

curriculum vitae

DAVID L. BARBEAU, JR.

SCHOOL OF THE EARTH, OCEAN & ENVIRONMENT
UNIVERSITY OF SOUTH CAROLINA

PERSONAL INFORMATION

ADDRESS:

School of the Earth, Ocean & Environment
University of South Carolina
701 Sumter St. EWS 617
Columbia, SC 29208 USA

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EDUCATION

THE UNIVERSITY OF ARIZONA

Ph.D. in Geology, 2003

Application of Growth Strata and Detrital-Zircon Geochronology to Facies Architecture and Kinematic Histories

THE UNIVERSITY OF ARIZONA

M.S. in Geology, 2000

A Flexural Model for the Paradox Basin: Implications for the Tectonics of the Ancestral Rocky Mountains

CARLETON COLLEGE

B.A. cum laude in Geology, 1997

Geology and the Sense of Place: A Geologic History of Tensleep Preserve, Wyoming

PROFESSIONAL EXPERIENCE

ASSOCIATE PROFESSOR

*School of the Earth, Ocean and Environment (formerly Department of Earth & Ocean Sciences),
University of South Carolina*

2010-present

GEOLOGY FIELD CAMP DIRECTOR

University of South Carolina, University of Georgia

2014-2019, 2021, 2023

VISITING RESEARCH SCIENTIST

Lamont-Doherty Earth Observatory, Columbia University

2012-2013

GRADUATE DIRECTOR

School of the Earth, Ocean & Environment, University of South Carolina

2010-2012, Fall 2019

PRINCIPAL INVESTIGATOR

United States Antarctic Program, Research Cruises LMG 09-11, LMG 11-02

Winters 2009-2011

VISITING GEOLOGIST

British Antarctic Survey, Rothera Research Station, Antarctica

Winter 2008-2009

CO-CHIEF SCIENTIST & PRINCIPAL INVESTIGATOR

United States Antarctic Program, Research Cruise LMG 07-17

Winter 2007-2008

ASSISTANT PROFESSOR

*Department of Earth & Ocean Sciences (formerly Department of Geological Sciences),
University of South Carolina*

2004-2009

PRODUCTION & RESEARCH GEOLOGIST

ExxonMobil Production Company, Houston, TX

Summer 2002

RESEARCH GEOLOGIST

ExxonMobil Upstream Research Company, Houston, TX

Summers 2000, 2001

GRADUATE ASSISTANT IN TEACHING

Department of Geosciences, The University of Arizona

1998-2002

PROGRAM ASSISTANT

Visions of California off-campus seminar, Carleton College

Spring 1998

GEOLOGIST-IN-RESIDENCE

Tensleep Preserve, Nature Conservancy, Tensleep, Wyoming

Summer 1996

TEACHING LABORATORY ASSISTANT

Geology Department, Carleton College

1995-1996

RESEARCH INTERESTS

- The sedimentary record of plate tectonics & mountain building
- Sediment provenance analysis using geochronology
- The influence of plate tectonics on ocean circulation, glaciation, climate change & biogeography
- Siliciclastic sedimentology, stratigraphic architecture & growth strata

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- Chronostratigraphy of siliciclastic depositional systems using magnetostratigraphy & sequence stratigraphy
- Thermochemistry of mountain belts & magmatic arcs
- Geodynamic evolution, stratigraphic architecture, tectonic setting & flexural modeling of foreland basins
- Petroleum geology & the distribution of siliciclastic reservoirs
- Regional geology & tectonics of the southern Andes, Antarctica, the Mediterranean & North America
- Inquiry-based science pedagogy

FUNDING

ANTARCTIC TECTONICS, PALEOCLIMATE & PALEOENVIRONMENTS

EAGER: Evaluating the Larsen basin's suitability for testing the Cretaceous Glaciation Hypothesis 2012-2014

National Science Foundation Office of Polar Programs, Antarctic Earth Sciences program: NSF-OPP 1241460, completed, \$299,836 (\$189,184 to USC). **Barbeau** and S. Hemming (Columbia University) were PIs.

Testing the Cretaceous Antarctic Glaciation Hypothesis: Nd isotopes of Southern Ocean sediment 2013-2014

University of South Carolina Office of Undergraduate Research Magellan Scholar Program, completed, \$2,500. **Barbeau** was mentor and PI, M. Wright was Magellan Scholar, B. Oliver was graduate student mentor.

IPI: Testing the Gateway Hypothesis: An Integrated Record of Drake Passage Opening and Antarctic Glaciation 2007-2011

National Science Foundation Office of Polar Programs, Antarctic Earth Sciences program, NSF-OPP 0732995, completed, \$700,852 (\$595,190 to USC) + an estimated \$3.5M in United States Antarctic Program and British Antarctic Survey logistical support. **Barbeau** was PI, R. Thunell and H. Scher were Co-PIs.

Collaborative Research: Austral Portals Workshop: Tectonics, Paleogeography and Biogeography 2009-2011

National Science Foundation Office of Polar Programs, Antarctic Earth Sciences program, NSF-OPP 0925370, completed, \$38,100 (\$7,500 to USC). **Barbeau** and R.D.E. MacPhee (Amer. Mus. Nat. Hist.) were PIs.

SEDIMENTARY BASINS, GEOCHRONOLOGY & PROVENANCE ANALYSIS

Detrital zircon geochronology of Cretaceous-Eocene coastal plain sedimentary rocks 2020-2023

USGS Earth MRI and South Carolina Department of Natural Resources, subcontract of \$17,500 to USC, completed. **Barbeau** was USC PI.

Deconvolving the Southern South American Pleistocene-Holocene Dust Production Pathways 2019-2023

National Science Foundation, Sedimentary Geology & Paleobiology Program: NSF-EAR 1910510, in progress, \$191,823 to USC. A. Leier is USC PI, **Barbeau** is Co-PI.

Sedimentary Record of Late Cretaceous to Eocene Laramide Uplift in the Cañon City Embayment, Colorado, USA. 2018-2020

University of South Carolina Office of Undergraduate Research Magellan Scholar Program, \$3,000, completed. N. Mitchell was Magellan Scholar, **Barbeau** was PI and faculty mentor.

Detrital-zircon geochronology of offshore heavy mineral deposits, South Carolina, Georgia and North Carolina. 2018-2019

South Carolina Department of Natural Resources and Bureau of Ocean Energy Management, subcontract of \$18,000 to USC, completed. **Barbeau** was USC PI.

Detrital-zircon tests of competing hypotheses for the Eastern Blue Ridge & Inner Piedmont Provinces, Southern Appalachian Mountains 2017

University of South Carolina Office of Undergraduate Research Magellan Scholar Program, completed, \$3,000/ Meredith Love was student investigator, **Barbeau** was PI and faculty mentor.

Detrital-zircon geochronology of suspect terranes in the South Carolina Piedmont 2016-2017

South Carolina Geological Survey / Department of Natural Resources, completed, \$13,800. **Barbeau** was PI.

U-Pb detrital-zircon geochronology of the Appalachian basin, USA: Testing models for the onset of the Alleghanian orogeny 2007-2008

University of South Carolina Office of Undergraduate Research Magellan Scholar Program, completed, \$6,000. **Barbeau** was mentor and PI, Denise Bachmann-Krug and Alan Rickenbaker were Magellan Scholars, Hyunmee Park was graduate student mentor.

Applications of Stable-Isotope and ICP-AES Geochemistry to Provenance of Calcareous Sediments 2006-2007

University of South Carolina Office of Undergraduate Research Magellan Scholar Program, completed, \$3,000. **Barbeau** was mentor and PI, Beth Ann Bell was Magellan Scholar.

Mountain-Building and Sedimentary Basins in the Southernmost Andes 2005-2006

University of South Carolina Research and Productive Scholarship Programs, completed, \$19,000. **Barbeau** was PI, Matt Kohn was mentor.

GROWTH STRATA AND KINEMATIC SEQUENCE STRATIGRAPHY

Leveraged Research Grant

2002-2003

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ExxonMobil Upstream Research Company, Siliciclastic Reservoir Section, completed, \$50,000. **Barbeau** was (student) PI.

Geostructure Partnership Grant 2001
The University of Arizona, completed, \$2,185. **Barbeau** was (student) PI.

Fluvial Sedimentology Award 2000
Society for Sedimentary Geology, Rocky Mountain Section, completed, \$1,000. **Barbeau** was (student) PI.

PARADOX BASIN & ANCESTRAL ROCKY MOUNTAINS

Grant-in-Aid 1999
American Association of Petroleum Geologists, completed, \$2,186. **Barbeau** was (student) PI.

Wesley Peirce Graduate Scholarship 1999
The University of Arizona Department of Geosciences, completed, \$3,000. **Barbeau** was (student) PI.

Research Grant
Geological Society of America, completed, \$1,200. **Barbeau** was (student) PI. 1999

Master's Thesis Grant 1999
Four Corners Geological Society, completed, \$1,500. **Barbeau** was (student) PI.

EARTH SCIENCE EDUCATION

iCoach-Teacher Teams Professional Development Program for Middle Schools 2008-2011
South Carolina Department of Education and United States Department of Education, completed, \$1,616,433. C. Lotter was PI, B. Ely, **D. Barbeau**, and J. Yow were Co-PIs.

INSTRUMENTATION

Acquisition of a Dynamic Image-Based Particle Shape- and Size-Analyzer 2013-2014
University of South Carolina College of Arts & Sciences Associate Professor Small Research Instrumentation grant, University of South Carolina, complete, \$50,000. **D. Barbeau** was PI.

Upgrade of Electron Microprobe for Earth Science and Materials Research at the University of South Carolina 2009-2010
National Science Foundation, Earth Sciences Instrumentation and Facilities, NSF-EAR 0841461, completed, \$166,853 + \$50,000 University cost-share. G. Yagodziniski was PI, **D. Barbeau**, M. Bizimis, D. Zhao and C. Hintz were Co-PIs.

MRI: Acquisition of ICPMS Instrumentation for Interdisciplinary Research 2008-2010
National Science Foundation Major Research Instrumentation, NSF-OCE 0820723, completed, \$695,247 + >\$1M University cost-share. R. Thunell was lead PI, M. Bizimis, T. Shaw and H. Scher were Co-PIs, **D. Barbeau**, G. Yagodziniski were collaborators.

PUBLICATIONS

ARTICLES IN PEER-REVIEWED JOURNALS

Stubbins, B., Leier, A.L., **Barbeau, D.L.**, Pullen, A., Abell, J.T., Nie, J., Zárate. M.A., Fidler, M.K., in press, Global climate forcing on the late Miocene establishment of the Pampean aeolian system in South America, *Nature Communications*.

Romano, C.O., Garrido, A.C., **Barbeau, D.L.**, Vera, R.B., Bonini, R., Boscaini, A., Cerdeño, E., Cruz, L.E., Esteban, G.I., de la Fuente, M.S., Fernández-Monescillo, Fernicola, J.C., Krapovickas, V., Madozzo-Jaén, M.C., Encarnación Pérez, M., Pujos, F., Rasia, L., Turazzini, G.F., Vera, B., MacPhee, R.D.E., Forasiepi, A.M., Prevosti, F.J., in press, Redefining the Huayquerian Stage (Upper Miocene – Lower Pliocene) of the South American chronostratigraphic scale based on biostratigraphic analyses and geochronological dating, *Papers in Paleontology*.

Ruiz-Ramoni, D., Romano, C.O., Tarquini, S.D., Forasiepi, A.M., García Massini, J.L., **Barbeau, D.L.**, Cruz, L.E., Barasoain, D., Cerdeño, E., Madozzo Jaén, M.C., Combina, A.M., Asurmendi, E., Pujana, R.R., Torres Carro, V., Ortiz, P.E., Schmidt, G.I., Krapovickas, V., Fernicola, J.C., Marensi, S.A., Prevosti, F.J., 2023, Mammalian diversity and age of the Salicas Formation (Late Miocene–Early Pleistocene), Northwestern Argentina: State of knowledge and new contributions, *Journal of South American Earth Sciences*, 131 (in press), <https://doi.org/10.1016/j.jsames.2023.104605>.

Khanna, T., **Barbeau, D.L.**, Arora, K., Sawant, S., 2023, Petrogenesis of Neoproterozoic granitoids beneath the Koyna-Warna region, Deccan Volcanic Province, India, *Journal of Asian Earth Sciences*, 241: article 105455. doi: [10.1016/j.jseaes.2022.105455](https://doi.org/10.1016/j.jseaes.2022.105455)

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- Bruner, A., Leier, A., **Barbeau, D.L.**, Pullen, A., Fidler, M., Stubbins, B., 2023, Detrital zircon provenance and transport pathways of Pleistocene-Holocene eolian sediment in the Pampean Plains, Argentina, *Geological Society of America Bulletin*, 135: 435-448. doi: 10.1130/B36267.1
- Pullen, A., **Barbeau, D.L.**, Leier, A.L., Abell, J.T., Ward, M., *Bruner, A.*, Fidler, M.K., 2022, A westerly wind dominated Puna Plateau during deposition of upper Pleistocene loessic sediments in the subtropical Andes, South America, *Nature Communications*, 13: 3411. doi: 10.1038/s41467-022-31118-5
- Corradino, J.I., Pullen, A., Leier, A.L., **Barbeau, D.L.**, Scher, H.D., Weislogel, A., Bruner, A., Leckie, D.A., Currie, L.D., 2022, The ancestral trans-North American Bell River system recorded in late Oligocene to early Miocene sediments in the Labrador Sea and Canadian Great Plains, *Geological Society of American Bulletin*, 134: 130-144. doi: 10.1130/B35903.1.
- LaMaskin, T.A., Rivas, J.A., **Barbeau, D.L.**, Schwartz, J.J., Russell, J.A., and Chapman, A.D., 2022, A crucial geologic test of exotic collision versus endemic re-accretion in the Klamath Mountains province, U.S.A. with implications for the assembly of Cordilleran North America: *Geological Society of America Bulletin*, 134: 965-988. doi: 10.1130/B35981.1.
- Jackson, W.T., McKay, M.P., Beebe, D.A., Mullins, C., Ionescu, A., Shaulis, B., **Barbeau, D.L.**, 2021, Detrital zircon U-Pb ages and Th/U reveal a southern Appalachian Piedmont provenance along the eastern Gulf Coastal Plain (USA) during Late Cretaceous, *Journal of Sedimentary Research* 91: 1025–1039, doi: 10.2110/jsr.2020.177.
- Rubino, E., Leier, A., Cassel, E.J., Archibald, S.B., Foster-Baril, Z., **Barbeau, D.L.**, 2021, Detrital zircon U–Pb ages and Hf-isotopes from Eocene intermontane basin deposits of the southern Canadian Cordillera, *Sedimentary Geology*, 422: article 105969, doi: 10.1016/j.sedgeo.2021.105969.
- Khanna, T., Bizimis, M., **Barbeau, D.L.**, Krishna, A.K., Sessa Sai, V.V., 2019, Evolution of ca. 2.5 Ga Dongargarh volcano-sedimentary Supergroup, Bastar craton, Central India: Constraints from zircon U-Pb geochronology, bulk-rock geochemistry and Hf-Nd isotope systematics. *Earth Science Reviews* 190: 273-309. doi: 10.1016/j.earscirev.2018.11.014
- Pratt, J.R., **Barbeau, D.L.**, Izykowski, T.M., Garver, J.I., and Emran, A., 2016, Sedimentary provenance of the Taza-Guercif basin, South Rifian Corridor, Morocco: Implications for the Messinian Salinity Crisis, *Geosphere*, 12, 221-236.
- Pratt, J.R., **Barbeau, D.L.**, Garver, J.I., Emran, A., and Izykowski, T.M., 2015, Detrital zircon geochronology of Mesozoic sediments in the Rif and middle Atlas belts of Morocco: provenance constraints and refinement of the West African signature, *Journal of Geology*, 123, 177-200, doi:10.1086/681218.
- Zahid, K.M. and **Barbeau, D.L.**, 2013, Nd Isotope and REE analysis from the Atlantic coast of Tierra del Fuego: Tectonic implications of Fuegian Andes in Drake Passage opening. *Chemical Geology*, 347, 69-81.
- Barbeau, D.L.**, 2011, Exhumational history of the margins of Drake Passage from thermochronology and sediment provenance, in Anderson, J., Wellner, J., eds., *Tectonic, Climatic, and Cryospheric Evolution of the Antarctic Peninsula*, AGU Monograph.
- Anderson, J.B., Warny, S., Askin, R.A., Wellner, J.S., Bohaty, S.M, Kirshner, A.E., Livsey, D.N., Simms, A.R., Smith, T.R., Ehrmann, W., Lawver, L., **Barbeau, D.**, Wise, S.W., Kulhenek, D.K., Weaver, F.M., Majewski, W., 2011, Progressive Cenozoic cooling and the demise of Antarctica's last refugium, *Proceedings of the National Academy of Sciences*, v. 108, 11356-11360.
- Zahid, K.M., and **Barbeau, D.L.**, 2011, Constructing sandstone provenance and classification ternary diagrams using an electronic spreadsheet, *Journal of Sedimentary Research*, v. 81, 702–707.
- Zahid, K.M., and **Barbeau, D.L.**, 2010, Provenance of eastern Magallanes foreland basin sediments: heavy mineral analysis reveals Paleogene tectonic unroofing of the Fuegian Andes hinterland, *Sedimentary Geology*, 229, 64-74.
- Gunthner, W.R., **Barbeau, D.L.**, Reiners, P., and Thomson, S., 2010, Slab-window migration and terrane accretion preserved by low-temperature thermochronology of a magmatic arc, northern Antarctic Peninsula, *Geochemistry, Geophysics, Geosystems*, 10, doi:10.1029/2009GC002765.
- Barbeau, D.L.**, Gombosi, D.J., Zahid, K.M., Bizimis, M., Swanson-Hysell, N., Valencia, V., and Gehrels, G., 2010, U/Pb zircon constraints on the age and provenance of the Rocas Verdes basin-fill, Tierra del Fuego, Argentina, *Geochemistry, Geophysics, Geosystems*, 10, doi:10.1029/2009GC002749.
- Park, H., **Barbeau, D.L.**, Rickenbaker, A., and Bachmann-Krug, D., 2010, Detrital-zircon geochronology of the central Appalachian foreland basin: implications for terrane accretion and orogenic recycling, *Journal of Geology*, 18, 23-44, doi:10.1086/648400.

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- Barbeau, D.L.**, Davis, J.D., Murray, K.E., Valencia, V., Gehrels, G.E., Zahid, K.M., and Gombosi, D.J., 2010a, Detrital-zircon geochronology of metasedimentary rocks of northwestern Graham Land, Antarctic Science, 22, 65-78, doi:10.1017/S095410200999054X.
- Gombosi, D.J., **Barbeau, D.L.**, and Garver, J., 2009, New thermochronometric constraints on the rapid Paleogene uplift of the Cordillera Darwin complex and related thrust sheets in the Fuegian Andes, Terra Nova, 21, 507-515, doi:10.1111/j.1365-3121.2009.00908.x.
- Barbeau, D.L.**, Olivero, E.B., Swanson-Hysell, N., Zahid, K.M., Murray, K.E., and Gehrels, G., 2009, Detrital-zircon geochronology of the eastern Magallanes foreland basin: Implications for Eocene kinematics of the northern Scotia Arc and Drake Passage, Earth and Planetary Science Letters, v. 284, p. 489-503.
- Swanson-Hysell, N., and **Barbeau, D.L.**, 2008, Reply to Garcés et al. comment on 'The diachroneity of alluvial-fan lithostratigraphy: a test case from southeastern Ebro basin magnetostratigraphy,' Earth and Planetary Science Letters, v. 275, p. 187-192.
- Swanson-Hysell, N., and **Barbeau, D.L.**, 2007, The diachroneity of alluvial-fan lithostratigraphy: a test case from southeastern Ebro basin magnetostratigraphy, Earth and Planetary Science Letters, v. 262, p. 343-362.
- Barbeau, D.L.**, Ducea, M.N., Gehrels, G.G., Kidder, S., Wetmore, P.H., and Saleeby, J.B., 2005, U-Pb detrital-zircon geochronology of northern Salinian basement and cover rocks, Geological Society of America Bulletin, v. 117, p. 466-481.
- Barbeau, D.L.**, 2003, A flexural model for the Paradox Basin: Implications for the tectonics of the Ancestral Rocky Mountains, Basin Research, v.15, p.97-115.

PEER-REVIEWED PROPRIETARY INTERNAL COMPANY REPORTS

- Barbeau, D.L.**, Geslin, J.K. and Hamid, T.N., 2002, Kinematic sequence boundaries and systems tracts in growth strata: Implications for reservoir geometry and distribution adjacent to salt structures, ExxonMobil Upstream Research Company.
- Barbeau, D.L.**, Geslin, J.K., Thurmond, J., Dunn, P.A., and Ryall, J. 2001, Digital geology: a guide to outcrop data acquisition using RTK GPS and laser ranging, ExxonMobil Upstream Research Company.

OTHER PUBLICATIONS & PRODUCTS

- Garrido, A.C., Bonini, R., **Barbeau, D.L.**, 2017, Paleoambiente, edad y vertebrados de la Formación Huayquerías (Mioceno Tardío), Provincia de Mendoza, República Argentina, XX Congreso Geológico Argentino, p. 50-55.
- Barbeau, D.L.**, Sexton, J.S., Howard, C.S., Morrow, R., 2017, Detrital-zircon geochronology of middle Eocene strata, Peachtree Rock Heritage Preserve, Edmund, South Carolina, 21p. [internal report to The Nature Conservancy]
- Barbeau, D.L.**, Sexton, J.S., Love, M.K., Holliday, J.T., Howard, C.S., Morrow, R., Secor, D., 2017, Preliminary U-Pb zircon ages from metasedimentary and metaigneous rocks of the Carolina Terrane of the South Carolina Piedmont, 40p. [internal report to the SC Department of Natural Resources - Geological Survey]
- Barbeau, D.L.**, and Strickland, D., 2008, What Makes a Place Special? An Inquiry-Based Curriculum for Earth Science, 91 pp. + digital plates and resources.

PRESENTATIONS

PRESENTATIONS AT INTERNATIONAL MEETINGS WITH PUBLISHED ABSTRACTS

(§ invited keynote talk; * invited talk; + student-authored paper. *Italics* indicate student collaborator.)

- + *Stubbins, B., Quanrud, W., Leier, A., Pullen, A., Barbeau, D.L., Zapor, M., Prior, A.* 2022, Late Miocene Eolian Sediment Transport Pathways In Southern South America Derived From Detrital Zircon Geochronology, Geological Society Of America Abstracts With Programs, Vol. 54, No. 5, doi: 10.1130/abs/2022AM-381874
- + *Kroeger, E., Fidler, M., Pullen, A., Leier, A., Barbeau, D.L.*, 2022, The Whims Of Wind: Understanding Aeolian Deposits In The Gran Chaco, Argentina, Geological Society Of America Abstracts With Programs. Vol 54, No. 5, doi: 10.1130/abs/2022AM-380288
- + Pullen, A., **Barbeau, D.L.**, Leier, A., *Ward, M., Bruner, A., Fidler, M.K.*, 2021 Westerly Winds Over The Southern Puna Plateau During Deposition Of Upper Pleistocene Loessic Sediments In The Subtropical Andean Foothills, South America, Geological Society of America Abstracts with Programs, Vol. 53, No. 6, doi: 10.1130/abs/2021AM-364114
- LaMaskin, T., *Rivas, J.A., Barbeau, D.L., Schwartz, J., Russell, J.A., Chapman, A.*, 2021, A Crucial Geologic Test Of Late Jurassic Exotic Collision Versus Endemic Re-Acretion In The Klamath Mountains Province, Western United States, With Implications For The Assembly Of Western North America, Geological Society of America Abstracts with Programs, Vol. 53, No. 6, doi: 10.1130/abs/2021AM-370508

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- *Prior, A., Parga V.L., Stubbins, B., Leier, A., Pullen, A., **Barbeau, D.L.**, 2021, Inferring Pleistocene Wind Patterns From Eolian Landforms In The Pampean Sand Sea, Central Argentina, Geological Society of America Abstracts with Programs, Vol 53, No. 6, doi: 10.1130/abs/2021AM-367125
- *Stubbins, B., Bruner, A., Pullen, A., Leier, A., **Barbeau, D.L.**, 2021, A Preliminary Assessment Of Dust Production Pathways From Southern South American Pleistocene Loess Using Detrital Zircon Geochronology, Geological Society of America Abstracts with Programs, Vol 53, No. 6, doi: 10.1130/abs/2021AM-367081
- *Tully, L.S., **Barbeau, D.L.**, Sexton, J.S., Howard, C.S., 2020, An Evaluation Of Source-To-Sink Sediment Dynamics In The Santee River Basin And South Carolina Continental Shelf Using Detrital-Zircon Geochronology: Geological Society of America Abstracts with Programs. Vol 52, No. 6 doi: 10.1130/abs/2020AM-357240
- *Corradino, J.I., Pullen, A., Leier, A., Scher, H.D., **Barbeau, D.L.**, Currie, L., Leckie, D.A., 2020, Cordilleran sediments in the Labrador Sea: Detrital evidence from the Saglek Basin for the Oligocene-Pliocene transcontinental Bell River: Geological Society of America Abstracts with Programs. Vol 52, No. 6 doi: 10.1130/abs/2020AM-358444
- *Bruner, A., Pullen, A., **Barbeau, D.**, and Leier, A., 2020, Evaluation of the dust production pathways of the southern South American Pleistocene loess using detrital zircon geochronology: Geological Society of America Abstracts with Programs. Vol. 52, No. 2 doi: 10.1130/abs/2020SE-345459
- Jackson, W.T., McKay, M.P., Beebe, D.A., Mullins, C., Shaulis, B., **Barbeau, D.L.**, 2020, Late Cretaceous Source To Sink Dynamics Along The Eastern Gulf Coastal Plain (Usa) Revealed By Detrital Zircon Petrochronology Of The Ripley Formation, Geological Society of America Abstracts with Programs. Vol 52, No. 6 doi: 10.1130/abs/2020AM-355199
- * **Barbeau, D.L.**, Sexton, J.S., Secor, D.T., Howard, C.S., Morrow, R.H., 2018, New constraints on the nature and history of the Modoc Zone from U-Pb geochronology, Geological Society of America Abstracts with Programs. Vol. 50, No. 3, ISSN 0016-7592 doi: 10.1130/abs/2018SE-313239
- Barbeau, D.L.**, Hemming, S.R., 2018, Mesozoic-Cenozoic crystallization and cooling history of the Antarctic Peninsula, Geological Society of America Abstracts with Programs. Vol. 50, No. 3, ISSN 0016-7592 doi: 10.1130/abs/2018SE-313247
- Barbeau, D.L.**, Hemming, S.R., Guenther, W.R., 2018, Cooling History of the Antarctic Peninsula Magmatic Arc, Goldschmidt Abstracts, 133.
- *Rubino, E.M., Leier, A., Archibald, S.B., Cassel, E.J., Foster-Baril, Z., **Barbeau, D.L.**, Sexton, J.S., 2017, Detrital zircon U-Pb provenance of Eocene sediments in southern British Columbia and northern Washington: Record of a collapsing orogen: Geological Society of America Abstracts with Programs, 49 doi: 10.1130/abs/2017AM-302741.
- *Oliver, B., **Barbeau, D.**, 2016, Detrital zircon provenance trends in the Larsen Basin, Antarctic Peninsula, Geological Society of America Abstracts with Programs, Vol. 48, No. 7, doi: 10.1130/abs/2016AM-287904.
- *Love, M.K., Holliday, J., Carter, B., **Barbeau, D.** 2016, The southern Appalachian terrane mosaic: an unresolved custody battle, Geological Society of America Abstracts with Programs, Vol. 48, No. 3 doi: 10.1130/abs/2016SE-273747
- *Gomes, S., Weislogel, A., **Barbeau, D.**, Robinson, D., 2016, Neoproterozoic provenance of the Early Jurassic Norphlet Formation, Mobile Bay, Alabama: Mexican and South American connections through continental-scale paleodrainage system, Geological Society of America Abstracts with Programs. Vol. 48, No. 7, doi: 10.1130/abs/2016AM-285447
- *Ames, C., Leier, A., Leckie, D.A., Chesley, J., Heinze, C., Rubino, E., **Barbeau, D.**, 2016, The Canadian High Plains and the Northern Rockies: a detrital zircon provenance study, Geological Society of America Abstracts with Programs. Vol. 48, No. 3, doi: 10.1130/abs/2016SE-273625
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- *Wiley, K., Weislogel, A., Bowman, S., Gomes, S.W., Robinson, D.M. and **Barbeau, D.**, 2016, Facies and Provenance of Basal Clastics in the Eastern Gulf of Mexico, American Association of Petroleum Geologists Annual Convention & Exhibition, AAPG Datapages.
- *Gomes, S.W., Weislogel, A., Robinson, D., and **Barbeau, D.**, 2016, Temporal Variation in U-Pb Geochronology of the Norphlet Formation in the Eastern Gulf of Mexico, Mobile Bay: Connection Between Sediment Provenance and Reservoir Quality, American Association of Petroleum Geologists Annual Convention & Exhibition, AAPG Datapages.

DAVID L. BARBEAU, JR.

SCHOOL OF THE EARTH, OCEAN & ENVIRONMENT
UNIVERSITY OF SOUTH CAROLINA

- * *Essex, C., Robinson, D.M., Weislogel, A., and Barbeau, D.*, 2016, Regional Correlation of Facies Within the Haynesville Formation From Onshore Alabama: Analysis and Implications for Provenance and Paleo-Structure, American Association of Petroleum Geologists Annual Convention & Exhibition, AAPG Datapages.
- * *Ames, C., Leier, A., Leckie D.A., Heinze, C., Chesley, J., Rubino, E., and Barbeau, D.L.*, 2015, Detrital zircon provenance of Paleogene-Neogene fluvial conglomerates and the Cenozoic Evolution of the Northern Rockies, and southern Canadian Plains, Geological Society of America Abstracts with Programs, 47, 363.
- * *Oliver, B., Barbeau, D., Davis, J.T., Hemming, S.R., Adams, E.P., Gehrels, G.*, 2013, Correlation of detrital zircon provenance trends with paleoclimate proxies to assess potential Late Cretaceous glaciation of Antarctica, Geological Society of America Abstracts with Programs, 45, 745.
- * *Wright, M., Barbeau, D., Scher, H., Oliver, B., Hemming, S.*, 2013, Testing the Cretaceous Glaciation Hypothesis utilizing Nd isotopes of Southern Ocean sediment, AGU Fall Meeting Abstracts, A1865
- * *Pratt, J., Barbeau, D., Emran, A.*, 2013, Evaluating Rifean corridor closure using detrital zircon sediment provenance of the Taza-Guercif basin, Morocco, AGU Fall Meeting Abstracts, 2548.
- § *Barbeau, D.L.*, 2013, Sedimentary provenance of the Larsen and Magallanes basins, GEOSUR 2013
- * *Oliver, B.P., Barbeau, D.L., and Hemming, S.R.*, 2011, Proposed research: Does the sediment mass balance of the Larsen basin, Antarctic Peninsula, support ephemeral Cretaceous glaciation?, Geological Society of America Abstracts with Programs, 43, 283.
- Barbeau, D.L.*, 2011, Sedimentary Connections and Ocean Thoroughfare In the Antarctic: Constraints on the closing of the Scotia Portal and the opening of Drake Passage, 11th International Symposium on Antarctic Earth Sciences, Programme and Abstracts, 264.
- * *Davis, J.T., Barbeau, D.L., Zahid, K.M., Murray, K.E., and Gehrels, G.E.*, 2010, Comparative U/Pb detrital zircon analysis of southern South America and the northern Antarctic Peninsula, Geological Society of America Abstracts with Programs, 42, 128.
- * *Barbeau, D.L., Zahid, K.M., Gombosi D.J., Guenther W.R., Scher, H.D., Bizimis, M., Davis, J.T., Brown, A.R., Gehrels, G.E., Reiners, P.W., Thomson, S.N. & Garver, J.I.*, 2010, Insight into Drake Passage Opening from Sediment Provenance and Thermochronology, Goldschmidt Conference Abstracts 2010, A51.
- * *Barbeau, D.L.*, 2010, New constraints on Drake Passage opening from continental tectonic proxies, International Polar Year Oslo Science Conference, Oslo, Norway.
- § *Barbeau, D.L.*, 2009, Using detrital geochronology to assess the opening of marine gateways, Geological Society of America Abstracts with Programs, 41, 427.
- Barbeau, D.L., Gombosi, D.J., Guenther, W., Swanson-Hysell, N., Zahid, K.M., Murray, K.E., MacPhee, R.D.E., Scher, H.S., Thunell, R.C., Pusz, A., Davis, J., Reiners, P.*, 2009, Sediment provenance and thermochronology of the margins of Drake Passage, Antarctic Climate Evolution Symposium Abstracts, Granada, Spain.
- § *Barbeau, D.L.*, 2009, Kinematic sequence stratigraphy revisited, American Association of Petroleum Geologists 2009 Annual Convention and Exhibition Abstracts Volume, 18.
- * *Park, H., Barbeau, D.L., Rickenbaker, A., Bachmann-Krug, D., and Gehrels, G.*, 2009, Detrital-zircon geochronology of Appalachian foreland basin strata in the central and southern Appalachians: the changes of sedimentary source from the Taconic through the Alleghanian. Geological Society of America Southeastern Section meeting, Geological Society of America Abstracts with Programs 41, 19.
- § *Barbeau, D.L., Olivero, E.B., Murray, K.E., Zahid, K.M., Swanson-Hysell, N., and Gehrels, G.*, 2008, Detrital-zircon perspective of Antarctic Peninsula - South America kinematics & paleogeography – results from SCOTIA, Geological Society of America Abstracts with Programs, 40, 330.
- * *Gombosi, D.J., Barbeau, D.L., and Kendall, C.G.*, 2008. Foreland Basin Fills: What Controls Carbonate Versus Clastic Accumulation?, American Association of Petroleum Geologists 2008 Annual Convention and Exhibition Abstracts Volume, 17, 68.
- * *Bell, E.A., Barbeau, D.L., Tappa, E. and Baresch, E.*, 2008, Geochemical determination of calcareous gravel provenance by analogy to archeological marble provenance studies Geological Society of America Abstracts with Programs, 40, 395.
- * *Gombosi, D.J., Barbeau, D.L., Garver, J., and Reiners, P.*, 2008, Cenozoic thermal evolution of the Darwin Complex and related terranes in Tierra Del Fuego, Geological Society of America Abstracts with Programs, 40, 510.
- * *Zahid, K., Scher, H., Ducea, M.N., and Barbeau, D.L.*, 2008, Nd isotope provenance signatures from the Atlantic coast of Tierra del Fuego, Geological Society of America Abstracts with Programs, 40, 156.

DAVID L. BARBEAU, JR.

SCHOOL OF THE EARTH, OCEAN & ENVIRONMENT
UNIVERSITY OF SOUTH CAROLINA

- **Guenther, W.R., Reiners, P., Thomson, S., and Barbeau, D.L., 2008, Cenozoic exhumation of the western Antarctic Peninsula: thermochronologic results from northern and southern Graham Land, Geological Society of America Abstracts with Programs, 40, 331.*
- **Gombosi, D.J., Barbeau, D.L., Hourigan, J.K., and Zhao, D., Microprobe Assisted Zoned Alpha Corrections in Zircon (U-Th)/He Chronology, FT2008 abstract volume.*
- **Gombosi, D.J., and Barbeau, D.L., 2008, Integration of hinterland low-temperature thermochronology with flexural modeling: A new tool for foreland basin analysis: AAPG Student Expo abstract volume.*
- Barbeau, D.L., Swanson-Hysell N., Olivero E.B., Zahid, K., Gombosi D.J., Murray K.E., Gehrels G.E. and Ducea M.N., 2008, Kinematic history of the Fuegian Andes as indicated by U-Pb detrital-zircon geochronology and rare earth element geochemistry of the Magallanes foreland basin, *Geochimica et Cosmochimica Acta*, 72, A53.**
- **Park, H., Rickenbaker, A, Bachmann-Krug, D., Barbeau, D.L., and Gehrels, G.E., 2008, Detrital-zircon geochronology of Acadian foreland basin strata of West Virginia and Virginia, Geological Society of America Abstracts with Programs, 40, 18.*
- Hames, W., Tull, J., **Barbeau, D., McDonald, W., and Steltenpohl, M., 2007 Laser 40Ar/39Ar ages of muscovite and evidence for Mississippian (Visean) deformation near the thrust front of the southwestern Blue Ridge province, Geological Society of America Abstracts with Programs, 39, 78.**
- ***Barbeau, D.L., Swanson-Hysell, N., Zahid, K.M., and Gehrels, G.E., 2006, Detrital-zircon geochronology of the Fuegian Andes, Geological Society of America Abstracts with Programs, 38, 368.**
- **Bell, E., Barbeau, D.L., Tappa, E., and Baresch, E., 2006, Calcarenite provenance by stable isotope geochemistry, Geological Society of America Abstracts with Programs, 38, 371.*
- **Park, H., Barbeau, D.L., and Kendall, C.G. St. C., 2006, Application of kinematic sequence stratigraphy to growth strata associated with a listric growth fault in the South Marsh Island region, offshore Louisiana, Geological Society of America Abstracts with Programs, 38, 145.*
- **Zahid, K.M., Barbeau, D.L., and Swanson-Hysell, N., 2006, SEM-EDS heavy mineral provenance analysis of Magallanes foreland basin sandstones, Geological Society of America Abstracts with Programs, 38, 368.*
- §**Barbeau, D.L., Russell, M., Brenneman, E., and Gehrels, G., 2006, Detrital-zircon geochronology of the southern Appalachian foreland basin, Geological Society of America Abstracts with Programs, 38, 6.**
- **Bell, E., Mitchell, C., Barbeau, D., Tappa, E., and Schaal, E., 2005, Innovative application of geochemistry to provenance, Ebro Basin, Spain, Geological Society of America Abstracts with Programs, 37, 560.*
- ***Barbeau, D.L., Swanson-Hysell, N., Schaal, E., Stalker, K., DeCelles, P.G., Kirschvink, J.L., and Haileab, B., 2005, Kinematic evolution of the southern Ebro foreland basin system, American Association of Petroleum Geologists Annual Meeting CD-ROM.**
- Kidder, S., Ducea, M., Barbeau, D.L. and Gehrels, G., 2004. The Cretaceous Salinian continental arc: Overview and new advances, Geological Society of America Abstracts with Programs, 36, A342.*
- ***Barbeau, D.L., and Geslin, J.K., 2004, Growth strata and Kinematic Sequence Stratigraphy, 32nd International Geological Congress abstract volume, Firenze, Italy.**
- §**Barbeau, D.L., 2003, An overview of kinematic sequence stratigraphy, American Association of Petroleum Geologists, Pacific Section Meeting CD-ROM.**
- Barbeau, D.L. and DeCelles, P.G., 2002, Geometry, chronology and style of ARM foreland and intraforeland basin development: an assessment of a "soft" contractional southern margin of late Paleozoic North America, American Association of Petroleum Geologists, Hedberg Research Conference Program.**
- ***Barbeau, D.L., and Geslin, J.K., 2002, Kinematic sequences and systems tracts: a perspective from growth strata, American Association of Petroleum Geologists, Annual Convention, Official Program, A12.**
- ***Barbeau, D.L., Hamid, T.N. and Geslin, J.K., 2002, Growth strata and fluvial reservoir distribution, American Association of Petroleum Geologists, Annual Convention, Official Program, A12.**
- ***Barbeau, D.L., 2000, Intraforeland flexure in the Ancestral Rocky Mountains, Geological Society of America Abstracts with Programs 32, 466.**
- Barbeau, D.L., 1999, A flexural model for the Paradox Basin, Four Corners' region, USA, Geological Society of America Abstracts with Programs, 31, 239.**

curriculum vitae

DAVID L. BARBEAU, JR.

SCHOOL OF THE EARTH, OCEAN & ENVIRONMENT
UNIVERSITY OF SOUTH CAROLINA

(\$ invited keynote talk; * invited talk)

2023

*The Earth System through the Lens of Geochronology, *Clemson University*

*Probing the Earth System through *in situ* geochronology at CEMS, *University of South Carolina Research Cores Fair*

2021 - 2023

*STEM Research @ USC: Why and How, *University of South Carolina Freshman Fellowship Foundations*

2020

*Zircon Geochronology from Source to Sink, *Coastal Carolina University*

2019

*Zircon Geochronology from Source to Sink, *UNC-Wilmington*

2018

Crystallization and Cooling history of the Antarctic Peninsula magmatic arc, *School of the Earth, Ocean and Environment CEMSinar*

Detrital-zircon geochronology of the Modoc Zone and adjacent rocks, South Carolina, *School of the Earth, Ocean and Environment CEMSinar*

Time from rocks: A hands-on introduction to zircon geochronology, *South Carolina Department of Education*

*Getting Started in STEM Research @ USC, *University of South Carolina Office of Fellowships and Scholar Programs' Sophomore Series panel presentation*

2017

*Scaffolded Constructivist Pedagogy in Geology: An Uncommon Route to Empathy? *USC Center for Teaching Excellence Oktoberbest*

Geology of the Lake Murray Spillway, *Ann Johnson Institute Parents' Weekend field trip*

*Zircons are Forever: Using A Beautiful and Resilient Mineral to Address Important Geologic Problems, *Columbia Gem & Mineral Society*

*Earth Science as Opportunity, *Richland School District Two teacher workshop*

*Getting Started in STEM Research @ USC, *University of South Carolina Office of Fellowships and Scholar Programs' Sophomore Series panel presentation*

*Geologist & Professor, *Logan Elementary Career Day*

2016

*Zircon geochronology: a tool for heavy mineral exploration? *Bureau of Ocean Energy Management and South Carolina Geological Survey*

*What is your Antarctica? *Montessori School of Columbia*

2015

*Thermochronology Workshop (Columbia University/Rutgers University/Stony Brook University), *Columbia University Lamont-Doherty Earth Observatory*

Testing models of arc cyclicity in the northern Antarctic Peninsula through sedimentary detritus, *University of South Carolina Friends of the Solid Earth*

2013

Sediment Provenance, Geochronology & Thermochronology: tools for tectonic & paleoclimate problems, *University of South Carolina CEMSeminar*

Continental drilling of the Cretaceous-Paleogene Larsen basin, *Antarctic Geologic Drilling Workshop, University of Houston*

Selection of a continental drilling site in the James Ross Island region of the Larsen basin, *Antarctic Geologic Drilling Workshop, University of Houston*

*Testing the Cretaceous glaciation hypothesis: a view from Antarctica, *Stony Brook University*

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UNIVERSITY OF SOUTH CAROLINA

*Testing hypotheses of Antarctic glaciation: a perspective from the Peninsula, *University of Rochester*
What is your Antarctica? *Cub Scout Pack 31, Denville, NJ*

2012

Towards constraining the timing & mechanism of Drake Passage opening, *Columbia University Lamont-Doherty Earth Observatory*
Testing the Cretaceous glaciation hypothesis: a perspective from the Larsen basin, Antarctica, *Columbia University Lamont-Doherty Earth Observatory*
*Testing hypotheses of Antarctic glaciation, *Princeton University*

2011

*A Scientific Pub Crawl between the Deep South's Most Famous & Questionable Icehouses, *Central Savannah River Area Geological Society*
*Asking the big questions, *Carolina Leadership Initiative*
*The glaciations of Antarctica, *University of Georgia*
*Testing the gateway hypothesis for Antarctic glaciation, *University of South Carolina STEM 101 seminar*
*Asking the big questions, *Greater Piedmont Chapter of the Explorers Club*

2010

*Has Drake Passage been open since the Paleocene? *Columbia University Lamont-Doherty Earth Observatory*
*Insight into Drake Passage opening from the sediment provenance and thermochronology of its margins, *Columbia University Lamont-Doherty Earth Observatory*
*Testing the gateway hypothesis for Antarctic glaciation, *University of South Carolina STEM 101 seminar*

2009

§Sand grains and rising mountains: testing the gateway hypothesis for Antarctic glaciation, *Central New York Earth Science Symposium, Syracuse University*
*Teaching with teleconnections – A perspective from Antarctica, *University of South Carolina S-STEM initiative*
*Testing the gateway hypothesis for Antarctic glaciation, *University of South Carolina STEM 101 seminar*
*Geological Research in Antarctica: The BAS Sledge Golf expedition of 2008-2009, *University of South Carolina STEM 101 seminar*
*Testing the gateway hypothesis for Antarctic glaciation, *Pennsylvania State University*
*Application of stratigraphic architecture and sediment provenance analysis to tectonostratigraphic problems, *Pennsylvania State University*
*Testing the gateway hypothesis for Antarctic glaciation; *British Antarctic Survey's Rothera Research Station, Antarctica*

2008

*Inguinal hernia repair, benign schwannoma and the medical procrastination of a young male scientist: How Antarctic Earth science changed my life (and could change yours), *University of South Carolina School of Medicine Surgical Grand Rounds*
*When did Drake Passage open? A detrital-zircon perspective of ocean circulation, Antarctic glaciation and faunal interchange, *University of Georgia*
*Earth science research in the International Polar Year, *University of South Carolina STEM101 seminar*
*Testing the polar gateway hypothesis: An integrated record of Drake Passage opening & Antarctic glaciation, *University of South Carolina College of Education summer science institute*
Testing the polar gateway hypothesis: An integrated record of Drake Passage opening & Antarctic glaciation, *University of South Carolina Geological Sciences Brown Bag Seminar*

2007

Place- and Inquiry-based Earth Science Learning and Teaching: a Mini Curriculum for South Carolina Secondary School Teachers & Students, *South Carolina Science Council annual meeting*
*Earth science research in the International Polar Year, *University of South Carolina STEM101 seminar*
*Kinematic history of mountain belts through sediment provenance: Application of detrital-zircon geochronology to the Appalachians and southernmost Andes, *Central Savannah River Area Geological Society*

DAVID L. BARBEAU, JR.

SCHOOL OF THE EARTH, OCEAN & ENVIRONMENT
UNIVERSITY OF SOUTH CAROLINA

2006

- *Detrital-zircon geochronology of the southern Appalachians and southernmost Andes, *University of Florida*
- The Patagonian orocline & Magallanes foreland basin: Meso-Cenozoic tectonic history of the End of the World, *University of South Carolina Geological Sciences Brown Bag Seminar*
- *Sedimentology & stratigraphy of growth structures: Evaluating kinematic & architectural applications, *University of Massachusetts*
- *Applications of sedimentary architecture & composition to foreland basin interpretation, *University of Wyoming*
- *Sedimentology & stratigraphy of growth structures: Evaluating kinematic & architectural applications, *University of Wyoming*

2005

- Innovative application of stable-isotope and ICP-AES geochemistry to provenance problems, *University of South Carolina*

2004

- §Salt tectonic regimes -- the ideal setting for application of kinematic sequence stratigraphy, *Salt Tectonics Symposium, ExxonMobil Exploration Company*.
- *Growth strata and kinematic sequence stratigraphy, *University of North Carolina, Chapel Hill*.
- *Linking tectonics & sedimentation: Application of growth structures to kinematic history analysis, *Carleton College*.
- Stratigraphic architecture of the southern Ebro foreland basin, *University of South Carolina Geological Sciences Brown bag seminar*

2003

- *Growth strata and facies distribution: a leveraged research progress report, *ExxonMobil Upstream Research Company*
- *Stratigraphic cycles in growth strata: Implications for kinematic histories and facies distribution, *University of South Carolina*
- *Stratigraphic cycles in growth strata: Implications for kinematic histories and facies distribution, *Louisiana State University*

2002

- Controls on facies, parasequence and sequence distribution: Oso Field, Nigeria, *ExxonMobil Production Company*;
- Influence of syntectonic deltaic deposition on chronostratigraphy and reservoir distribution: Nigeria, *ExxonMobil Production Company*

2001

- Growth structures and fluvial reservoir distribution, *ExxonMobil Upstream Research Company*

2000

- Salt-tectonic growth structures and reservoir distribution, *ExxonMobil Upstream Research Company*

HONORS AND AWARDS

| | |
|--|-----------|
| Geological Society of America Exceptional Reviewer, <i>Lithosphere</i> | 2018 |
| Pearce Faculty Fellow, South Carolina Honors College | 2017-2023 |
| Michael J. Mungo Award for Outstanding Undergraduate Teaching | 2017 |
| Biography listed in <i>American Men and Women of Science</i> | 2017 |
| Antarctic Service Medal of the United States of America | 2012 |
| Biography listed in <i>Who's Who in America</i> | 2009-? |
| Mortar Board Excellence in Teaching Award | 2009 |
| International Polar Year National Science Foundation Principal Investigator | 2007 |
| Two Thumbs Up Award, University of South Carolina Disability Services | 2004 |
| Fluvial Sedimentology Award, Society for Sedimentary Geology, Rocky Mountain Section | 2001 |
| Women's Auxiliary to the American Institute of Mining and Engineering Scholarship Loan | 1999 |

DAVID L. BARBEAU, JR.

SCHOOL OF THE EARTH, OCEAN & ENVIRONMENT
UNIVERSITY OF SOUTH CAROLINA

Wesley Peirce Graduate Scholarship, The University of Arizona 1999
Four Corners Geological Society Master's Thesis Grant 1999
Eagle Scout, Boy Scouts of America, Old Colony Council, Marshfield, Massachusetts 1992

PROFESSIONAL ACTIVITIES

Editorial Board, *Geology* 2013-2015, 2018-2020
Proposal reviewer for 13 funding agencies: 2004-present
NSF Tectonics, NSF Sedimentary Geology & Paleobiology, NSF Antarctic Earth Sciences, NSF Frontiers in Earth-Systems Dynamics, NSF Antarctic Glaciology, NSF CAREER, INACH (Chilean Antarctic Survey), ACS Petroleum Research Fund, CRDF (Russia), Natural Environment Research Council (UK), Deutsche Forschungsgemeinschaft (Germany), Israel Science Foundation, National Geographic Society
Manuscript reviewer for 34 journals or books: 2002-present
Geology, Tectonics, Tectonophysics, Basin Research, Geological Society of America Bulletin, Sedimentology, Antarctic Science, Geological Society of America Special Paper, American Association of Petroleum Geologists Bulletin, American Association of Petroleum Geologists Memoir, Global & Planetary Change, GEOSPHERE, Geological Magazine, Gondwana Research, Journal of Asian Earth Sciences, Journal of South American Earth Sciences, Journal of Sedimentary Research, Geochimica Cosmochimica Acta, Journal of the Geological Society, GSA Books, Terra Nova, Cretaceous Research, Chemical Geology, Marine & Petroleum Geology, Lithosphere, Precambrian Geology, Geoscience Frontiers, American Mineralogist, Journal of Geology, Geophysical Research Letters, Nature Scientific Reports, Crystals, Geosciences, Nature Communications Earth & Environment,
School of the Earth, Ocean, and Environment Geology & Geophysics Program Lead 2022-present
College of Arts & Sciences Climates Theme Semester Committee 2021
South Carolina Honors College Top Scholars Admissions & Awards Interviewer 2019, 2021, 2023
School of the Earth, Ocean, and Environment Awards Committee 2019
Session Convener: Geological Society of America regional meeting, Charleston 2019
School of the Earth, Ocean, and Environment Programs Faculty Advisory Committee 2018-2022
Michael T. Mungo Outstanding Undergraduate Teaching Award Committee 2018-2021
Rock Preparation Facility Manager, School of the Earth, Ocean & Environment 2014-present
University of South Carolina Goldwater Scholarship Committee 2013-present
Center for Elemental Mass Spectrometry Oversight & Steering Group 2013-present
Undergraduate Committee, School of the Earth, Ocean & Environment 2004-05, '07-10, '15-'21
Tenure & Promotion Committee, School of the Earth, Ocean & Environment 2011-present
University of South Carolina Top Scholars Mentor 2017-2019
Seminar Coordinator, Department of Earth & Ocean Sciences 2010-2012, 2013-2015
Graduate Committee, Department of Earth & Ocean Sciences 2004-2007, 2010-2015, 2019-2023
Peer Review Committee, Department of Earth & Ocean Sciences 2005, 2007, 2009, 2014
Faculty and staff search committees, Department of Earth & Ocean Sciences 2007, 2012, 2013, 2015, 2018-9
Session Convener: Geological Society of America national meeting, Denver 2013
Convener: Austral Portals NSF Workshop: Plate tectonics, paleogeography & biogeography 2010
Consultant for Stoney Forensic, Inc. 2007-2010
Faculty Senator, University of South Carolina 2006-2009
Organizing Committee: Goldschmidt Conference, Geochemical Society, Vancouver 2008
Session Convener: Goldschmidt Conference, Geochemical Society, Vancouver 2008
Center for Science Education Director search committee, University of South Carolina 2008
AAPG Student Chapter Faculty Advisor, University of South Carolina 2004-2008
NSF Office of Polar Programs Antarctic Earth Sciences panel 2007
Chair's Advisory Council, University of South Carolina Department of Geological Sciences 2004-2005
Session Convener: Geological Society of America national meeting, Salt Lake City 2005
Session Convener: American Association of Petroleum Geologists Pacific Section meeting, Long Beach 2003
Conference Convener: American Association of Petroleum Geologists Hedberg Research Conference, Vail 2002

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| | |
|---|-----------|
| President, Sigma Gamma Epsilon, The University of Arizona Department of Geosciences | 2001 |
| Graduate Student Representative to Faculty, The University of Arizona Department of Geosciences | 2000-2001 |
| Session Convener: Geological Society of America national meeting, Reno | 2000 |
| Chair: GeoDaze Geosciences Symposium, The University of Arizona Department of Geosciences | 1998-1999 |
| Student Departmental Advisor and Geology Forum Member, Carleton College Geology Department | 1994-1997 |

MEDIA PRINT

Garnet & Black, Kansas City Star, Reuters, Antarctic Sun, Carleton College's The Voice, USC's Breakthrough, International Polar Year 2007-2009 webpage, USC Times, USC News, LiveScience, San Antonio News Express

RADIO

Public Radio International's *The World*, eTV Radio's *Carolina Minute*

TV:

WSPA (CBS), Reuters, South Carolina Education Lottery commercial

STUDENTS

SUPERVISION, ADVISING AND MENTORING

UNIVERSITY OF SOUTH CAROLINA

Graduate students

Meredith Love (M.S., expected 2024, *primary advisor*)
Lancen Tully (Ph.D., expected 2024, *primary advisor*)
Charles (Andy) Wykel (M.S., 2022, *primary advisor*)
Jonathan Pratt (Ph.D., 2015, *primary advisor*)
Tyler Izykowski (M.S. 2013, *primary advisor*)
Amanda Savrda (M.S., 2011, *primary advisor*)
Khandaker Zahid (Ph.D., 2010, *primary advisor*)
Hyunmee Park (Ph.D., 2010, *primary advisor*)
David Gombosi (M.S., 2008, *primary advisor*)
Elizabeth Baresch (M.S., 2006, *primary advisor*)
Marc Russell (M.S., 2006, *primary advisor*)

Undergraduate research mentees, collaborators & assistants (geology majors unless indicated)

Jordan Jeffreys (B.S., expected 2026)
Harrison Ray (B.S., expected 2024)
Kelsey Stillwater (B.S., expected 2024)
Avery Williams (B.S., South Carolina Honors College, expected 2024)
Lauren Dombey (B.S., expected 2024)
Helena Hubbard (B.S., South Carolina Honors College, 2023)
Hayden Best (B.S. in Anthropology, expected 2023)
Al Eichbauer (B.S., 2022)
Ben Hurley (B.S. in Marine Science, South Carolina Honors College, 2022)
Brian Lockerbie (B.S., 2021)
Nicholas Mitchell (B.S., South Carolina Honors College, 2020)
Nick Peraino (B.S. in Mechanical Engineering, South Carolina Honors College, 2020)
Joshua McTeer (B.S., 2018)
Meredith Love (B.S., 2017)
Tobey Wilson (B.S., 2017)
Justin Holliday (B.S., 2016)
Jason Titus (B.S., 2014)
Justin Baumgartner (B.S. in Computer Science, South Carolina Honors College, 2014)

curriculum vitae

DAVID L. BARBEAU, JR.

SCHOOL OF THE EARTH, OCEAN & ENVIRONMENT
UNIVERSITY OF SOUTH CAROLINA

Ryan McGraw (B.S. in Computer Science, South Carolina Honors College, 2014)
Logan Hood (B.S. in Computer Science, South Carolina Honors College, 2014)
Marissa Wright (B.S., 2013)
Erin Adams (B.S., 2013)
Brock Weyman (B.S., 2013)
Alex Brown (B.S., 2010)
Denise Bachmann-Krug (B.S., 2010)
Alan Rickenbaker (B.S., 2010)
Justin Davis (B.S., 2009)
Christiann Boutwell (B.S., 2009)
Susan Herron (B.S., 2009)
Robb Hawfield (B.S., 2009)
Elizabeth Ann Bell (B.S., South Carolina Honors College, 2008)
Christopher Mitchell (B.S., South Carolina Honors College, 2005)

EXTERNAL SUPERVISION, ADVISING, MENTORING, COLLABORATION AND EVALUATION

Graduate student advisees, mentees, examinees & research collaborators:

Justin Futrell (M.S., UNC-Wilmington)
Emma Krueger (Ph.D., Clemson)
Julia Corradino (M.S., Clemson)
Austin Bruner (B.S., Clemson)
Jack Nolan (M.S., UNC-Wilmington)
Patrick Finnerty (M.S., UNC-Wilmington)
Paula Castillo Gonzalez (Ph.D., Australian National University)
Jonathan Rivas (M.S., UNC-Wilmington)
Hannah Hilbert-Wolf, (Ph.D., James Cook University)
W. Patrick Frier (M.S., West Virginia)
Sonnet Gomes (Ph.D., West Virginia)
Kory Wiley (M.S., West Virginia)
Caleb Essex (M.S., Alabama)
Kendra Murray (Ph.D., Arizona)
Elizabeth Pierce (Ph.D., Columbia LDEO)
Nick Swanson-Hysell (B.A., Carleton College)
Willy Guenthner (M.S., Arizona)
Rasha R. Al-Mraikhi (M.S., Kuwait University)
Rachael Czechowskyj (M.S., Alabama)

Undergraduate advisees, mentees & research collaborators (Carleton College):

Austin Sorscher (B.A., 2019)
Daniel Shapiro (B.A., 2007)
Ellen Root (B.A., 2007)
Ellen Schaal (B.A., 2005)
Nick Swanson-Hysell (B.A., 2005)
Katherine Stalker (B.A., 2005)

COURSES

Field Geology (SPR/SUM 2010-2019, 2021, 2023): Four to seven-week geology field school for undergraduate geology majors from the University of South Carolina and University of Georgia. Geologic mapping, petroleum systems, GIS, sequence stratigraphy.

Observing the Earth: Geology & the Sense of Place (SPR 2004, FALL 2005-2011, 2014, 2016, 2018, 2022): Field-based, hands-on, undergraduate honors and general population introductory Earth science course linking geology to other natural and social sciences via landscape. Designed to recruit and develop prospective geology majors and improve general interest and understanding of the Earth and related sciences.

curriculum vitae

DAVID L. BARBEAU, JR.

SCHOOL OF THE EARTH, OCEAN & ENVIRONMENT
UNIVERSITY OF SOUTH CAROLINA

Stratigraphy and Sedimentary Basins (SPR 2005, 2007, 2009, 2011; FALL 2013, 2015, 2017, 2019, 2021, 2023): Undergraduate core curriculum classroom, laboratory, and field course for geology majors and minors.

Regional Tectonics (FALL 2007, SPR 2010, SPR 2012, SPR 2020): Advanced graduate course on techniques of tectonic analysis.

Sedimentary Basin Analysis (SPR 2006, FALL 2008): Advanced graduate classroom, laboratory, and field course in basin subsidence, accommodation and accumulation processes and products.

Seminar in Tectonophysics (SPR 2007, FALL 2011): Graduate student seminar on compelling topics associated with plate tectonics, sedimentology, and the larger questions that can be addressed using such techniques.

Field Studies in Geology: Spain (SPR 2005), *Costa Rica* (SPR 2007): Undergraduate field course in metamorphic, volcanic, and sedimentary geology and the appreciation of foreign landscapes and cultures.

Seminar in Stratigraphy: Ichnology Short Course (SPR 2005): Field and laboratory graduate and undergraduate course in the identification and application of marine and continental trace fossils to stratigraphic problems.

Earth Science Inquiry-Based Pedagogy for Eighth Grade Teachers (SUM 2006-2008, 2010-2015): Content and pedagogical instruction, demonstration and evaluation of current and future public school teachers. Curriculum development and implementation.

Astronomy Inquiry-Based Pedagogy for High School Teachers (SUM 2010, 2011): Ibid.

Physics Inquiry-Based Pedagogy for High School Teachers (SUM 2006, 2007): Ibid.

Earth Science Field Studies for Eighth Grade Teachers (FALL 2008): Field-based, hands-on course for current South Carolina public secondary school teachers.