

## **Simon C Brewer**

Associate Professor, Geography Department, University of Utah  
260 S. Central Campus Drive Rm 4845  
Salt Lake City UT 84112, USA  
Tel: +1-801-565-6896; Email: [simon.brewer@geog.utah.edu](mailto:simon.brewer@geog.utah.edu)

---

### **Research Interests**

Understanding complex systems in space and time  
Changes in past climate and terrestrial ecosystem response  
Development of methodology for reconstructing past environments  
Model simulation of long-term environmental changes  
Understanding societal response to environmental changes

Scopus ID: 8144850900

ORCID: 0000-0002-6810-1911

Google Scholar: <http://bit.ly/3aHR3VK>

---

### **Education**

2002 Ph.D. Université d'Aix-Marseille I, Marseille, France  
- Biosciences de l'Environnement.  
1997 MSc. Royal Holloway and Bedford College,  
University of London, UK.  
- Quaternary Sciences.  
1996 BSc. Kings College, University of London, UK.  
- Biological Sciences (specialty: Ecology).

### **Academic Positions**

2019-Present Associate Professor  
Geography Department, University of Utah, USA  
2011-2019 Assistant Professor  
Geography Department, University of Utah, USA  
2008-2011 Post-Doctoral Research Associate (Advisor: Prof. S.T. Jackson)  
Department of Botany, University of Wyoming, USA  
2007-2008 Post-Doctoral Research Associate (Advisor: Prof. L. Francois)  
Laboratory of Planetary and Atmospheric Physics, Liege, Belgium  
2006-2007 Post-Doctoral Research Associate (Advisor: Dr. L. Borgniat)  
CEMAGREF, Aix-en-Provence, France  
2002-2006 Post-Doctoral Research Associate (Advisor: Prof. J. Guiot)  
CEREGE-CNRS, Aix-en-Provence, France

### **Grants and Funding**

- Finished: SO&P (EU FP5 Project 2002-2005; Associate researcher); OCCAM (French ANR Project 2005-2008; Associate Researcher)
- Current: Neotoma (U.S. National Science Foundation Geoinformatics Program 0622289; Associate Researcher)
- Finished: Modeling the Vegetation of the Past (U.S National Science Foundation Paleoclimate Perspectives on Climate Change Program; PI. \$271,584);

**Publications (\* indicates student author)**

Peer-reviewed publications:

- \*Brussel, T., Brewer, S. et al. (in review). Latitudinal gradients in trait space and functional diversity vary over 11000 years. PLoS One.
- Medina, R.M., Nicolosi, E.A., Brewer, S. and Moore, E. (2021). A Geographical Analysis of Socioeconomic and Ideological Drivers of Hate Crime in the United States. Applied Geospatial Research, 12:2. DOI: 10.4018/IJAGR.2021040103
- Park, K., Rigolon, A., Choi, D., Lyons, T., Brewer, S., (2021). Transit to parks: An environmental justice study of transit access to large parks in the U.S. West. Urban Forestry & Urban Greening, 60, 127055.
- \*Brussel, T. and Brewer, S. (2021). Functional paleoecology & the pollen-plant functional trait linkage. Frontiers in Ecology and Evolution, 8, 501.
- \*Keuntae, K., Garcia, I., Brewer, S. (2020). Spatial relationship between eviction filings, neighborhood characteristics, and proximity to the central business district: A case study of Salt Lake County, Utah. Housing Policy Debate. <https://doi.org/10.1080/10511482.2020.1838598>
- \*Yaworsky, P.M., Vernon, K.B., Spangler, J., Brewer, S. and Coddling, B.F. (2020). Advancing predictive modeling in archaeology: An evaluation of regression and machine learning methods on the Grand Staircase-Escalante National Monument. PLoS One, <https://doi.org/10.1371/journal.pone.0239424>
- \*Heyer, J., Brewer, S., Brunelle, A., Leys, B., Lundeen, Z., Rittenour, T., Power, M. (2020). Age control for the Lake Bottom oxbow in the Dolores River watershed of eastern Utah, USA. Quaternary International, <https://doi.org/10.1016/j.quaint.2020.09.013>
- \*Sullivan, P.R., Campbell, M.J., Dennison, P.E., Brewer, S., Butler, B. (2020). Modeling Wildland Firefighter Travel Rates by Terrain Slope: Results from GPS-Tracking of Type 1 Crew Movement. Fire 2020, 3(3), 52; <https://doi.org/10.3390/fire3030052>
- \*Li, J., Hassan, D., Brewer, S. and Sitzenfrei, R. (2020). Is Clustering Time-Series Water Depth Useful? An Exploratory Study for Flooding Detection in Urban Drainage Systems. Water, 12(9), 2433; <https://doi.org/10.3390/w12092433>
- Medina, R.M., Byrne, K., Brewer, S. and Nicolosi, E.A. (2020). Housing inequalities: Eviction patterns in Salt Lake County, Utah. Cities, <https://doi.org/10.1016/j.cities.2020.102804>
- \*Fuhriman, C., Medina, R.M. and Brewer, S. (2020). Introducing a Dataset of Multi-Scale Geographies of ISIS Ideology from ISIS Sources. Terrorism and Political Violence. <https://doi.org/10.1080/09546553.2020.1742707>
- \*Vernon, K.B., Yaworsky, P.M., Spangler, J., Brewer, S. and Coddling, B.F. (2020). Decomposing Habitat Suitability Across the Forager to Farmer Transition. Environmental Archeology, <https://doi.org/10.1080/14614103.2020.1746880>
- \*Sabouri, S., Brewer, S. and Ewing, R. (2020). Exploring the relationship between ride-sourcing services and vehicle ownership, using both inferential and machine learning approaches. Landscape and Urban Planning, 198, <https://doi.org/10.1016/j.landurbplan.2020.103797>
- Burke, K.D., Williams, J.W., Brewer, S., Finsinger, W., Giesecker, T., Lorenz, D.J. and Ordonez, A. (2019). Differing climatic mechanisms control transient and accumulated vegetation novelty in Europe and eastern North America. Phil. Trans. Roy Soc. B. 374 (1788), 2019218
- Giesecke, T., Wolters, S., van Leeuwen, J.F.N., van der Knaap, P.W.O., Leydet, M. and Brewer, S. (2019). Postglacial change of the floristic diversity gradient in Europe. Nature Comm., 10(1), 1-7.

## S. Brewer - Curriculum vitae

- Morris, J.L., DeRose, R.J., Brussel, T., Brewer, S., Brunelle, A., Long, J.N. (2019). Stable or seral? Fire-driven alternative states in aspen forests of western North America. *Biology Letters* 15(6), 20190011
- Gallego-Sala, A., Charman, D., Brewer, S., Page, S., Prentice, I.C. et al. (2018). Latitudinal limits to the predicted increase of the peatland carbon sink with warming. *Nature Climate Change*, 8(10), 907.
- Nolan, C., Overpeck, J.T., Allen, J.R.M., Anderson, P.M., Betancourt, J.L., Binney, H.A., Brewer, S., Bush, M.B., Chase, B.M. et al. (2018). Past and future global transformation of terrestrial ecosystems under climate change. *Science*, 361 (6405), 920-923.
- \*Brussel, T., Minckley, T.M., Brewer, S.C. and Long, C.J. (2018). Community-level functional interactions with fire track long-term structural development and fire adaptation. *Journal of Vegetation Science*, 29:3. DOI: 10.1111/jvs.12654
- \*Jameel, Y., Brewer, S., Fiorella, R.P., Tipple, B.J., Terry, S., and Bowen, G.J. (2018). Isotopic reconnaissance of urban water supply system dynamics. *Hydrology and Earth System Sciences Discussions*, DOI: 10.5194/hess-2018-283
- Zanon, M., Davis, B.A.S., Marquer, L., Brewer, S. and Kaplan, J.O. (2018). European Forest Cover During the Past 12,000 Years: A Palynological Reconstruction Based on Modern Analogs and Remote Sensing. *Frontiers in Plant Science*. DOI: 10.3389/fpls.2018.00253
- Medina, R.J., Nicolosi, E., Brewer, S. and Linke A.M. (2018) Geographies of Organized Hate in America: A Regional Analysis. *Annals of the American Association of Geographers*. DOI: 10.1080/24694452.2017.1411247
- \*Marsicek, J., Shuman, B., Bartlein, P.J., Shafer, S.L. and Brewer S. (2018) Reconciling divergent trends and millennial variations in Holocene temperatures. *Nature*. DOI: 10.1038/nature25464
- Giesecke, T. and Brewer, S. (2018). Notes on the postglacial spread of abundant European tree taxa. *Veg. History and Archaeobotany*, 27:2, 337-349. DOI: 10.1007/s00334-017-0640-0
- \*Heyer, J., Brewer, S. and Shinker, J.J. (2017). Using high-resolution reanalysis data to explore localized western North America hydroclimate relationships with ENSO. *Journal of Climate*, doi: 10.1175/JCLI-D-16-0476.1
- \*Tasic, I., Elvik, R and Brewer S. (2017). Exploring the Safety in Numbers Effect for Vulnerable Road Users on a Macroscopic Scale. *Journal of Accident Analysis and Prevention*, 109: 36-46. DOI: 10.1016/j.aap.2017.07.029
- Jensen, W. A., Brown, B. B., Smith, K. R., Brewer, S. C., Amburgey, J. W., & McIff, B. (2017). Active transportation on a complete street: Perceived and audited walkability correlates. *International Journal of Environmental Research and Public Health*, 14(9), 1-19.
- Giesecke, T., Brewer, S., Finsinger, W., Leydet, M. and Bradshaw, R.H.W. (2017). Patterns and dynamics of European vegetation change over the last 15000 years. *Journal of Biogeography*, doi: 10.1111/jbi.12974
- Finsinger, W., Giesecke, T., Brewer, S. and Leydet, M. (2017). Emergence patterns of novelty in European vegetation assemblages over the past 15,000 years. *Ecology Letters* 20 (3), 336-346.
- Chevalier, M, Brewer, S, Chase, BM, (2017). Qualitative assessment of PMIP3 rainfall simulations across the eastern African monsoon domains during the mid-Holocene and the Last Glacial Maximum. *Quaternary Science Reviews* 156, 107-120
- \*Carter, V.A., Brunelle, A., Minckley, T.A., Brewer, S., Shaw, J.S. and DeRose, J. (2017). Climate variability and fire effects on Quaking Aspen 2000 to 4500 years ago from the Central Rocky Mountains, USA. *Journal of Biogeography*
- Brewer, S., Giesecke, T, Davis, B.A.S., Finsinger, W., Wolters, S., Binney, H., de Beaulieu, J.L., Fyfe, R., Gil-Romera, G., Kuhl, N., Kunes, P., Leydet, M. and Bradshaw, R.H. (2017) Late-

## S. Brewer - Curriculum vitae

- glacial and Holocene European pollen data. *Journal of Maps*, 13, 2:, doi: 10.1080/17445647.2016.1197613
- \*Jameel, Y., Brewer, S., Good, S.P., Tipple, B.J., Ehleringer, J.R., and Bowen, G.J. (2016) Spatiotemporal variation in the tap water isotope ratios of Salt Lake City: a novel indicator of urban water system structure and dynamics, *Water Resources Research*, 52, 1-20.
- Marlon J.R., R. Kelly, A-L. Daniau, B. Vannière, M.J. Power, P. Bartlein, P. Higuera, O. Blarquez, S. Brewer, T. Brücher, A. Feurdean, G. Gil Romera, V. Iglesias, S.Y. Maezumi, B. Magi, C.J.C. Mustaphi, and T. Zhihai. "Reconstructions of biomass burning from sediment-charcoal records to improve data-model comparisons." *Biogeosciences* 13 (2016): 3225-3244. DOI: 10.5194/bg-13-3225-2016
- \*Tasic, I., Porter, R.J., Brewer, S. (2016). Applications of Generalized Additive and Bayesian Hierarchical Models for Areal Safety Analysis: Case Study of an Urban Multimodal Transportation System in Chicago, Illinois. *Transportation Research Record Journal of the Transportation Research Board* 2601:99-109
- Nogués-Bravo, D., Veloz, S., Holt, B.G., Singarayer, J., Valdes, P., Davis, B.A.S., Brewer, S., Williams, J.W. & Rahbek C. (2016) Amplified plant turnover in response to climate change forecast by Late Quaternary records. *Nature Climate Change*, doi: 10.1038/NCLIMATE3146
- \*Panthail, J.K., Brewer, S.C. & Burian, S.J. (2015). Statistical Modeling of the PM2.5-Albedo-Streamflow Relationship in Parley's Creek, Utah, Using MODIS Albedo Data. *American Society of Civil Engineers (ASCE)*. 2638-2647
- Leys, B., Brewer, S., McConaghy, S., Mueller, J., McLauchlan, K. (2015). Fire history reconstruction in grassland ecosystem: charcoal amount reflect the local area burn. *Environmental Research Letters*, 10 (11), 114009.
- Knox, D.B., Lanspa, M.J., Kuttler, K.G., Brewer, S.C. and Brown, S.M. (2015) Phenotypic clusters within sepsis-associated multiple organ dysfunction syndrome. *Intensive Care Medicine*. DOI: 10.1007/s00134-015-3764-7
- Minckley, T., Haws, J.A., Benedetti, M.M., Brewer, S.C., Forman, S.L. (2015). Last interglacial vegetation and climate history from the Portuguese coast. *Journal of Quaternary Science*, 30(1), 59-69
- Blarquez, O., Vanniere, B., Marlon, J.R., Daniau, A.-L., Power, M.J., Brewer, S. and Bartlein, P.J. (2014). paleofire: an R package to analyse sedimentary charcoal records from the Global Charcoal Database to reconstruct past biomass burning. *Computers and Geoscience*, 72, 255-261
- \*Arnold, J.D., Brewer, S. and Dennison, P.E. (2014) Modeling climate-fire connections within the Great Basin and Upper Colorado river basin, Western United States. *Fire Ecology*, 10:2, 64-75
- \*Qi, Y, Dennison, P.E., Jolly, W.M, Kropp, R.C. and Brewer, S.C. (2014). Spectroscopic analysis of seasonal changes in live fuel moisture content and leaf dry mass. *Remote Sensing of the Environment*, 150:198-206
- Dennison, P.E., Brewer, S.C., Arnold, J.D. and Moritz, M.A. (2014) Large wildfire trends in the Western United States, 1984-2011. *Geophysical Research Letters*, 41:8, 2928-2933
- Harrison, S.P., Bartlein, P.J., Brewer, S., Prentice, I.C., Boyd, M., Hessler, I., Holmgren, K., Izumi, K., Willis, K. (2014). Climate model benchmarking with glacial and mid-Holocene climates. *Climate Dynamics*, 43:3-4, 671-688.
- \*Marsicek, J., Brewer, S., Foster, D., Oswald, W.W. and Shuman, B. (2013). Abrupt summer temperature changes across mid-latitude eastern North America at ca. 5 ka. *Quaternary Science Reviews*, 80, 129-142

- Giesecke, T., Brewer, S., Davis, B.A.S., Finsinger, W. et al (2014) Towards mapping the late quaternary vegetation change of Europe: chronologies with uncertainties that allow data selection + taxonomic considerations. *Vegetation History and Archeobotany*, 23:1, 75-86
- Saltré, F., St-Amant, R., Gritti, E., Brewer, S., Gaucherel, C., Davis, B.A.S. & Chuine, I. (2013). Climate or dispersal: what limited European beech postglacial colonization? *Global Ecology and Biogeography*.
- Charman, D.J., Beilman, D.W., Blaauw, M., Booth, R.K., Brewer, S. and 37 others. (2013) Climate-driven changes in peatland carbon accumulation during the last millennium. *Biogeosciences*, 10, 929-944
- \*Liu, Y., Brewer, S., Booth, R.K., Minckley, T.A. and Jackson, S.T. (2012). Temporal density of pollen sampling affects the age determination of the mid-Holocene Tsuga (hemlock) decline. *Quaternary Science Reviews*, 45, 54-59
- McKnite AM, Perez-Munoz ME, Lu L, Williams EG, Brewer S., et al. (2012) Murine Gut Microbiota is defined by host genetics and modulates variation of metabolic traits. *PLoS ONE* 7(6): e39191. doi:10.1371/journal.pone.0039191
- Lesser, M.J. and Brewer, S. (2012). How sampling affects estimates of demographic parameters. *Journal of Vegetation Science*. DOI: 10.1111/j.1654-1103.2012.01419.x
- \*Djamali, M., Brewer, S., Breckle, S. and Jackson, S.T. (2012). Ecological implications of *Cousinia* Cass. (Asteraceae) persistence through the last two glacial–interglacial cycles in the continental Middle East for the Irano-Turanian flora. *Review of Palaeobotany and Palynology*. 172(15), 10-20.
- \*Djamali, M., S. Brewer, S.W. Breckle & S.T. Jackson. 2012. Climatic determinism in phytogeographical regionalization: a case study from the Irano-Turanian region, SW and Central Asia. *Flora* 207:237-249.
- Booth, R.K., Brewer, S., Blaauw, M., Minckley, T.A. and Jackson, S.T. (2012). Decomposing the Mid-Holocene Tsuga decline in Eastern North America. *Ecology*, 93, 1841-1852.
- Clark, P.U., Shakun, J.D., Baker, P.A., Bartlein, P.J., Brewer, S. and 31 others (2012). Global climate evolution during the last deglaciation. *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1116619109
- Brewer, S., Jackson, S.T. and Williams, J.W. (2012). Paleoinformatics: applying geohistorical data to ecological questions. *Trends in Ecology and Evolution*, 27:2, 104-111
- Costanza, R., van der Leeuw, S., Hibbard, K., Aulenbach, S., Brewer, S., Burek, M., Cornell, S., Crumley, C., Dearing, J., Folke, C., Graumlich, L., Hegmon, M., Heckbert, S. Jackson, S., Kubiszewski, I., Scarborough, V., Sinclair, P., Sörlin, S., and Steffen, W. (2011). Developing an Integrated History and future of People on Earth (IHOPE). *Current Opinion on Environmental Sustainability*. 4:1, 106-114
- Daniau A.-L., Tinner, W., Bartlein P.J., Harrison S.P., Prentice, I.C., Brewer, S. and 55 others. (2012) Predictability of biomass burning in response to climate changes. *Global Biogeochemical Cycles* 26 (4) GB4007.
- Braconnot, P., Luan, Y., Brewer, S. and Zheng, W. (2012). Impact of Earth's orbit and fresh water fluxes on Holocene climate mean seasonal cycle and ENSO characteristics. *Climate Dynamics*, 38(5) 1081-1092.
- Davis, B.A.S. and Brewer, S. (2011). A unified approach to Orbital, Solar and Lunar forcing based on Earth's Latitudinal Insolation/Temperature Gradient. *Quaternary Science Reviews*, 30: 15-16, 1861-1874
- van der Leeuw, S., Aulenbach, S., Brewer, S., Burek, M., Cornell, S., Costanza, R., Crumley, C., Dearing, J., Downy, C., Graumlich, L., Hegmon, M., Hibbard, K., Jackson, S., Kubiszewski, I.,

- Sinclair, P., Sörlink, S., and Steffen, W. (2011). Toward An Integrated History to Guide the Future. *Ecology and Societies*. 16:4, 2. doi:10.5751/ES-04341-160402
- Williams, J.W., Tarasov, P., Brewer, S. and Notaro, M. (2011). Late-Quaternary Variations in Tree Cover at the Northern Forest-Tundra Ecotone. *Journal of Geophysical Research – Biogeosciences*, 116, G01017, doi:10.1029/2010JG001458
- Bartlein, P.J., Harrison, S.P., Brewer, S., Connor, S., Davis, B.A.S., Gajewski, K., Guiot, J., Harrison-Prentice, T.I., Henderson, A., Peyron, O., Prentice, I.C., Scholze, M., Seppä, H., Shuman, B., Sugita, S., Thompson, R.S., Viau, A.E., Williams, J.W. and Wu, H. (2011). Pollen-based continental climate reconstructions at 6 and 21 ka: a global synthesis. *Climate Dynamics*, doi:10.1007/s00382-010-0904-1
- Hely, C., Girardin, M., Ali, A., Carcaillet, C., Brewer, S. and Bergeron, Y. (2010). Unprecedented low natural forest fire activity threatened by global warming. *Geophysical Research Letters*, doi:10.1029/2010GL043706.
- \*Djamali, M., Akhiani, H., Andrieu-Ponel, V., Bracconnot, P., Brewer, S., de Beaulieu, J.-L., Fleitmann, D., Fleury, J., Gasse, F., Guibal, F., Jackson, S.T., Lézine, A.-M., Médail, F., Ponel, P., Roberts, N. & Stevens, L. 2010. Indian Summer Monsoon variations could have affected the early Holocene woodland expansion in the Near East. *The Holocene*, 20, 813, doi: 10.1177/0959683610362813.
- \*Liu, Y., Jackson, S.T., Brewer, S. and Williams, J.W. 2010. Assessing antiquity and turnover of terrestrial ecosystems in eastern North America using fossil pollen data: A preliminary study. *IOP Conference Series: Earth and Environmental* 9 012005 doi:10.1088/1755-1315/9/1/012005.
- Nicault, A., Guiot, J., Edouard, J.L. and Brewer, S. 2010. Preserving long-term climatic changes in standardization of tree-ring series by the Adaptive Regional Growth Curve (ARGC). *Dendrochronologia*, 28, 1-12.
- Brewer, S. Francois, L., Cheddadi, R., Laurent, J.-M. and Favre, E. 2009. Comparison of simulated and observed vegetation for the mid-Holocene in Europe. *Climate of the Past Discussions*, 5, 965-1011.
- Kuehl, N., Moschen, R., Wagner, S., Brewer S., and Peyron O. 2009. A multiproxy record of Late Holocene natural and anthropogenic environmental change from the Sphagnum peat bog Dürres Maar, Germany: implications for quantitative climate reconstructions based on pollen. *Journal of Quaternary Science*. DOI: 10.1002/jqs.1342
- Saltré, F., Chuine, I., Brewer, S., & Gaucherel, C., 2009. A phenomenological model without kernel to model species migrations. *Ecological Modelling*, 220, 3546-3554.
- Davis, B.A.S. and Brewer, S. 2009. Orbital forcing and role of the Latitudinal Insolation/Temperature Gradient. *Climate Dynamics*. DOI: 10.1007/s00382-008-0480-9
- Bordon, A., Peyron, O., Lézine, A.-M., Brewer, S. and Fouache, E. 2009. Late-Glacial and Holocene quantitative climate estimates in Southern Balkans (lake Maliq) from pollen data. *Quaternary International*, 200:1-2, 19-30.
- Chase, B. and Brewer, S. 2009. Last Glacial Maximum dune activity in the Kalahari Desert of Southern Africa: observations and simulations. *Quaternary Science Reviews*, 28 (3), 301-307.
- Arnold, L., Breon, F.-M. and Brewer, S. 2010. The Earth as an extrasolar planet: the vegetation spectral signature today and during the last Quaternary climatic extrema. *International Journal of Astrobiology*, 8:2, 81-94. doi: 10.1017/S1473550409004406
- Fyfe, R.M., de Beaulieu, J.-L., Binney, H., Bradshaw, R.H.W., Brewer, S. and 11 other. 2009. The European Pollen Database: past efforts and current activities. *Vegetation History and Archaeobotany*, 18:5, 417-424.

- Henrot, A., Francois, L., Brewer, S. and Munhoven, G. 2009. Impacts of land surface properties and atmospheric CO<sub>2</sub> on the Last Glacial Maximum climate: a factor separation analysis. *Climate of the Past*, 5, 183-202.
- Nicault, A., Alleaume, S., Brewer, S., Carrer, M., Nola, P., Guiot, J. 2008. Mediterranean drought fluctuation during the last 500 years based on tree-ring data *Climate Dynamics*, 31:2-3, 227-245. DOI:10.1007/s00382-007-0349-3
- Feurdean, A.; Klotz, S.; Brewer, S., Mosbrugger, V.; Tamas, T. & Wohlfarth, B. 2008. Lateglacial climate development in NW Romania – comparative results from three quantitative pollen-based methods. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 265:1-2, 121-133.
- Brewer, S., Guiot, J., Sanchez-Goni, M.-F. and Klotz, S. 2008. The climate in Europe during the Eemian: a multi-method approach using pollen data. *Quaternary Science Reviews*, 27:25-26, 2303-2315.
- Djamali, M., de Beaulieu, J.-L., Shah-hosseini, M., Andrieu-Ponel, V., Ponel, P., Amini, A., Akhiani, H., Leroy, S.A.G., Stevens, L., Lahijani, H. and Brewer S. 2008. A late Pleistocene long pollen record from Lake Urmia, NW Iran. *Quaternary Research*, 69:3, 413-420. doi:10.1016/j.yqres.2008.03.004
- Brewer, S., Alleaume, S., Guiot, J. and Nicault, A. 2007. Historical droughts in Mediterranean regions during the last 500 years: a data/model approach. *Climate of the Past*, 3, 355-366.
- Brewer, S., Guiot, J. and Torre, F. 2007. Mid-Holocene climate changes in Europe: a data/model comparison. *Climate of the Past*, 3, 499-512.
- Wu, H., Guiot, J., Brewer, S. and Guo, Z. 2007. Climatic changes in Eurasia and Africa at the Last Glacial Maximum and the mid-Holocene: reconstruction from pollen data using inverse vegetation modelling. *Climate Dynamics*, 29 :211-229.
- Ramstein, G., Kageyama, M., Guiot, J., Wu, H., Hély, C., Krinner, G. and Brewer, S. 2007. How cold was Europe at the Last Glacial Maximum? A synthesis of the progress achieved since the first PMIP model-data comparison. *Climate of the Past*, 3, 331-339.
- Wu, H., Guiot, J., Brewer, S., Guo, Z. and Peng, C. 2007. Dominant factors controlling glacial and interglacial variations in the treeline elevation in tropical Africa. *Proceedings of the National Academy of Sciences*, doi: 10.1073/pnas.0610100104.
- Holgate, S., Jevrejava, S., Woodworth, P., Brewer, S. 2007. Comment on “A semi-empirical approach to projecting sea-level rise”. *Science*, 5846, 1866. doi: 10.1126/science.1140942
- Brewer, S., Hély-Alleaume, C., Cheddadi, R., de Beaulieu, J.-L., Laurent, J.-M. and Le Cuziat, J. (2006). Postglacial history of the Atlantic Oakwoods: context, dynamics and controlling factors. *The Botanical Journal of Scotland*, 57:1-2, 41-58.
- Lowe, A., Unsworth, C., Gerber, S., Davies, S., Munro, R., Kelleher, C., King, A., Brewer, S., White, A. and Cottrell, J. 2006. The route, speed and mode of oak postglacial colonisation across the British Isles. *The Botanical Journal of Scotland*, 57:1-2, 59-82.
- Ortu, E., Brewer, S. and Peyron, O. 2006. Pollen-inferred palaeoclimate reconstructions in mountain areas: problems and perspectives. *Journal of Quaternary Science*, 21:6, 615-627.
- Vincens, A., Bremond, L., Brewer, S., Buchet, G. and Dussouillez, P. 2006. Modern pollen-based biome reconstructions in East Africa expanded to southern Tanzania. *Review of Palaeobotany and Palynology*, 140:3-4, 187-212.
- Garcin, Y., Williamson, D., Bergonzini, L., Radakovitch, O., Vincens, A., Buchet, G., Guiot, J., Brewer, S., Mathé, P.-E. and Majule, A. 2006. Solar and anthropogenic imprints on Lake Masoko (southern Tanzania) during the last 500 years. *Journal of Paleolimnology*, DOI 10.1007/s10933-006-9033-6

- Guitter, F., Triganon, A., Andrieu-Ponel, V., Ponel, P., Hebrard, J.P., Nicoud, G., De Beaulieu, J.L., Brewer, S. and Guibal, F. 2005. First evidence of "in situ" Eemian sediments on the high plateau of Evian (Northern Alps, France): implications for the chronology of the Last Glaciation. *Quaternary Science Reviews*, 24, 35-47.
- Gladstone, R.M., Ross, I., Valdes, P.J., Abe-Ouchi, A., Braconnot, P., Brewer, S. et al. 2005. Mid-Holocene NAO: A PMIP2 model intercomparison. *Geophysical Research Letters*, 32, L16707. doi:10.1029/2005GL023596
- Tarasov, P., Granoszewski, Bezrukova, W., Nita, M., Brewer, S. and Oberhänsli, H. 2005. Quantitative reconstruction of the Last Interglacial climate based on the pollen record from Lake Baikal, Russia. *Climate Dynamics*, DOI 10.1007/s00382-005-0045-0
- Peyron, O., Bégeot, C., Brewer, S., Heiri, O., Magny, M., Millet, M., Ruffaldi, P., Van Campo, E. and Yu, G. 2005. Lateglacial climatic changes in eastern France (Lake Lautrey) from pollen, lake-levels and chironomids. *Quaternary Research*. 64: 2, 197-211.
- Gachet, S., Guiot, J., Cheddadi, R., Brewer, S., Davis, B. and Gritti, E. 2003. A probabilistic approach of pollen indicators for plant functional types, an application to the European vegetation at 0 and 6 ka. *Global Ecology and Biogeography*, 12, 103-118.
- Petit, R.J., Aguinadale, I., De Beaulieu, J.-L., Bittkau, C., Brewer, S., Cheddadi, R., Ennos, R., Fineschi, S., Grivet, D., Lascoux, M., Mohanty, A., Müller-Starck, G., Musch, B., Palme, A., Clemente, J. P. M., Rendell, S., Vendramin, G.G. 2003. Glacial refugia: Hotspots but not melting pots of genetic diversity. *Science*, 300, 1563-1565.
- Davis, B.A.S., Brewer, S., Stevenson, A.C., Guiot, J. and Juggins, S. 2003. The temperature of Europe during the Holocene reconstructed from pollen data. *Quaternary Science Reviews*, 22, 1701-1716.
- Brewer, S., Cheddadi, R., de Beaulieu, J.-L., Reille, M. & Data contributors 2002. The migration of deciduous *Quercus* throughout Europe since the last glacial period. *Forest Ecology and Management*, 156 (1-3), 27-48.
- Petit R.J., Brewer, S., Bordács, S., Burg, K., Cheddadi, R., Coart, E., Cottrell, J., Csaikl, U.M., Deans, J.D., Fineschi, S., Finkeldey, R., Goicoechea, P.G., Jensen, J.S., König, A.O., Lowe, A.J., Madsen, S.F., Mátyás, G., Munro, R.C., Oledska, I., Popescu, F., Slade, D., Tabbener, H., van Dam, B., Ziegenhagen, B., de Beaulieu, J.-L., Kremer, A. 2002. Identification of refugia and postglacial colonisation routes of European white oaks based on chloroplast DNA and fossil pollen evidence. *Forest Ecology and Management*, 156 (1-3), 49-74.
- Bordács, S., Popescu, F., Csaikl, U.M., Slade, D., Lesur, I., Borovics, A., Kezdy, P., König, A.O., Gömöry, D., Brewer, S., Burg, K., and Petit, R.J. 2002. Chloroplast DNA variation of white oaks in northern Balkans and in the Carpathian Basin. *Forest Ecology and Management*, 156 (1-3), 49-74.
- Petit, R.J., Bialozyt, R., Brewer, S., Cheddadi, R., and Comps, B. 2001. From spatial patterns of genetic diversity to postglacial migration processes in forest trees. *Special Symposia of The British Ecological Society: "Integrating Ecology and Evolution in a Spatial Context"*. Edited by Silvertown, J. and Antonovics, J. Blackwell Science Ltd. Chapter 14: 295-318.
- Tarasov, P.E., Peyron, O., Guiot, J., Brewer, S., Volkova, V.S., Bezuko, L.G., Dorofeyuk, N.I., Kvavadze, E.V., Osipova, I.M. And Panova, N.K. 1999. Last Glacial Maximum climate of the former Soviet Union and Mongolia reconstructed from pollen and plant macrofossil data. *Climate Dynamics*, 15, 227-240.
- Tarasov, P.E., Cheddadi, R., Guiot, J., Bottema, S., Peyron, O., Belmonte, J., Ruiz-Sanchez, V., Saadi, F.A. and Brewer, S. 1998. A method to determine warm and cool steppe biomes from pollen data; application to the Mediterranean and Kazakhstan regions. *Journal of Quaternary Science*, 13, 335-344.

- \*Panthail, J.K., Brewer, S. and Burian, S.J. (2015). Statistical modeling of the PM2.5-Albedo-Streamflow relationship in Parley's Creek, Utah using MODIS albedo data. EWRI World Environmental and Water Resources Congress, Austin, Texas. May 17-25, 2015
- Arnold, L., Bréon, F.-M., Brewer, S., Guiot, J., Jacquemoud, S. and Schneider, J. 2005. The green vegetation as a biosignature on Earth and Earth-like planets. In (eds) Beaulieu, J.P., Lecavelier des Etangs, A. and Terquem, C. Extrasolar Planets: Today and Tomorrow, XIXth IAP Colloquium, Paris, France, 30 June - 4 July 2003. ASP Conference Series, ISBN 1-58381-183-4, vol. CS 321.
- Davis, B.A.S. and Brewer, S. 2003. The application of multi-dimensional GIS in palaeoclimate research. 1st ESF-HOLIVAR Workshop on "Combining Climate Proxies". Lammi Biological Station, Finland, 17-20, April, 2002. [www.gsf.fi/esf\\_holivar/](http://www.gsf.fi/esf_holivar/)

#### Books and/or Book Chapters

- Garfinkel-Castro, A., Bushman, T., Sabouri, S., Brewer, S.C., Song, Y. and Park, K. (2020). Cluster analysis. In: (ed.) Ewing, R., and Park, K. *Advanced Quantitative Research Methods for Urban Planners*, Routledge, 359 pp.
- Wheelwright, M., Levine, Z., Garfinkel-Castro, A., Bushman, T., Sabouri, S. and Brewer, S.C. (2020) Principal component and factor analysis. In: (ed.) Ewing, R., and Park, K. *Advanced Quantitative Research Methods for Urban Planners*, Routledge, 359 pp.
- Kim, K., Brewer, S.C. and Ewing, R. (2020) Spatial Econometrics. In: (ed.) Ewing, R., and Park, K. *Advanced Quantitative Research Methods for Urban Planners*, Routledge, 359 pp.
- Heckbert, S., Isendahl, C., Gunn, J., Brewer, S., Scarborough, V., Chase, A.F., Chase, D.V., Costanza, R., Dunning, N., Beach, T., Luzzadder-Beach, S., Lentz, D. and Sinclair, P. (2019). Growing the Maya social-ecological system from the bottom up: complex systems models of resilience. In: *Handbook of Historical Ecology and Applied Archaeology*, C. Isendahl & D. Stump, eds. Oxford University Press
- Brewer, S., Guiot, J., Davis, B.A.S and Barboni, D. (2015). Pollen data as climate proxies. In (ed.) Elias, S. *Encyclopedia of Quaternary Science* ed. 2, Elsevier, Oxford.
- Grimm, E.C., Bradshaw, R.H.W., Brewer, S., Flantua, S., Giesecke, T., Lezine, A.M., Takahara, H., Williams, J.W. (2013). Databases and their applications. In (ed.) Elias, S. *Encyclopedia of Quaternary Science* ed. 2, Elsevier, Oxford.
- Marchant, R., Brewer, S., Webb III, T. and Turvey, S.T. (2009). Holocene Deforestation: A History of Human-Environmental Interactions, Climate Change and Extinction. In (ed.) Turvey, S.T. *Holocene Extinctions*. Oxford University Press.
- Brewer, S., Guiot, J. and Barboni, D. (2007). Pollen data as climate proxies. In (ed.) Elias, S. *Encyclopedia of Quaternary Science*, vol. 4, Elsevier, Oxford, pp 2498-2510.
- Roberts, N., Stevenson, A.C., Davis, B., Cheddadi, R., Brewer, S., and Rosen, A. 2004. In: Holocene climate, environment and cultural change in the circum-Mediterranean region. In: Battarbee R.W., Gasse F., and Stickley C.E. (eds), *Past Climate Variability through Europe and Africa*. Kluwer Academic Publishers, Dordrecht, the Netherlands, pp 343-362.

#### Selected Conference Abstracts

- Brewer S., Giesecke, T., Finsinger, W. and Wolters, S. Estimating long-term functional diversity from pollen data and plant traits. International Association of Vegetation Science, Brno, Czech Republic. 19-24 July, 2015
- Brewer S. Ecoinformatics and the Paleoworld. 2014. International Conference on Ecological Informatics, Nanjing, China. 21-23 October, 2014
- Brewer S., Marsicek, J.P, Davis, B.A.S. 2013. Holocene pollen records from the northern mid-latitudes: syntheses, spatial patterns and gradients. AGU, San Francisco, December 9-13 2013

## S. Brewer - Curriculum vitae

- Brewer S., Bartlein, P.J., Harrison, S.P., Jackson, S.T., Marlon, J.R., Marsicek, J.P., Davis, B.A.S., Shuman, B.N., Williams, J.W. 2011. Benchmarking transient paleoclimate simulations: comparisons with terrestrial datasets. AGU, San Francisco, December 5-9 2011
- Brewer, S., Bartlein, P.J. and Harrison, S.P. 2011. Benchmark datasets: vegetation and terrestrial climates. INQUA, Berne, Switzerland, July, 21-27, 2011
- Brewer, S., Marsciek, J., Davis, B.A.S. and Shuman, B.N. 2011. Uncertainty in large-scale climate reconstructions. INQUA, Berne, Switzerland, July, 21-27, 2011
- Brewer, S. and Jackson, S.T. 2010. Vegetation response to abrupt climate change during the Bolling-Allerod and the Younger Dryas. 95th ESA Annual Meeting, Pittsburgh, USA, 1-6 August 2010.
- Jackson, S.T. and Brewer, S. 2009. What do regime shifts of the past indicate about those likely to come? 94th ESA Annual Meeting, Albuquerque, USA, 3-7 August 2009.
- Brewer, S., Norris, J.R., Lesser, M.L., Betancourt, J.L. and Jackson, S.T. 2009. Climate variability and the distribution of the ponderosa pine. 94th ESA Annual Meeting, Albuquerque, USA, 3-7 August 2009.
- Brewer, S. and Guiot, J. 2008. Recent progress in palaeoclimate reconstructions from pollen data. Keynote talk, XII IPC, Bonn, Germany, 30 August – 5 September 2008
- Brewer, S., Francois, L., Cheddadi, R., Laurent, J.-M. and Favre, E. 2008. Comparison of simulated and observed vegetation for the mid-Holocene in Europe. ESF-EuroCLIMATE Meeting, Giens, France, 29-30 September, 2008
- Brewer, S. and Guiot, J. 2007. Palaeoclimate simulations: data-model comparisons. EuroCLIMATE Workshop, Aix-en-Provence, France, 7-12 May 2007.
- Brewer, S., Guiot, J. Wu, H. and Hély-Alleaume, C. 2006. Palaeoclimate and palaeovegetation reconstructions from European fossil pollen records by the inversion of a vegetation model. EGU General Assembly, Vienna, Austria. 03/2006.
- Brewer, S., Cheddadi, R. and de Beaulieu, J.-L. 2005. The postglacial recolonisation of deciduous *Quercus* in Europe based on pollen data. Invited talk, Botanical Society of Scotland Symposium on Atlantic Oakwoods, Oban, Scotland, 9/2005.
- Brewer, S. and Davis, B.A.S. 2004. The temperature of Europe during the Holocene reconstructed from pollen data. EGU General Assembly, Nice, France.
- Brewer, S., Davis, B.A.S. and Ortu, E. 2004. Pollen-based climate reconstructions in the Alps: techniques and limitations. 1st ClimAlp Meeting, Aix-les-Bains, France, 1/2004.
- Brewer S. and Davis, B.A.S. 2004. Developing a gridded data-set of pollen-based climate reconstructions for the Holocene in Europe. ESF-HOLIVAR Workshop, Bremen, Germany, 2/2004.
- Brewer, S. and Davis, B.A.S. 2004. Holocene temperature of Europe reconstructed from pollen data. Workshop on the 8.2ka event, Montréal, Canada, 5/2004.
- Brewer, S., Cheddadi, R. and de Beaulieu, J.-L. 2004. Combining pollen databases and genetic data: the recolonisation of deciduous *Quercus* in Europe. International Palynological Conference, Granada, Spain, 7/2004.
- Brewer, S., Cheddadi, R. and Petit, R.J.P. 2004. *Fagus sylvatica*: postglacial history and genetic diversity. International Palynological Conference, Granada, Spain, 7/2004.
- Brewer, S., Cheddadi, R. and de Beaulieu, J.-L. 2001. Postglacial colonization of forest trees inferred from fossil pollen and genetic markers. European Forest History: combining phylogeographical and paleoecological information. Orléans, France, 6/2001.

### Invited talks in international conferences and workshops

## S. Brewer - Curriculum vitae

- Brewer S. Producing composite carbon accumulation estimates from peatland records. MilliePeat Workshop, Exeter, UK. 14-15, December, 2015
- Brewer S. Reconstructions of past land cover characteristics using pollen and remote sensing data. LandCover6K Workshop, Reading, UK. 7-11, September, 2015
- Brewer S. Ecoinformatics and the Paleoworld. International Conference on Ecological Informatics, Nanjing, China. 21-23 October, 2014
- Brewer S. Holocene changes in climatic variability. PMIP Paleovariability Workshop, UCL, London, UK. March 12-14, 2014
- Brewer S. European age-depth models. Age-depth modeling workshop, Queens University, Belfast, NI. January 13-16, 2014
- Brewer, S., Marsicek, J.P, Davis, B.A.S. Holocene pollen records from the northern mid-latitudes: syntheses, spatial patterns and gradients. AGU, San Francisco, USA. December 9-13, 2013
- Brewer, S. Spatiotemporal analysis of long-term peatland records. Synthesis Workshop on Holocene Circum--Arctic Peatland Carbon Dynamics, Bethlehem, PA, USA. October 13-15, 2013
- Brewer, S. Statistical and process based models in paleoecology. 50 Pressing Questions in Palaeoecology, Oxford, UK, December 13-14, 2012
- Brewer, S. Reconstructions of large scale climate and vegetation patterns from pollen data. Holocene land-cover change in Eastern Asia for climate modelling. Shijiazhuang, China, October 9-11, 2012
- Brewer, S. Pollen databases: current progress. Fire-Ice Workshop, Exeter, UK. October 1-5, 2012
- Brewer, S. Benchmarking transient paleoclimate simulations: comparisons with terrestrial datasets. AGU, San Francisco, USA. December 5-9, 2011
- Brewer, S. Global-scale paleoecological and paleoclimatological studies. What big questions can the Quaternary help us answer? Laramie, Wyoming, USA, November 12, 2011
- Brewer, S. Benchmark data sets: vegetation and terrestrial climates. INQUA, Berne, Switzerland, July, 21-27, 2011
- Brewer, S. Continental scale climate reconstructions from fossil pollen data: can we improve error propagation? Bayesian Hierarchical Models for High-Resolution Climate Reconstructions, Boulder, Colorado March 24-25, 2011,
- Brewer, S., Bartlein, P.J. and Harrison, S. Climate reconstructions from plant fossil data. PMIP3 Meeting, Kyoto, Japan, December 6-10, 2010
- Brewer, S., Blois, J., Davis, B.A.S., Shuman, B.N. and Williams, J.W. Mid and high-latitude pollen records. SynTrace Meeting, Oregon, USA, October 9-13, 2010
- Brewer, S. Learning from the past: paleoenvironmental data and models. Department of the Geophysical Sciences, University of Chicago, Chicago USA, November 20, 2009
- Brewer, S. and Guiot, J. Recent progress in palaeoclimate reconstructions from pollen data. Keynote talk, XII IPC, Bonn, Germany, August 30, – September 5, 2008
- Brewer, S., Francois, L., Cheddadi, R., Laurent, J.-M. and Favre, E. Comparison of simulated and observed vegetation for the mid-Holocene in Europe. ESF-EuroCLIMATE Meeting, Giens, France, September 29-30, 2008
- Brewer, S. and Guiot, J. Palaeoclimate simulations: data-model comparisons. EuroCLIMATE Workshop, Aix-en-Provence, France, May 7-12, 2007.
- Brewer, S., Guiot, J. Wu, H. and Hély-Alleaume, C. Palaeoclimate and palaeovegetation reconstructions from European fossil pollen records by the inversion of a vegetation model. ESF-Euroclimate Session, EGU, Vienna, April 2-7, 2006.

## S. Brewer - Curriculum vitae

Brewer, S., Cheddadi, R. and de Beaulieu, J.-L. The postglacial recolonisation of deciduous *Quercus* in Europe based on pollen data. Botanical Society of Scotland Symposium on Atlantic Oakwoods, Oban, Scotland. September 14-16, 2005.

Brewer, S., Davis, B.A.S and Ortu, E. Pollen-based climate reconstructions in the Alps: techniques and limitations, 1st ClimAlp Meeting, Aix-les-Bains, France, January, 2004

Brewer S. and Davis, B.A.S. Developing a gridded data-set of pollen-based climate reconstructions for the Holocene in Europe. ESF-HOLIVAR Workshop, Bremen, Germany, February, 2004.

Brewer, S. and Davis, B.A.S. Holocene temperature of Europe reconstructed from pollen data. 8.2ka BP Event Workshop, AGU, Montreal, Canada, May, 2004

Brewer, S, Cheddadi, R. and de Beaulieu, J.-L. Combining pollen databases and genetic data: the recolonisation of deciduous *Quercus* in Europe. IPC, Granada, Spain, July, 2004

Brewer, S, Cheddadi, R. and de Beaulieu, J.-L. Postglacial recolonisation of oak and beech in Europe. Dept of Paleoecology, Vrije University, Amsterdam, Netherlands. March, 2002

Brewer, S, Cheddadi, R. and de Beaulieu, J.-L. Postglacial colonization of forest trees inferred from fossil pollen and genetic markers. Phylogeography of European forest trees and shrubs and application for their conservation and management, Orléans, France June, 27-30, 2001.

### Teaching

- 2017. Ecological and environmental modeling (graduate seminar), Geography Department, University of Utah
- 2017-Present. Global Environmental Change, Honors College, University of Utah
- 2017. Ecological and environmental modeling (graduate seminar), Geography Department, University of Utah
- 2014-Present. Introduction to R (short course), Geography Department, University of Utah
- 2014. Open source geospatial software (graduate seminar), Geography Department, University of Utah
- 2012. Applications of time series analysis (graduate seminar), Geography Department, University of Utah
- 2012. Modeling long-term environmental processes (graduate seminar), Geography Department, University of Utah
- 2012-2014. Spatial modeling in GIS, Geography Department, University of Utah
- 2012-Present. Climate change: impacts, adaptation and mitigation, Geography Department, University of Utah
- 2011-Present. Spatial statistics, Geography Department, University of Utah
- Taught short course 'Introduction to statistics using R', Univ Cezanne, France (2004-2008), UQAM, Canada (2006-2007), U. Wyoming (2009, 2010), U. Nebraska (2010).

### Awards

- Superior Teaching Award, 2013, College of Social and Behavioral Science, University of Utah
- Outstanding Mentor Award, 2012, 2014, 2016, Geography Department, University of Utah

### University service

- Member, Dean search committee, University of Utah, 2013-2014
- Member, Medical Geography search committee, University of Utah, 2013
- Member, GIScientist search committee, University of Utah, 2013
- Departmental Honors advisor, University of Utah, 2014-2016
- UROP reviewer, University of Utah, 2012-2016
- Graduate student advisor:
  - James Arnold (Masters, defended 2013)
  - Alex Headman (Masters, defended 2015)
  - Emily Nicolsi (Masters, defended 2015)

## S. Brewer - Curriculum vitae

- Ed Conrad (Masters, defended 2015)
- Brian Olsen (Masters)
- Kaila Macdonald (Masters, defended 2014)
- Ryan Bares (Masters, defended 2014)
- Thao Vy Nguyen (Masters, defended 2015)
- Josh Heyer (Masters, defended 2016; PhD)
- Vanessa Bailey (Masters, defended 2017; PhD)
- Clair Bidez (Masters, defended 2017)
- Tom Brussel (PhD, defended 2020)
- Graduate student committee (University of Utah):
  - Paris Latham (Masters, defended 2014)
  - Michael Seth Bogle (Masters)
  - Jared Butler (Masters, defended 2013)
  - Vachel Carter (PhD)
  - Kenneth Dudley (Masters, defended 2014)
  - Michael Freeman (Masters, defended 2014)
  - Liwei Fu (Masters, defended 2015)
  - Dustin Garrett (Masters)
  - Mohd Yusuf Jameel (PhD)
  - Yoshi Maezumi (PhD, defended 2015)
  - Ran Meng (PhD, defended 2014)
  - Clement Miege (PhD, defended 2015)
  - Julie Miller (PhD, defended 2014)
  - Josh Mueller (PhD)
  - Jai Kanth Panthail (Masters)
  - Yi Qi (PhD, defended 2014)
  - Benjamin Ritter (Masters, defended 2014)
  - David Selkowitz (PhD)
  - Corey Unger (Masters, defended 2015)
  - Jennifer Watt (PhD, defended, 05/2013)
  - Blake Wellard (Masters)
  - Steven Lizotte (Masters, defended 2020)
  - Durban Keeler (PhD)
  - Keuntae Kim (PhD)
  - Hassan Ameli (PhD)
  - Sadegh Sabouri (PhD)
  - Debolina Banerjee (PhD)
  - Dong-ah Choi (PhD)
  - Junsik Kim (PhD)
  - Keuntae Kim (PhD)
  - Ben Marconi (PhD)
  - Jiada Li (PhD)
  - Emma Marshall (Masters)
  - Morgan Macdonnell (Masters)
  - Matt Olsen (PhD)
  - Rebecca Steed (PhD)
  - Kripa Thapa (Masters)
  - Susana Velasquez Franco (PhD)
  - Kenneth Blake Vernon (PhD)
  - Peter Yaworksy (PhD)
- Member of student committee (other institutes):
  - Jeremiah Marsicek (PhD, U. Wyoming USA)
  - Yao Liu, (PhD U. Wyoming, USA, defended 2014)
  - Vincent Garreta (PhD CEREGE CNRS 6635, France, defended 2009)
  - Morteza Djamali (PhD IMEP CNRS 6116, France defended 2009)

## S. Brewer - Curriculum vitae

- Ali Thabeet (PhD IMEP CNRS 6116, France, defended 2008).

### **Other activities**

- Leader of European Pollen Database support group ‘Mapping and data accuracy’
- Member of European Pollen Database support group ‘Database structure’
- Participating member of international working groups:
  - Paleoclimate Modelling Intercomparison Group (<http://pmip.lsce.ipsl.fr/>)
  - Paleocarbon Modelling Intercomparison Group
  - Global Paleofire Working Group (<http://www.gpwg.org>)
  - PAGES-HITE (<http://www.pages.unibe.ch/science/focus4.html>)
  - IHOPE (<http://www.aimes.ucar.edu/activities/ihope.shtml>)
  - Peatlands as Archives of Climate and History
- Organized and ran ESF/HOLIVAR Training course on Quantitative climate reconstruction and data-model comparisons, Toulouse, France, 27 June-8 July 2005
- Editorial board member for Ecological Informatics
- Reviewer for Journal of Geophysical Research, Journal of Quaternary Science, Quaternary Science Reviews, Journal of Paleolimnology, Journal of Vegetation Science, Journal of Applied Meteorology and Climatology, International Journal of Climatology, Grana; The Holocene; Palaeogeography, Palaeoclimatology, Palaeoecology, Journal of Biogeography, Proceedings of the National Academy of Sciences, Nature Communications
- Project reviewer for European Science Foundation, National Science Foundation, German Aerospace Center, Fonds de Recherche en Quebec

### **Technical skills**

- Statistical techniques including geostatistics and spatial analysis, regression analysis, multivariate analysis, time series analysis, neural networks, Bayesian analysis and fuzzy logic.
- Relational databases including development and web-based access using CGI and HTML.
- Geographical Information Systems for spatial data analysis and image analysis.
- Programming languages including R, SQL, C/C++, Perl, Python, Fortran and Java
- In addition, I am familiar with a wide range of techniques and programs for data analysis and reduction under Unix (Linux), Mac OSX and Windows environments.
- I am fluent in French and English, and have given presentations and taught in both languages. My thesis and postdoctoral work has involved visiting and collaborating with laboratories across Europe and North America.