id=17037>).
- 2008 Burke Museum Docents, UWBM (Lecture).
- 2008 Northwest Paleontology Meeting, UWBM (Lecture).
- 2008 Junior High School, Republic, WA (Lecture, Q&A).
- 2008-present Annual family event *Dino Day*, UWBM (Showcased paleobotany).
- 2008-present Annual *Members Night*, and *Curators Dinner*, UWBM (Showcase paleobotany research).
- 2008-present Tours of UWBM paleobotany collections to undergraduates and the public.
- 2008 *Faculty Serving Washington* event, Legislature, Olympia, WA (Showcased UWBM paleobotany).
- 2007 Showcased my research to undergraduates from Pennsylvania State University, PA, and George Washington University, DC, the public, USNMNH, Washington, DC.
- 2007 Paleontology activity for K-2 kids (*Digging habitats of the past*) at *Fossil Fest* open house, USNMNH, Washington, DC, and at Arlington Science Focus School, Arlington, VA.
- 2006 Interviewed in documentary (*Innovation in Evolution*), Los Angeles County Natural History Museum (released 2007).
- 2004-2006 Numerous outreach activities through Swedish Museum of Natural History, Stockholm.
- 1007-2003 Numerous outreach activities through the UCMP.

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### **Talks, Papers, Presentations**

#### *Invited lectures and talks*

- 2018 10th European Palaeobotany and Palynology Conference. **Plenary speaker.**
- 2018 Yale University, New Haven, CT
- 2018 Earth and Planetary Sciences Department, UC Davis

- 2017 Oregon State University, Corvallis, OR
- 2017 Duke University, Durham, NC (*declined—scheduling conflict*)
- 2017 Texas A&M University, TX (*declined—scheduling conflict*)
- 2017 Geological Society of America. **Keynote speaker.**
- 2017 International Botanical Congress, Shenzhen, China.
- 2017 Biology Department, Brown University, RI
- 2016 Lafayette College, Easton, PA (*declined—scheduling conflict*)
- 2016 10<sup>th</sup> International Meeting on Phytoliths Research, Aix-en-Provence, France. **Keynote speaker.**
- 2016 Symposium: *Growing the Grass Classification: Celebration of Derek Clayton's 90th Birthday and Discussion about the Future of GrassBase*. Linnean Society, London. (*had to cancel last minute because of illness*)
- 2016 Department of Geology, Lund University, Sweden.
- 2016 Department of Biological and Environmental Sciences, University of Gothenburg, Sweden.
- 2016 Bristol School of Earth Sciences Seminar Series, U. of Bristol, UK.
- 2015 Department of Archaeology, University of Barcelona, Spain.
- 2015 Earth and Planetary Sciences Department, UC Davis. (*postponed—scheduling conflict*)
- 2015 [Paleoecology Symposium](#), Cleveland Museum of Natural History (*co-author R. Dunn presented in my stead because of a scheduling conflict*).
- 2015 Southern Methodist University, Dallas, TX.
- 2015 Society for American Archaeology meeting, San Francisco; symposium in honor of Dolores Piperno (USNMNH, STRI), phytolith researcher/archaeologist extraordinaire.
- 2015 USNMNH, Smithsonian Institution, Washington, DC.
- 2015 Department of Geological Sciences, University of Oregon, Eugene, OR.
- 2014 Department of Biological Sciences, Humboldt State University, Eureka, CA.
- 2014 Geophysical Sciences Department, University of Chicago, IL.
- 2014 North American Paleontological Convention, Gainesville, FL.
- 2013 Botany, New Orleans, LA. x2
- 2013 Monocots V, New York, NY. x2
- 2013 Texas A&M University, College Station, TX. D.J. Dyksterhuis Distinguished Lecture Series (*declined—scheduling conflict*).
- 2013 Boise State University, ID. (*declined—scheduling conflict*).
- 2013 Washington State University, Pullman, WA. (*declined—scheduling conflict*).
- 2012 University of Sheffield, UK.
- 2012 University of Washington, Seattle (Department of Earth and Space Sciences).
- 2012 University of Minnesota, Minneapolis, MN.
- 2012 IUBS General Assembly and Conferences on Biological Sciences and Bioindustry, Suzhou, China (*declined—scheduling conflict*).
- 2012 University of Oregon, OR (*declined—scheduling conflict*).
- 2012 Wake Forest University, Winston-Salem, NC.
- 2012 Museo de La Plata, La Plata, Argentina.
- 2011 University of Tübingen, Germany (*declined—scheduling conflict*).
- 2011 Smith Lecture Series, University of Michigan, Ann Arbor, MI.
- 2010 VII Simpósio Brasileiro de Paleontologia de Vertebrados, Rio de Janeiro, Brazil. **Keynote speaker** (*declined—late stage pregnancy*).
- 2010 University of Iowa, Iowa City, IA.
- 2010 Cascades Volcano Observatory, Vancouver, WA.
- 2009 x2: Geology Seminar Series, Ecology Seminar Series, Univ. of Wyoming, Laramie, WY.
- 2009 Southern Methodist University, Dallas, TX.
- 2008 VII International Meeting on Phytoliths Research, and IV Encuentro Sudamericano de Estudios Fitolíticos, Mar del Plata, Argentina. **Keynote speaker.**
- 2008 VIII International Organization of Palaeobotany Conference, XII International Palynological Congress, Bonn, Germany. **Keynote speaker.**
- 2008 Field Museum, Chicago, IL.
- 2008 Plant Biology Initiative, Harvard University, Cambridge, MA.

- 2008 Macalester College, MN. (*Also gave informal lecture to undergraduate class.*)  
 2008 UCMP Short Course for teachers on Darwin Day on “*Climate Change and Its Impact on Evolution*,” University of California, Berkeley, CA.  
 2007 USNMNH, Smithsonian Institution, Washington, DC.  
 2007 Harvard University, Cambridge, MA.  
 2007 Wilbert Lecture Series, Louisiana State University, LA.  
 2006 University of Chicago, Chicago, IL.  
 2005 Bonn University, Bonn, Germany.  
 2005 CEREGE (European Centre for Research and Teaching of Environmental Geosciences), Aix-en-Provence, France.  
 2005 University of Helsinki, Helsinki, Finland.  
 2004 Tübingen University, Tübingen, Germany.  
 2004 University of California, Berkeley, CA.  
 2003 Stout Lecture series, University of Nebraska, Lincoln, NE.  
 2001 University of Nebraska Conservation and Survey Division & University of Nebraska State Museum, Lincoln, NE.  
 2001 Rancho Santa Ana Botanical Garden, Claremont, CA.  
 2001 University of Oregon, Eugene, OR.

*Contributed posters (not invited) (\*C. Strömberg = presenter, graduate student presenter, undergraduate student presenter)*

- 2016 GSA, Denver, CO (Crifò)  
 2016\* Botany, Savannah, GA  
 2016\* II Iberian Symposium of Geometric Morphometrics, Madrid, Spain  
 2015 AGU, San Francisco, CA  
 2015 Botany, Edmonton, Alberta, Canada (Thummel)  
 2014 GSA, Vancouver, BC, Canada (Buzard)  
 2014 XI Congreso Latinoamericano de Botânica, Salvador, Bahia, Brazil x2  
 2014 GSA Joint Rocky Mountain/Cordilleran Section Meeting, Bozeman, MT (Moore)  
 2012\* Geological Society of America (GSA), Charlotte, NC  
 2012 Midcontinent Paleobotanical Colloquium, New Haven, CT (Dunn)  
 2012 Emerging Researchers National Conference, Atlanta, Georgia (Le)  
 2011 GSA, Minneapolis, MN (Zaborac)  
 2011\* Botany, St. Louis, MO  
 2010\* GSA, Denver, CO  
 2009 American Geophysical Union, San Francisco, CA (Dunn)  
 2008\* GSA, Houston, TX  
 2008\* Botany, Vancouver, Canada  
 prior to 2007\* Several (4) posters at GSA, International Organization of Palaeobotany Conference.

*Contributed papers (not invited) (\*C. Strömberg = presenter, graduate student presenter, undergraduate student presenter)*

- 2017 SVP, Calgary, Canada (Novello)  
 2017 Botany, Fort Worth, TX (Gallaher)  
 2016 AGU, San Francisco, CA (Hyland)  
 2016 GSA, Denver, CO x2 (Kipp, Crifò)  
 2016 Botany, Savannah, GA (Brightly)  
 2015 Simposio Argentino de Paleobotánica y Palinología, La Plata, Argentina  
 2014\* American Geophysical Union, San Francisco, CA x2  
 2014\* GSA, Vancouver, BC, Canada x3 (Dunn, Buzard)  
 2014\* Botany, Boise, ID x6 (Harris)  
 2014\* North American Paleontological Convention, Gainesville, FL x6 (Dunn, Harris, Hyland)  
 2013\* SVP, Los Angeles, CA  
 2013 Botany, New Orleans x2 (Benca)  
 2012 American Geophysical Union, San Francisco, CA

- 2012\* Geological Society of America, Charlotte, NC x8 (Chen, Dunn, Fredrickson, Harris, Jijina, Smith, Vilhena)
- 2012 Society for Vertebrate Paleontology (SVP), Raleigh, NC
- 2012 International Organisation for Palaeobotany Conference, Tokyo, Japan
- 2011 SVP, Las Vegas, NV
- 2011\* VII International Meeting on Phytoliths Research, Estes Park, CO
- 2011\* Botany, St. Louis, MO x3 (Benca, Le)
- 2011 Midcontinent Paleobotanical Colloquium, Raleigh, NC (Miller)
- 2010 American Geophysical Union, San Francisco, CA
- 2010 GSA, Denver, CO
- 2010\* SVP, Pittsburgh, PA (Dunn)
- 2010 XII Congreso Latinoamericano de Paleontología, Buenos Aires, Argentina
- 2010 Botany, Providence, RI (Benca)
- 2009 GSA, Portland, OR (Mack)
- 2009\* Leaf Summit, USNMNH, Smithsonian Institution, Washington, DC
- 2008\* VIII International Organization of Palaeobotany Conference, XII International Palynological Congress, Bonn, Germany (2<sup>nd</sup> talk, see invited keynote above)
- 2007\* GSA, Denver, CO
- 2007\* SVP, Austin, TX
- 2007\* Botany, Chicago, IL
- 2007\* Leaf Summit, Denver, CO
- 2007\* GSA Cordilleran Section, Bellingham, WA
- 2007\* Geobiology Symposium, USNMNH, Smithsonian Institution, Washington, DC
- prior to 2007\* ~20 talks at e.g., GSA, SVP, Botany, European Palaeobotany-Palynology Conference, International Palaeontological Congress.

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### **Field Experience**

- 2015, phytoliths/plant macrofossils: Hell Creek Formation, Montana (Cretaceous).
- 2015, phytoliths/mammals: Santa Cruz Province, Patagonia, Argentina (Miocene).
- 2014, phytoliths/pollen/plant macrofossils/mammals: Santa Cruz and Chubut Provinces, Patagonia, Argentina (Cretaceous-Eocene).
- 2002, 2009, 2012, phytoliths/pollen/macrofossils/mammals/stable isotopes: Chubut and Neuquén Provinces, Patagonia, Argentina (Eocene-Miocene).
- 1999-2001, 2008, 2009, 2011-2014 (every year, often multiple trips):  
phytoliths/macrofossils/mammals/stable isotopes, MT, WY, NE, ID, CO, ND, NM, USA (Paleocene-Miocene).
- 2007-present (every year): macrofossils, WA, OR, ID (Devonian, Eocene-Miocene).
- 2007-2008, 2011: macrofossils, Bighorn Basin, WY (Cretaceous).
- 2006: phytoliths/stable isotopes, Yunnan Province, China (Miocene-Pliocene).
- 2005: phytoliths, Madrid Basin, Barcelona area, Spain (Eocene, Oligocene, Miocene).
- 2004: phytoliths, Anatolia, Turkey (Eocene, Miocene).
- 2004: phytoliths, Axios Valley, Macedonia, Greece (Miocene).
- 1999: phytoliths, California, Texas and Florida (Eocene-Miocene).
- 1997, 2000: macrofossils/vertebrates, Hell Creek Formation, Montana (Cretaceous).
- 1999: pollen/vertebrates, Bogotá area, Colombia (Cretaceous).
- 1991-1995: Field trips for geology/paleontology courses: Sweden, Denmark, Norway, Israel, Egypt.

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### **Collaborators during the last 48 months (selected)**

*United States:* A. Behrensmeyer, D. Piperno, S. Wing (USNMNH); R. Burnham, N. Sheldon, S. Smith (U. Michigan), D. Fox (U. Minnesota); E. Edwards (Brown); J. Crowley, M. Kohn, M. Schmitz (Boise



State U.); R. Kay (Duke); R. Madden (U. Chicago); E.A. Kellogg (UM-St. Louis); B. Jacobs (SMU); C.J. Still (Oregon State U.); B Willis (Bur. Econ. Geol., Austin); J. Moore (U. New Mexico); C Bergstrom, V.S. Di Stilio, J. Hille Ris Lambers, A. Leaché, C Sidor, P Ward, G. Wilson, K. Huntington, A. Swann (UW).

*International:* Argentina: A. Carlini, S. Vizcaino, S. Bargo, J. Gelfo, F. Goin (Mus. La Plata), G. Ré (U. Bs Aires), A Zucol (CICYTTP-CONICET), A. Iglesias (INIBIOMA-CONICET); Australia: F. McInerney (U. Adelaide), F. Tiver (U. South Australia); China: L. Tang, S. Ge (Chin Acad Scien), Z. Song (Tianjin University), India: V. Prasad (BS Inst Palaeobot), A. Sahni (Lucknow U.), B. Samant (Nagpur U.), D. Mohabey (Geol. Surv.), R. Patnaik (Panjab U.); Israel: O. Katz (Dead Sea & Arava Science Center). South Africa: W. Bond (U. Capetown), A. Novello (Univ. of Witwatersrand, Johannesburg); Spain: R.M. Albert (U. Barcelona, Spain), A. Galobart (ICP, Sabadell, Spain); UK: C. Osborne, P.-A. Christin (Sheffield), S. Hartley (York U.); N. Salamin (U. Lausanne, Switzerland), D. Barboni (CEREGE, Aix-en-Provence, France).