

## DAVID STEWART JONES

Associate Professor of Geology

Amherst College

11 Barrett Hill Road

Amherst, MA 01002

djones@amherst.edu

### Professional Appointments

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2018 – present	Associate Professor, Department of Geology Amherst College, Amherst, MA
2019 – present	Director, Beneski Museum of Natural History Amherst College, Amherst, MA
2011 – 2018	Assistant Professor, Department of Geology Amherst College, Amherst, MA
2009 – 2010	Postdoctoral Research Scholar, Department of Earth & Planetary Sciences Washington University in Saint Louis, Saint Louis, MO
2008 – 2009	Visiting Instructor, Department of Geology Bates College, Lewiston, ME

### Education

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2004 – 2009	Ph.D. (Earth & Planetary Sciences), Harvard University, Cambridge, MA Advisor: Paul F. Hoffman
1994 – 1998	B.A. (Geology), Carleton College, Northfield, MN Advisor: David M. Bice

### Publications

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*\*Amherst College undergraduate*

#### Peer Reviewed Articles

Kaiho, K., Aftabuzzaman, Md., **Jones, D. S.**, and Tian, L., accepted. Pulsed volcanic combustion events coincident with the end-Permian terrestrial disturbance and the following global crisis. doi:10.1130/G48022.1. *Geology*.

**Jones, D. S.**, *\*Brothers, R. W.*, Ahm, A.-S. C., Slater, N., Higgins, J. A., and Fike, D. A., 2020. Sea level, carbonate mineralogy, and early diagenesis controlled  $\delta^{13}\text{C}$  records in Upper Ordovician carbonates. doi:10.1130/G46861.1. *Geology*, 48:194-199.

Pruss, S. B., **Jones, D. S.**, Fike, D. A., Tosca, N. J., and Wignall, P. B., 2019. Marine anoxia and sedimentary mercury enrichments during the Late Cambrian SPICE event. doi:10.1130/G45871.1. *Geology*, 47: 475-478.

Faggetter, L., Wignall, P. B., Pruss, S. B., **Jones, D. S.**, Grasby, S. E., Widdowson, M., and Newton, R. J., 2019, Mercury chemostratigraphy across the Cambrian Series 2 - Series 3 boundary: evidence for increased volcanic activity coincident with extinction? 10.1016/j.chemgeo.2019.02.006. *Chemical Geology*, 510: 188-199.

Anderson, R. P., McMahon, S., Macdonald, F. A., **Jones, D. S.**, and Briggs, D. E. G., 2019. Palaeobiology of latest Ediacaran phosphorites from the upper Khesen Formation, Khuvsgul Group, northern Mongolia. doi: 10.1080/14772019.2018.1443977. *Journal of Systematic Palaeontology*, 17: 501-532.

Anderson, R. P., Macdonald, F. A., **Jones, D. S.**, McMahon, S., and Briggs, D. E. G., 2017. Doushantuo-type microfossils from latest Ediacaran phosphorites of northern Mongolia. doi:10.1130/G39576.1. *Geology*, 45: 1079-1082.

**Jones, D. S.**, Martini, A. M., Fike, D. A., and Kaiho, K., 2017. A volcanic trigger for the Late Ordovician mass extinction? Mercury data from South China and Laurentia. doi:10.1130/G38940.1. *Geology*, 45: 631-634.

Yellen, B., Woodruff, J. D., Ralston, D., MacDonald, D., and **Jones, D. S.**, 2017. Salt wedge dynamics lead to enhanced sediment trapping within side-embayments in high-energy estuaries. doi: 10.1002/2016JC012595. *Journal of Geophysical Research: Oceans*, 122: 2226-2242.

**Jones, D. S.**, \*Creel, R. C., and \*Rios, B., 2016. Carbon isotope stratigraphy and correlation of depositional sequences in the Upper Ordovician Ely Springs Dolostone, eastern Great Basin, USA. doi: 10.1016/j.palaeo.2016.01.036. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 458: 85–101.

**Invited contribution.**

**Jones, D. S.**, \*Creel, R. C., \*Rios, B., and \*Santiago Ramos, D., 2015. Chemostratigraphy of an Ordovician-Silurian carbonate platform:  $\delta^{13}\text{C}$  records below glacioeustatic exposure surfaces. doi:10.1130/G36236.1. *Geology*, 43: 59-62.

**Jones, D. S.**, and Fike, D. A., 2013. Dynamic sulfur and carbon cycling through the end-Ordovician extinction revealed by paired sulfate-pyrite  $\delta^{34}\text{S}$ . doi: 10.1016/j.epsl.2012.12.015. *Earth and Planetary Science Letters*, 363: 144-155.

Finnegan, S., Fike, D. A., **Jones, D. S.**, and Fischer, W. W., 2012. A temperature-dependent positive feedback on the magnitude of carbon isotope excursions. *Geoscience Canada*, 39: 122-131.

Macdonald, F. A. and **Jones, D. S.**, 2011. The Khuvsgul Group, Mongolia. doi.org/10.1144/M36.30. In: Arnaud, E., Halverson, G. P., and Shields-Zhou, G. (eds.), *The Geological Record of Neoproterozoic Glaciations*, Geological Society, London, Geological Society of London Memoirs, 36, p. 339-345.

**Jones, D. S.**, Finnegan, S., Fike, D. A., Fischer, W. W., Schrag, D. P., and McCay, D., 2011. Terminal Ordovician carbon isotope stratigraphy and glacioeustatic sea-level change across Anticosti Island (Québec, Canada). doi:10.1130/B30323.1. *Geological Society of America Bulletin*, 123: 1645-1664.

Finnegan, S., Bergmann, K., Eiler, J. M., **Jones, D. S.**, Fike, D. A., Eisenman, I., Hughes, N. C., Tripathi, A., and Fischer, W. W., 2011. The magnitude and duration of Late Ordovician-Early Silurian glaciation. doi: 10.1126/science.1200803. *Science*, 331: 903-906.

**Jones, D. S.**, Maloof, A. C., Rainbird, R., Hurtgen, M. T., and Schrag, D. P., 2010. Regional and global chemostratigraphic correlation of the Early Neoproterozoic Shaler Supergroup, Victoria Island, northwest Canada. doi:10.1016/j.precamres.2010.05.012. *Precambrian Research*, 181: 43-63.

Macdonald, F. A., Schmitz, M. D., Crowley, J. C., Roots, C. F., **Jones, D. S.**, Maloof, A. C., Strauss, J. V., Cohen, P. A., Johnston, D. T., and Schrag, D. P., 2010. Calibrating the Cryogenian. doi: 10.1126/science.1183325. *Science*, 327: 1241-1243.

Macdonald, F. A., **Jones, D. S.**, and Schrag, D. P., 2009. Stratigraphic and tectonic implications of a new glacial diamictite – cap carbonate doublet in southwestern Mongolia. doi:10.1130/G24797A.1. *Geology*, 37: 123-126.

Gattacceca, J., Deino, A., Rizzo, R., **Jones, D. S.**, Henry, B., Beaudoin, B., and Vadeboin, F., 2007. Miocene rotation of Sardinia: New paleomagnetic and geochronological constraints and geodynamic implications. doi:10.1016/j.epsl.2007.02.003. *Earth and Planetary Science Letters*, 258: 359-377.

#### Non – Peer Reviewed Articles

**Jones, D. S.**, 2016. Cracking the Neoproterozoic atmosphere? doi:10.1130/focus082016.1. *Geology*, 44: 687-688. **Invited contribution.**

#### Conference abstracts (last five years)

Hagen, A. P. I., **Jones, D. S.**, Fike, D. A., Tosca, N. J., and Pruss, S. B., 2020. Evaluating redox conditions during the Cambrian SPICE event, western Newfoundland, Canada. *Geological Society of America Abstracts with Programs*, Vol. 52 No. 56 doi: 10.1130/abs/2020AM-354140.

Pippenger, K., Estrada, L., **Jones, D. S.**, and Cohen, P., 2020. Mercury concentrations in the Appalachian Basin during the Late Devonian Kellwasser events show no evidence of volcanism. *Geological Society of America Abstracts with Programs*, Vol. 52 No. 56 doi: 10.1130/abs/2020AM-357800.

Nolan, M., Xiao, S., Gill, B. C., **Jones, D.**, and Zhou, C., 2019. Using mercury content to evaluate stratigraphic correlations of Ediacaran black shales in the upper Doushantuo Formation. *Geological Society of America Abstracts with Programs*, Vol. 51 No. 5, doi: 10.1130/abs/2019AM-338149.

Nolan, M., Xiao, S., Gill, B. C., **Jones, D.**, and Zhou, C., 2019. Assessing the Ediacaran Doushantuo Formation: Improving stratigraphic correlation of the upper Doushantuo black shales via mercury content. *International Meeting on the Ediacaran and the Ediacaran-Cambrian Transition*. 17-24 October, 2019. (<https://www.geoparquevalluercas.es/imect2019gi/>)

Morris, D., Sanders, C. B., Grotzinger, J. P., Busch, J., Cury, L. F., Daoust, P., Fischer, W. W., Howes, B., **Jones, D. S.**, Sheppard, R., Nelson, L. L., Pu, J. P., Quinn, D. P., Wilcots, J., Swart, R., 2018. Cap Sequence Post-dating Marinoan Glacial Deposits, Naukluft Mountains, Namibia, Abstract PP53E-2986 presented at 2018 Fall Meeting, AGU, Washington, D.C., 10-14 Dec.

Pruss, S. B., **Jones, D. S.**, Fike, D. A., Tosca, N. J., Wignall, P. B., and Faggetter, L. E., 2018. Does marine anoxia explain Hg enrichments during the SPICE event? New evidence from the Cambro-Ordovician Durness Group, northern Scotland. Abstract PP51A-05 presented at 2018 Fall Meeting, AGU, Washington, D. C., 10-14 Dec. **Invited contribution.**

Cappello, M., Husson, J. M., Schoene, B., Bergmann, K. D., Finnegan, S., and **Jones, D. S.**, 2018. Radiometric age constraints on the Ordovician-Silurian boundary from eastern Canada and Sweden. *Geological Society of America Abstracts with Programs*, Vol. 50, No. 6, doi: 10.1130/abs/2018AM-321432.

Estrada, L., Pippenger, K., Boyer, D., **Jones, D. S.**, and Cohen, P. A., 2018. Mercury and microfossil trends during end-Devonian extinction events. *Geological Society of America Abstracts with Programs*, Vol. 50, No. 6, doi: 10.1130/abs/2018AM-319352.

**Jones, D. S.**, \*Beaty, B. J., Schaller, M. F., Kent, D. V., and Olsen, P. E., 2017. Sedimentary Hg in Upper Triassic rift basins of eastern North America: CAMP volcanism, CO<sub>2</sub>, and end-Triassic extinction. *Geological Society of America Abstracts with Programs*, Vol. 49, No. 6, doi: 10.1130/abs/2017AM-307100.

Ahm, A.-S. C., **Jones, D. S.**, Fike, D. A., Bjerrum, C. J., and Higgins, J. A., 2017. Quantifying early marine diagenesis in shallow-water carbonate sediments during the latest Ordovician glaciation. *Geological Society of America Abstracts with Programs*, Vol. 49, No. 6, doi: 10.1130/abs/2017AM-30776.1 **Invited contribution.**

Anderson, R. P., Macdonald, F. A., **Jones, D. S.**, McMahon, S., and Briggs, D. E. G., 2017. A latest Ediacaran Doushantuo-type Lagerstätte from northern Mongolian phosphorites. *Geological Society of America Abstracts with Programs*, Vol. 49, No. 6, doi: 10.1130/abs/2017AM-300462.

Faggetter, L., Wignall, P. B., Pruss, S. B., **Jones, D. S.**, and Grasby, S. E., 2017. Mercury enrichments coincident with trilobite extinction at the Cambrian Series 2 – 3 boundary; an imprint of the Kalkarindji LIP? *Geological Society of America Abstracts with Programs*, Vol. 49, No. 6, doi:10.1130/abs/2017AM-296644. **Invited contribution.**

Witts, J. D., Landman, N. H., Garb, M. P., Thibault, N., **Jones, D. S.**, Larina, E., and Yancey, T. E., 2017. New records of an abundant ammonite assemblage from the latest Cretaceous Corsicana Formation, Brazos River, Texas. Implications for the Cretaceous–Paleogene (K–Pg) mass extinction

event in the Gulf of Mexico. *Geological Society of America Abstracts with Programs*, Vol. 49, No. 6, doi: 10.1130/abs/2017AM-306327.

Anderson, R. P., Macdonald, F. A., **Jones, D. S.**, McMahon, S., and Briggs, D. E. G., 2017. Diverse Ediacaran Doushantuo-style microfossils in northern Mongolian phosphorites. *International Symposium on the Ediacaran-Cambrian Transition*. 20-22 June, 2017. (<http://www.isect2017.org/st-johns-symposium.html>)

**Jones, D. S.**, \*Brothers, R. W., and Higgins, J. A., 2016. Calcium isotopes, seawater diagenesis, and end Ordovician Earth history, *Geological Society of America Abstracts with Programs*, Vol. 48, No. 7, doi: 10.1130/abs/2016AM-280549. **Invited contribution.**

**Jones, D. S.**, Martini, A. M., and Kaiho, K., 2016. Did volcanism trigger the Late Ordovician mass extinction? Mercury data from South China. *Geological Society of America Abstracts with Programs*, Vol. 48, No. 7, doi: 10.1130/abs/2016AM-280651.

#### Conference abstracts by undergraduate honors thesis students (last 5 years)

\*Edwards, F. A., Black, B. A., Martini, A. M., and **Jones, D. S.**, 2020. Sources of mercury during large igneous province emplacement: the Central Atlantic Magmatic Province and Siberian Traps. *Geological Society of America Abstracts with Programs*, Vol. 52, No. 2 doi: 10.1130/abs/2020SE-344658

\*Chinitz, R., Macdonald, F. A., and **Jones, D. S.**, 2020. Using sedimentary Hg as a volcanic proxy: testing the relationship between the Miocene Climate Optimum and the Columbia River Flood Basalts. *Geological Society of America Abstracts with Programs*, Vol. 52, No. 2 doi: 10.1130/abs/2020SE-345346

\*Grotzinger, H. L., Chen, C., Eyster, A., Faehnrich, K., Hemingway, J., Kasbohm, J. J., Mateo, P., Petrucciani, A., Osorio Rodriguez, D., Runyon, H., Grotzinger, J. P., **Jones, D. S.**, and Knoll, A. H., 2020. Did the Columbia River Flood Basalts initiate the Miocene Climate Optimum? Constraining the timing of LIP volcanism and climate change using sedimentary mercury concentrations. *Geological Society of America Abstracts with Programs*, Vol. 52, No. 2 doi: 10.1130/abs/2020SE-344911

\*Beaty, B. J., **Jones, D. S.**, and Schaller, M. F., 2017. Do mercury enrichments in the Mesozoic rift basins of eastern North America provide a link between flood basalt volcanism and the end-Triassic extinction? *2017 Northeastern Geobiology Symposium*, University of Connecticut. (<http://earth.uconn.edu/northeast-geobiology-symposium-2017>)

\*Hodge, C., **Jones, D. S.**, and Macdonald, F. A., 2017. Mercury chemostratigraphy leading into the Sturtian Snowball Earth glaciation: a volcanic aerosol link between volcanism and global glaciation? *2017 Northeastern Geobiology Symposium*, University of Connecticut. (<http://earth.uconn.edu/northeast-geobiology-symposium-2017>)

\*Brothers, R. W. and **Jones, D. S.**, 2016. Effects of early diagenesis on  $\delta^{44/40}\text{Ca}$  records of Upper Ordovician dolostones. *Geological Society of America Abstracts with Programs*, Vol. 48, No. 2, doi: 10.1130/abs/2016NE-272629.

## External Scientific Research Grants

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- American Chemical Society Petroleum Research Fund (ACS-PRF) Undergraduate Research Grant, “Sulfur Isotope Chemostratigraphy as a Potential Tool for Correlation in Paleozoic Dolomite.” 2016-2019 (no cost extension through 2020) – \$70,000
- Keck Geology Consortium Research Grant, “A geobiological approach to understanding dolomite formation at Deep Springs Lake, CA.” Co-Director with Jason Tor (Hampshire College), 2013-2014 – \$41,496
- National Science Foundation Graduate Research Fellowship, 2005-2008

## Fellowships, Awards, and Other Grants

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- Faculty Research Award Program, Amherst College, 2018 – \$29,102. Massive Volcanism, Mercury, and Miocene Climate Change: Assessing the Timing and History of Hg and CO<sub>2</sub> Release by the Columbia River Basalt Group.
- Dayton Environmental Science Fund, Amherst College, 2018 – \$8,808. Equipment for teaching digital environmental and geologic mapping using drones and tablets.
- Senior Sabbatical Fellowship, Amherst College, 2018-2019.
- Kavli Fellow, First Japanese-American-German Kavli Frontiers of Science symposium, co-sponsored by the Alexander von Humboldt Foundation, the Japan Society for the Promotion of Science and the U.S. National Academy of Sciences, Bad Neuenahr, Germany, 2017. **By invitation.**
- Mellon-supported Reimagining the Commons departmental grant – \$20,000 (with T. A. Harms, P. D. Crowley, and A. M. Martini), Amherst College, 2016-2017.
- Lazerowitz Lecture, “Looking Back from the Anthropocene: Geological Perspectives on Climate Change,” Amherst College, 2015
- Kavli Fellow, Second Israeli-American Kavli Frontiers of Science symposium, co-sponsored by the Israel Academy of Science and Humanities and the U. S. National Academy of Sciences, Jerusalem, 2015. **By invitation.**
- Trustee Faculty Fellowship, Amherst College, 2014-2015
- Project in Innovative Curriculum and Teaching Interdisciplinary Perspectives: On Time (with Andrew Poe), Amherst College, Summer 2017 – \$2500
- Project in Innovative Curriculum and Teaching “Flipped Classroom” pilot, Amherst College, Spring 2014 – \$2500
- Dayton Environmental Science Fund, Amherst College, 2012 – \$13,136. Equipment for teaching river geomorphology.
- Dayton Environmental Science Fund, Amherst College, 2011 – \$2056. Computer software for teaching mathematical modeling.
- Harvard University Certificate of Distinction in Teaching, 2007
- Henry Breck Fund Research Grant, Harvard University Center for the Environment, 2005-2006
- James Mills Peirce Fellowship, Harvard University, 2004-2007
- Alfred W. Stickney Fellowship, Harvard University, 2004-2005
- Distinction on senior research thesis, Carleton College, June 1998
- Graduated *magna cum laude* and with departmental honors, Carleton College, 1998

## Invited Research Talks

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- **Princeton University**, Geosciences Department Solid Earth Brown Bag Seminar, 2016.
- **Harvard University**, Department of Earth and Planetary Sciences BiSSEPS Seminar, 2016.
- **University of Connecticut**, Center for Integrative Geosciences Seminar, 2016.
- **University of Massachusetts Amherst**, Five College Geology Faculty Symposium, 2015.
- **MIT**, Chemical Oceanography, Geology, Geochemistry, and Geobiology Seminar, 2015.
- **Rensselaer Polytechnic Institute**, Dept. of Earth and Environmental Sciences Seminar, 2014.
- **Williams College**, Class of 1960 Lecturer in Geosciences, 2013.
- **Smith College**, Five College Geology Faculty Symposium, 2012.
- **Luther College**, Pew Midstates Consortium for Math and Science Speaker Series, 2010.
- **Western Carolina University**, Geosciences & Natural Resources Department, 2010.
- **Mongolian University of Science and Technology**, 2006.

## Courses Taught at Amherst College

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Geology 105: Introduction to Oceanography

Geology 111: Principles of Geology, with Lab

Geology 112: Surficial Earth Dynamics, with Lab

Geology 251: Paleontology and Geobiology, with Lab

Geology 311: Sedimentology and Stratigraphy, with Lab

First Year Seminar 108: Evolution and Intellectual Revolution

Colloquium 203: On Time: In Political Thought and Scientific Observation

## Undergraduate Honors Research Theses Supervised at Amherst College

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1. Catherine Rothacker '12, *magna cum laude*. Carbon Isotope Chemostratigraphy of the Ediacaran-Early Cambrian Khubsugul Group (Mongolia).  
M.E.M., 2017, Yale School of Forestry & Environmental Studies
2. Roger Creel '13, *summa cum laude*. Diagenesis and Dolomitization of Upper Ordovician-Lower Silurian Carbonates, Great Basin, Nevada. **Recipient of Pond Prize for Best Geology Thesis.**  
Ph.D., in progress, Columbia University, Earth & Environmental Sciences
3. Bernardo Rios '13, *magna cum laude*. Regional and Global Chemostratigraphic Correlations of a Late Ordovician-Early Silurian Carbonate Shelf in Central Nevada. **Awarded “Outstanding Undergraduate Student Poster” at the 2013 Geological Society of America Northeastern Section Meeting.**
4. Danielle Santiago Ramos '13, *magna cum laude*. Assessing the Potential Effects of Dolomitization on the Sulfur Isotopic Composition ( $\delta^{34}\text{S}_{\text{CAS}}$ ) of Late Ordovician-Early Silurian Dolostones from the Northern Basin and Range Province, Nevada.  
Ph.D., 2020, Princeton University, Geosciences

5. Benjamin Otoo '14, *cum laude*. Investigating Paleoenvironmental and Diagenetic Controls on Intrabasinal Variability of Stable Isotope Records in Ancient Limestones.  
M.Phil., 2015, University of Cambridge, Zoology  
M.Sc., 2016, University of Bristol, Palaeobiology  
Ph.D., in progress, University of Chicago, Committee on Evolutionary Biology
6. Cecilia Pessoa '14, *cum laude*. Magnesium Isotope Records Associated with Dolomite Formation in Deep Springs Lake, a Modern Alkaline Ephemeral Lake in Eastern California.
7. William Brothers '16, *magna cum laude*. Effects of Early Diagenesis on  $^{44/40}\text{Ca}$  Records of Upper Ordovician Carbonates and Implications for  $\delta^{13}\text{C}$  Interpretations. **Recipient of Pond Prize for Best Geology Thesis.**
8. Brian Beaty '17, *summa cum laude*. Mercury Enrichments in the Triassic-Jurassic Rift Basins of Eastern North America: Facies Dependence, Volcanic Associations, and Relationship to the End-Triassic Extinction. **Recipient of Pond Prize for Best Geology Thesis.**  
Ph.D., in progress, Yale University, Geology & Geophysics
9. Christopher Hodge '17, *cum laude*. Mercury Chemostratigraphy Leading into the Sturtian Snowball Earth: Testing Links between Volcanism and Global Glaciation.
10. Cody Pfund Pulliam '18E, *magna cum laude*. Reconstructing Pathways: An Investigation of Climate Data Preserved in Microfossil and Concretionary Carbonate Phases in Pleistocene-Aged Varved Clays from Glacial Lake Hitchcock.
11. Heather Grotzinger '20, *cum laude*. Did the Columbia River Flood Basalts Initiate the Miocene Climate Optimum? Constraining the Timing of LIP Volcanism and Climate Change Using Sedimentary Mercury Concentrations.
12. Raina Chinitz '20, *magna cum laude*. Investigating the Relationship Between the Miocene Climate Optimum and the Columbia River Flood Basalts Using Sedimentary Mercury Abundance. **Recipient of Pond Prize for Best Geology Thesis.**

### **Amherst Undergraduate Research Students (non-thesis)**

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Risalat Khan '13	Cara Lembo '17	Khylla Haddock '20
Mark Hellmer '13	Araceli Aponte '17	Felix Edwards '20
Adrian Castro '14	Helen Montie '18	Jessica Reid '20
Mollie McDowell '14	Caroline Feeley '18	Katie Boback '21
Amar Mukunda '16	Ian Petty '19	Colin Murphy '21
Lindsey Plummer '16	Olivia Moehl '20	Carley Malloy '22
Alina de Cordoba '16	Kelly Weisbard Missett '19	Petra Zuñiga '22
Annie Turnbull '16	Emma Swislow '20	Jonathan Vale '22
Olivia Truax '16	Luz Lim '20	Isabelle Cabán '23
Nicole Rioseco '16	Luke Maxwell '20	Nathan Grove '23



## Field Research Experience

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- **Majella Mountains, Italy**, 2019, including training two undergraduates and ten graduate students
- **Western Newfoundland**, 2019, including training three undergraduates
- **Monterey Formation, California**, 2018
- **Naukluft Mountains, Namibia**, 2018, including training twelve graduate students
- **Bighorn Mountains, Wyoming**, 2017, including training three undergraduates
- **Connecticut River Valley**, 2016, including training one undergraduate
- **Deep Springs Lake, California**, 2013-15, including training eleven undergraduates
- **Nevada/Utah Basin and Range**, 2005, 2012-15, 2019, including training eleven undergraduates
- **Perce, Québec**, 2011, including training one undergraduate
- **Anticosti Island, Québec**, 2008-09, 2018, including training one graduate student and two undergraduates
- **Mongolia**, 2006-07, including training five undergraduates
- **Apennine Mountains, Italy**, 2007, 2010 including training one undergraduate
- **Cornwallis Island, Arctic Canada**, 2006, including training two undergraduates
- **British Columbia Rockies**, 2005
- **Victoria Island, Arctic Canada**, 2004
- **Western Australia**, 2004
- **Otavi Group, Namibia**, 2004

## Field and Laboratory Training Courses

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- Agouon Advanced Field Course, Italy, 2019 (co-instructor)
- Agouon Advanced Field Course, Namibia, 2018 (co-instructor)
- International Course on Carbonate Microfacies, Universität Erlangen-Nürnberg, 2015 (student)
- Secondary Ionization Mass Spectrometry (SIMS) Workshop, ASU, 2010 (student)
- International GeoBiology Course, Agouon Institute-USC, 2005 (student)
- Geology and Geobiology of Western Australia field trip, Caltech, 2004 (student)
- Geology Field Semester in Italy, Carleton College, 1997 (student)

## Professional Service in the Geoscience Community

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- **Peer reviewer of research manuscripts** for *Geological Society of America Bulletin*; *Geology*; *Nature Geoscience*; *Earth and Planetary Science Letters*; *Geochimica et Cosmochimica Acta*; *Nature Communications*; *American Journal of Science*; *Sedimentology*; *Palaeogeography, Palaeoclimatology, Palaeoecology*; *Geoscience Canada*; *Chemical Geology*; *Canadian Journal of Earth Science*; *Basin Research*; *Geo-Marine Letters*; *Scientific Reports*; *AGU Books*; *Geological Magazine*; *National Science Review*; *Global and Planetary Change*
- **Peer reviewer of research grant proposals** for American Chemical Society Petroleum Research Fund; NSF Sedimentary Geology & Paleobiology Program; NSF CAREER Program; NSF Antarctic Earth Sciences Program; NSF Postdoctoral Fellowships Program; National

Geographic Society; NSERC Geoscience Discovery Grants Program; Natural Environment Research Council

- **External Ph.D. Dissertation Committee Member**
  - Anne-Sofie Crüger Ahm, University of Copenhagen, 2016. Advisor: Prof. Christian J. Bjerrum
  - James F. Busch, Dartmouth University, 2021. Advisor: Justin V. Strauss
- **Lead Faculty Organizer** of Northeast Geobiology Symposium, Amherst College, March 2019

## **Amherst College Service**

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### *Amherst College Committee Work*

- Committee on Athletics and Education, 2019 – present
- Search Committee for Center for Teaching and Learning Assistant Director for STEM, 2017-18
- Committee on International Education/Committee on Global Education, 2017 – 2018
- Keck Geology Consortium Campus Representative, 2017 – present
- Five College Coastal and Marine Science Steering Committee, 2016 – present
- Faculty Committee on Admission and Financial Aid, 2015-16
- Climate Action Plan task force, 2015-17
- Housing Committee, 2013 – 2014
- Swift Moore Committee, 2012 – 2013

### *Other Service, Involvement, and Collegial Work*

- Center for Teaching and Learning “Food for Thought” presentation on Geology Department curricular reform, 2018
- Parent Weekend Panel on Research with Undergraduates, 2017
- Class of 1821 Alumni Breakfast address, 2015
- Reunion Faculty Lecture Series, Amherst College, 2014
- Frost Library Discussion Series Lecture, Amherst College, 2013
- First Year Seminar Direct Assessment Pilot Project, 2013
- Flipped Classroom discussion group, 2013-2014
- Copeland Colloquium participant, 2013-2014
- Science and Humanities discussion group, 2012-2013

## **Public Outreach**

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- Lives of Scientists participant, Shutesbury Elementary School 5<sup>th</sup> grade class, 2018-20
- Academic Minute research snapshot on WAMC (radio) and academicminute.org, 2018
- Public lecture on climate change science, Western Massachusetts Master Gardener’s Association, 2016
- Interview on WHMP radio discussing mass extinctions and geology, 2015
- Public science lecture for community members, “The Unusual Minerals and Microbes of Deep Springs Lake,” Deep Springs College, 2015
- Led field trips to local geological sites for high school class from Rutland, VT, 2014, 2019