

STEPHEN ANDREW LESLIE

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EDUCATION

Ph.D. Geology, The Ohio State University, June 1995

Dissertation: Upper Middle Ordovician conodont biofacies distribution patterns in eastern North America and northwestern Europe: Evaluations using the Deicke, Millbrig and Kinnekulle K-bentonite beds as time planes. (Stig Bergström, Advisor)

M.S. Geology, University of Idaho, May 1990

Thesis: The Late Cambrian-Middle Ordovician Snow Canyon Formation of the Valmy Group, Northeastern Nevada. (Peter Isaacson, Advisor)

B.S. Geology, Bowling Green State University, May 1988, Cum Laude
Minor in Classical Studies

EMPLOYMENT

2007-present **Department Head and Professor with tenure**, Department of Geology and Environmental Science, James Madison University.

2016 **Interim Associate Dean**, College of Science and Mathematics, James Madison University

2004-2007 **Department Chair**, Department of Earth Sciences, University of Arkansas at Little Rock.

2002-2007 **Acting Director/Director** of the University of Arkansas at Little Rock Master of Science in Integrated Science and Mathematics Program, College of Science and Mathematics

2005 – 2007 **Professor with tenure**, Department of Earth Sciences, University of Arkansas at Little Rock.

2000 -2005 **Associate Professor with tenure**, Department of Earth Sciences, University of Arkansas at Little Rock.

1996 -2000 **Assistant Professor**, Department of Earth Sciences, University of Arkansas at Little Rock.

1995 - 1996 **Postdoctoral Research Scientist** at The Ohio State University.

1995 - 1996 **Lecturer** at Otterbein College.

1995 - 1995 **Lecturer** at The Ohio State Univ.-Marion & Marion Correctional Institution

1994 - 1994 **Lecturer** at The Ohio State Univ.-Marion & Marion Correctional Institution

1993 - 1994 **Doctoral Fellow** at The Ohio State University.

1993 & 1994 **Teaching Assistant** at The Ohio State University, Geology Field camp, Ephraim, Utah.

1991 – pres. **Private Geology Consultant**

1991 - 1993 **Research Assistant** at The Ohio State University.

1991 - 1991 **Exploration Geologist** with Independence Mining Co., Elko, Nevada.

- 1990 - 1991 **Teaching Assistant** at The Ohio State University.
 5/90 - 9/90 **Field Geologist** with the Idaho Geological Survey.
 1989 - 1990 **Teaching Assistant** at the University of Idaho.
 5/89 - 8/89 **Mine Geologist** with Freeport-McMoRan Gold, Elko, NV.
 5/88 - 12/88 **Mine Geologist** with Freeport-McMoRan Gold, Elko, NV.

MILITARY SERVICE

5/85 - 5/93 U.S. Navy Reserve (Honorably Discharged)

AWARDS AND DISTINCTIONS

- Sylvania Schools Distinguished Alumni Hall of Fame, inducted March 17, 2017
- Geological Society of America Fellow, elected 2015
- JMU Impact³ Leadership Program, 2012-13
- UALR Excellence in Research Award, 1st place, 2006
- UALR College of Science and Mathematics Excellence in Research Award, 1st place, 2006
- UALR College of Science and Mathematics Excellence in Teaching Award, 1st place, University-wide finalist, 2001
- UALR College of Science and Mathematics Excellence in Teaching Award, 3rd place, 2000
- Outstanding Senior Ph.D. Student, Spieker Book Award, The Ohio State University, Department of Geological Sciences, 1994.
- Best Student Paper, 27th Annual Meeting of the Pander Society at NCGSA, 1994.
- Shell Doctoral Fellowship, The Ohio State University, 9/93 - 6/94.
- Best Student Paper, 26th Annual Meeting of the Pander Society at NCGSA, 1993.
- Outstanding Student Research Award, The Geological Society of America, 1992.
- Harold T. and Claudia Stearns Scholarship, University of Idaho, 8/89 - 5/90.

UNIVERSITY TEACHING

Physical Geology, Historical Geology, Paleobiology, Geology and Ecology of the Bahamas, Field Geology, Sedimentology and Stratigraphy, Oceanography, Paleocology, Dinosaurs, Invertebrate Paleontology, Geology of Arkansas, Structural Geology, Marine Geology, Science and Society.

FUNDED GRANTS

National Science Foundation Collaborative Research: Testing the Early Late Ordovician Cool Water Hypothesis, 2013-2016. \$307,894, \$70,703 to Leslie (Co-PIs Achim Herrmann, LSU and Ken McLeod, University of Missouri).

National Science Foundation Collaborative Research: Late Ordovician Greenhouse-Icehouse Transition: An integrated stratigraphic and geochemical approach, 2008-2013. \$216,514, \$53,052 to Leslie (Co-PIs Matt Saltzman and Ken Foland, Ohio State University).

Petroleum Research Fund, Collaborative Research: Refining the Ordovician Time Scale - An Integrated Biostratigraphic Approach, 2006-2008. \$50,000, \$18,890 to Leslie (Co-PI D. Goldman, Univ. of Dayton).

National Science Foundation Collaborative Research: Automated Sequencing of the Fossil Record: Improved Methods and insights from Mohawkian (Ordovician) Geochronology, Tephrochronology, & Biostratigraphy, 2005-2009. \$376,201, \$60,106 to Leslie. (CO-PIs S. Samson, Syracuse Univ.; P. Sadler, UC Riverside; C. Mitchell SUNY Buffalo).

National Science Foundation University of Arkansas at Little Rock Science Scholars (USS), 2007-2014. \$579,175 (J. Lanza PI; J. Gaffne, R. Mock, J. Winter all at UALR CO-PIs; *I include only for completeness as I did no work on the project after funding because I left UALR, however as I was a Co-PI on the submission I am listed in the NSF database as an awardee*).

National Science Foundation subcontract through Ohio State for Paleobiology and Taphonomy of Exceptionally Preserved Fossils from Jurassic Lacustrine Deposits, Beardmore Glacier Area, Antarctica, (PI was L.E. Babcock at Ohio State, \$192,057, \$29,203 to Leslie Subcontract), 2003-2005.

SILO Advisory Council Undergraduate Research Fellowship (Mentor for student Lisa Guttery) for Age and depositional Environment of the Middle Ordovician Blakely Sandstone in the Ouachita Mountains of Central Arkansas using Conodont Microfossils, 2002-2003, \$2,650.

UALR Minigrant, Conodont Biostratigraphy of the Sylvan Shale, 2001-2002, \$1,000.

Petroleum Research Fund, Use of conodont graphic correlation to determine Mohawkian and Cincinnati (Ordovician) sea-level changes along the southern margin of the Ozark Dome in north-central Arkansas. 1999-2001, \$25,000.

UALR Curriculum Development Grant to develop a course in Marine Systems Science, 1999-2000, \$3,900.

UALR College of Science and Engineering Technology Professional Travel Grant to present a paper at the International Symposium on the Ordovician System in Prague, Czech Republic, 1999, \$920.00.

SILO Advisory Council Undergraduate Research Fellowship (Mentor for student Seth Young) for Analysis of Possible K-Bentonite Beds in the Ouachita Mountains and Their Potential for Regional Correlation. 1998-99, \$2,567.50.

Arkansas Science and Technology Authority Grant, High-Resolution Conodont Biostratigraphy, Sequence Stratigraphy, and Event Stratigraphy of the Middle Ordovician Joachim Dolomite in the Ozark Region of Northern Arkansas, 1997-1998, \$23,716.

UALR College of Science and Engineering Technology Professional Travel Grant to present a paper at the Working Group on the Ordovician Geology of Baltoscandia, St. Petersburg, Russia, August 10-16, 1997, \$1,300.

UALR Faculty Scholarship Award, High-Resolution Conodont Biostratigraphy, Sequence Stratigraphy, and Event Stratigraphy of the Middle Ordovician Joachim Dolomite in the Ozark Region of Northern Arkansas, 1997-1998, \$5,000.

INVITED LECTURES

- Louisiana State University
- Virginia Tech University
- United States Geological Survey, Reston
- University of Dayton, Department of Geology
- University of Texas at Arlington, Department of Geology
- University of Missouri at Columbia, Department of Geological Sciences
- University of Arkansas at Fayetteville, Department of Geology
- University of Central Arkansas, Department of Biology
- Working Group on Ordovician Geology of Baltoscandia meeting at the All-Russian Geological Research Institute (VSEGEI), St. Petersburg, Russia
- The Audubon Society of Central Arkansas
- Central Arkansas Gem, Mineral and Geology Society
- Society for Mining Metallurgy and Exploration, Arkansas Section Meeting
- Hot Springs Geology Club
- Central Arkansas Gem, Mineral and Geology Society
- Central Arkansas Science Alliance
- The Ohio Rock and Mineral Club
- Otterbein College, Department of Life and Earth Science

PUBLICATIONS

Books and editorships of published volumes

- 2015 **Leslie, S.A.**, Goldman, D. and Orndorff, R.C., eds, 12th International Symposium on the Ordovician System, Short Papers and Abstracts, Stratigraphy 12(3-4): 288p. <http://dx.doi.org/10.2110/sepmord.015> <https://www.sepm.org/files/SRv13-2-AppA.7t4x4twqrb0enp4m.pdf>
- 2008 Millage, C., Hess, F., Kunze, G., Sharp, L., **Leslie, S.**, Letro, S., and Snow, T. Earth Science: Geology, the Environment, and the Universe, Second Edition (Student Edition) Glencoe/McGraw-Hill, Columbus, OH,
- 2008 Millage, C., Hess, F., Kunze, G., Sharp, L., **Leslie, S.**, Letro, S., and Snow, T. Earth Science: Geology, the Environment, and the Universe, Second Edition (Teacher Edition). Glencoe/McGraw-Hill, Columbus, OH.
- 2001 Millage, C., Hess, F., Kunze, G., Sharp, L., **Leslie, S.**, Letro, S., and Snow, T. Earth Science: Geology, the Environment, and the Universe (Student Edition) Glencoe/McGraw-Hill, Columbus, OH, 970 p.
- 2001 Millage, C., Hess, F., Kunze, G., Sharp, L., **Leslie, S.**, Letro, S., and Snow, T. Earth Science: Geology, the Environment, and the Universe (Teacher Edition). Glencoe/McGraw-Hill, Columbus, OH. 970 p.

Articles in Review or in Press

- (68) 2023 Goldman, D., Leslie, S. A., Liang, Y., and Bergström, S.M. Ordovician Biostratigraphy — Index Fossils, Biozones and Correlation. Geological Society of London. Collection. <https://doi.org/10.6084/m9.figshare.c.6246574.v1>

Articles in Refereed Journals or Edited Volumes

- (67) 2022 Antun, A., and **Leslie, S.A.**, Continuous record of Upper Ordovician (Katian) to lower Silurian (Telychian) global $\delta^{13}\text{C}$ excursions in the Williston Basin. *Terra Nova* <https://doi.org/10.1111/ter.12593>
- (66) 2020 Haynes, J.T., **Leslie, S.A.**, Herrmann, A.D., and Long, N.T., Outlier of Trenton Group limestones (Ordovician) and Clinch Sandstone (Silurian) and associated unconformities in the Tellico-Sevier syncline, Blount County, Tennessee, identified on the basis of conodont biostratigraphy, in Avary, K.L., Hasson, K.O., and Diecchio, R.J., eds., *The Appalachian Geology of John M. Dennison: Rocks, People, and a Few Good Restaurants along the Way: Geological Society of America Special Paper 545*, p. 1–16, [https://doi.org/10.1130/2019.2545\(02\)](https://doi.org/10.1130/2019.2545(02)).
- (65) 2019 Adiatma, Y.D., Matthew R. Saltzman, M.R., Young, S.A., Griffith, E.M., Kozik, N.P., Edwards, C.T., **Leslie, S.A.**, and Bancroft, A.M. *Did early land plants produce a stepwise change in atmospheric oxygen during the late Ordovician (Sandbian ~458Ma)?*, *Palaeogeography, Palaeoclimatology, Palaeoecology*, <https://doi.org/10.1016/j.palaeo.2019.109341>
- (64) 2018 Myrow, P.M., Fike, D.A., Malmskog, E., **Leslie, S.A.**, Singh, B.P., Chaubey, R.S., and Prasad, S.K. Ordovician–Silurian boundary strata, Spiti Valley region of the Indian Himalaya: Record of the latest Ordovician Boda Event *GSA Bulletin* doi:<https://doi.org/10.1130/B31860.1>
- (63) 2017 Quinton, P.C., Law, S., MacLeod, K.G., Herrmann, A.D., Haynes, J.T., and **Leslie, S.A.** Testing the Early Late Ordovician cool-water hypothesis with oxygen isotopes from conodont apatite, *Geological Magazine*, V. 155, pp 1727-174.1 <https://doi.org/10.1017/S0016756817000589>.
- (62) 2017 Myrow, P.M., Martin, E., **Leslie, S.A.**, Macleod, K.G., And Herrmann, A.D. Depositional history, tectonics, and provenance of the Cambrian-Ordovician boundary interval in the western margin of the North China block: Reply, *GSA Bulletin Comment and Reply*, <https://doi.org/10.1130/B31835.1>
- (61) 2017 Wright, Z., Quinton, P.C., Martin, E., **Leslie, S.A.**, Macleod, K.G., and Herrmann, A.D. Neodymium isotope ratios and a positive $\delta^{13}\text{C}$ excursion: interpreting the connection between oceanographic and climate changes during the early Late Ordovician of Laurentia, *Stratigraphy Volume 14*, No. 1-4 pp. 443-456. DOI: [10.29041/strat.14.1-4.443-456](https://doi.org/10.29041/strat.14.1-4.443-456)

- (60) 2017 Myrow, P.M., Chen, J., Snyder, Z., **Leslie, S.A.**, Fike, D.A., Flemming, M., Yuan, J., and Tang, P. Depositional history, tectonics, and provenance of the Cambrian-Ordovician boundary interval in the western margin of the North China block: Reply. *GSA Bulletin (Online Only) – Comment and Reply* <https://doi.org/10.1130/B31835.1>
- (59) 2016 Quinton, P.C., **Leslie, S.A.**, Herrmann, A.D., and MacLeod, K.G. Effects of extraction protocols on the oxygen isotope composition of conodont elements. *Chemical Geology*, Volume 431, p. 36-43. <https://doi.org/10.1016/j.chemgeo.2016.03.023>
- (58) 2016 Young, S.A., Gill, B.C., Edwards, C.T., Saltzman, M.R., and **Leslie, S.A.** Middle–Late Ordovician (Darrivilian–Sandbian) decoupling of global sulfur and carbon cycles: isotopic evidence from eastern and southern Laurentia. *Palaeogeography, Palaeoclimatology, Palaeoecology*, Volume 458, 15 September 2016, Pages 118-132. <https://doi.org/10.1016/j.palaeo.2015.09.040>
- (57) 2016 Quinton, P.C., Herrmann A.D., Leslie, S.A., and MacLeod, K.G., 2015, Carbon cycling across the southern margin of Laurentia during the Late Ordovician. *Palaeogeography, Palaeoclimatology, Palaeoecology*, Volume 458, 15 September 2016, Pages 63-76. doi:[10.1016/j.palaeo.2015.08.020](https://doi.org/10.1016/j.palaeo.2015.08.020)
- (56) 2015 Edwards, C.T. Saltzman, M.R., **Leslie, S.A.**, Bergström, S.M., Sedlacek, Howard, A., Bauer, J.A., and Sweet, W.C. Strontium isotope ($^{87}\text{Sr}/^{86}\text{Sr}$) stratigraphy of Ordovician bulk carbonate: implications for preservation of primary seawater values. *Geological Society of America Bulletin*, 127:1275-1289.
- (55) 2015 Sell, B.K., Samson, S. D., Mitchell, C.E., McLaughlin, P.I., Koenig, A.E., and **Leslie, S.A.** Stratigraphic correlations with trace elements in apatite from Late Ordovician (Sandbian-Katian) K-bentonites of eastern North America. *Geological Society of America Bulletin*, 127:1259-1274.
- (54) 2015 Myrow, P.M, Chen, J., Snyder, Z., **Leslie, S.A.**, Fike, D.A., Flemming, M., Yuan, J., and Tang, P. Depositional history, tectonics, and provenance of the Cambrian–Ordovician boundary interval in the western margin of the North China Block. *Geological Society of America Bulletin*, 127:1174-1193.
- (53) 2015 Carlucci, J.R., Goldman, D., Brett, C.E., Westrop, S.R., and **Leslie, S.A.**, Katian GSSP and Carbonates of the Simpson and Arbuckle Groups in Oklahoma, *Stratigraphy* 12(3-4): 144-202, **S.A. Leslie**, D. Goldman, and R.C Orndorff., eds, 12th International Symposium on the Ordovician System, Short Papers and Abstracts
- (52) 2015 Bergström, S.M. Saltzman, M.R., **Leslie, S.A.**, Young, S.A., and Feretti, A. Trans-Atlantic application of the Baltic Middle and Upper Ordovician carbon isotope zonation. *Estonian Journal of Earth Sciences*, 64 (1): 8-12.
- (51) 2014 Saltzman, M.R., Edwards, C.T., **Leslie, S.A.**, Dwyer, G.S., Bauer, J.A., Repetski, J.E., Harris, A.G., and Bergström, S.M. Calibration of a conodont apatite-based Ordovician $^{87}\text{Sr}/^{86}\text{Sr}$ curve to biostratigraphy and geochronology:

Implications for stratigraphic resolution. Geological Society of America Bulletin, 126:1551-1568.

- (50) 2013 Sell, B, Ainsaar, L., and **Leslie S.A.** , Precise timing of the Late Ordovician (Sandbian) super-eruptions and associated environmental, biological, and climatological events. Journal of the Geological Society, London, 170(5):711-714.
- (49) 2013 Pope, M.C. and **Leslie, S.A.** New data from Late Ordovician-Early Silurian Mount Kindle Formation measured sections, Franklin Mountains and eastern Mackenzie Mountains, Northwest Territories, Geological Survey of Canada, Current Research, 2013-8, 14 pgs.
- (48) 2012 Taylor, J.F., Repetski, J.E., Loch, J.D., and **Leslie, S.A.**, Biostratigraphy and chronostratigraphy of the Cambrian – Ordovician great American carbonate bank, in J. R. Derby, R. D. Fritz, S. A. Longacre, W. A. Morgan, and C. A. Sternbach, eds., The great American carbonate bank: The geology and economic resources of the Cambrian – Ordovician Sauk megasequence of Laurentia: AAPG Memoir 98, p. 15 – 35. [issued Feb.5, 2013]
- (47) 2012 Rosenau, N.A, Herrmann, A.D., **Leslie, S.A.** Conodont apatite $\delta^{18}\text{O}$ values from a platform margin setting, Oklahoma, USA: implications for initiation of Late Ordovician icehouse conditions. Palaeogeography, Palaeoclimatology, Palaeoecology, 315-316:172-180.
- (46) 2011 **Leslie, S.A.**, Saltzman, M.R., Bergström, S.M Repetski, J.E., Howard, A., Seward, A.M. Conodont biostratigraphy and stable isotope stratigraphy across the Knox/Beekmantown unconformity in the central Appalachians. Ordovician of the World, Gutierrez-Marco, J.C, Rabano, I, and Garcia-Bellido, D (eds.), Cuadernos del Museo Geominero, 14, pgs. 301-308.
- (45) 2011 **Leslie, S.A.**, Barrick, J.E, Mosley, J, Bergström, S.M. Conodont biostratigraphy from shallow water upper Ordovician platform rocks in the subsurface of south Texas. Ordovician of the World, Gutierrez-Marco, J.C, Rabano, I, and Garcia-Bellido, D (eds.), Cuadernos del Museo Geominero, 14, pgs. 295-300.
- (44) 2011 Sell, B.K., **Leslie, S.A.**, Maletz, J. New U-Pb zircon data for the GSSP for the base of the Katian in Atoka, Oklahoma, USA and the Darriwilian in Newfoundland, Canada Ordovician of the World, Gutierrez-Marco, J.C, Rabano, I, and Garcia-Bellido, D (eds.), Cuadernos del Museo Geominero, 14, pgs. 537-546.
- (43) 2011 Herrmann, A.D., **Leslie, S.A.**, MacLeod, K.G., Did intense volcanism trigger the first Late Ordovician icehouse? Comment. Geology, Volume 39, p. e237
- (42) 2011 Holm-Denoma, C.A., Hofstra, A.H. Noble, P.J., **Leslie, S.A.** Paleozoic stratigraphy and kinematics of the Roberts Mountains allochthon in the Independence Mountains, northern Nevada Great Basin, Evolution and Metallogeny - Geological Society of Nevada 2010 Symposium, Roger Steininger and William Pennell, Editors, pgs. 1039-1054.

- (41) 2010 Herrmann, A.D., MacLeod, K.G., **Leslie, S.A.** Did a volcanic mega-eruption cause global cooling during the Late Ordovician? *Palaios*, Vol. 25, pgs. 831-836
- (40) 2010 Bergström, S.M. and **Leslie, S.A.** The Ordovician zone index conodont *Amorphognathus ordovicicus* Branson & Mehl, 1933 from its type locality and the evolution of the genus *Amorphognathus* Branson & Mehl. *Journal of Micropalaeontology*, 29:73-80.
- (39) 2009 Boncheva, I., M. C. Goncuoglu, S. A. **Leslie**, I. Lakova, V. Sachanski, G. Saydam, I. Gedik, P. Konigshof. New conodont and palynological data from the Lower Palaeozoic in Northern Camdag, NW Anatolia, Turkey. *Acta Geologica Polonica*, 59:(2)157–171
- (38) 2009 **Leslie, S.A.** Relationships Between Upper Ordovician (Mohawkian) Lithofacies and Conodont Biofacies Distribution Patterns Using K-Bentonite Beds as Time-Planes, Eastern North America and Northwestern Europe. Chapter 3, in *Conodont Studies Commemorating the 150th Anniversary of the First Conodont Paper (Pander, 1856) and the 40th Anniversary of the Pander Society*, edited by D. Jeffrey Over, *Palaeontographica Americana*, (62):23-40.
- (37) 2008 Young, S.A., Saltzman, M.R., Bergström, S.M., **Leslie, S.A.** and Chen Xu. Paired $\delta^{13}\text{C}_{\text{carb}}$ and $\delta^{13}\text{C}_{\text{org}}$ Records of Upper Ordovician (Sandbian–Katian) carbonates in North America and China: Implications for paleoceanographic change. *Palaeogeography, Palaeoclimatology, Palaeoecology*, Volume 270, Issues 1-2, p. 166-178
- (36) 2008 **Leslie, S.A.**, Bergström, S.M. and Huff, W.D. Ordovician K-bentonites Discovered in Oklahoma. *Oklahoma Geology Notes*, V. 68, No. 1 & 2, p. 1-14.
- (35) 2008 Goldman, D., **Leslie, S.A.**, Bergström, S.M., Nölvak, J., Young, S.A., and Finney, S.C. An Ordovician Global Reference Section Recently Selected in Oklahoma. *Oklahoma Geology Notes*, V. 68, No. 1 & 2, p. 15-18
- (34) 2008 Stigall, A.L., Babcock, L.E., Briggs, D.E.G. and **Leslie, S.A.** Taphonomy of Lacustrine Interbeds in the Kirkpatrick Basalt (Jurassic), Antarctica. *Palaios*, 23:344-355
- (33) 2007 Goldman, D., **Leslie S.A.**, Nölvak, J., and Young, S.A. The Global Stratotype Section and Point (GSSP) for the base of the Katian Stage of the Upper Ordovician at Black Knob Ridge, Southeastern Oklahoma, USA. *Episodes*, 30:258-270.
- (32) 2007 **Leslie, S.A.**, and Mitchell, J.C., Removing gold coating from SEM samples, *Palaeontology*, 50: 459–1461.
- (31) 2007 Goldman, D., **Leslie, S.A.**, Nölvak, J., Young, S. The Black Knob Ridge Section, Southeastern Oklahoma, USA: The Global Stratotype-Section and Point

(GSSP) for the base of the Katian Stage of the Upper Ordovician Series" *Acta Palaeontologica Sinica*, 2007, 46, (Suppl.), 144-154

- (30) 2007 Goldman, D., Mitchell, C. E., Maletz, J., Riva, J.F.V., **Leslie, S.A.**, Motz, G. J. Ordovician graptolites and conodonts of the Trail Creek Region of central Idaho: a revised, integrated biostratigraphy, *Acta Palaeontologica Sinica*, 46, (Suppl.), 155-162.
- (29) 2006 Babcock, L.E., Stigall, A.L., **Leslie, S.A.**, Ford, L.A., Elliot, D.H., and Briggs, D.E.G.,. The "Preservation Paradox": Microbes as a Key to Exceptional Fossil Preservation in the Kirkpatrick Basalt (Jurassic), Antarctica. *The Sedimentary Record*, 4(4):4-8.
- (28) 2006 Bergström, S.M., Finney, S.C., Chen Xu, Goldman, D. & **Leslie, S.A.**, Three new Ordovician global stage names. *Lethaia*, 39:287:288.
- (27) 2006 Panchuk, K.M., Holmden, C.E. and **Leslie, S.A.** Local controls on carbon cycling in the Ordovician midcontinent region of North America with implications for carbon isotope secular curves. *Journal of Sedimentary Research*, 76:200-211.
- (26) 2005 **Leslie, S.A.**, and Lehnert, O. Evolution of the Ordovician Conodont Genus *Cahabagnathus* Bergström, 1983. *Journal of Paleontology*, 79(6):1131-1142.
- (25) 2005 **Leslie, S.A.** and Bergström, S.M. Rediscovery of Branson & Mehl's classical Ozora, Missouri conodont locality and the morphology of the Upper Ordovician conodont zone index *Amorphognathus ordovicicus*, p. 39-42. In Ludvigson, G.A., and Bunker, B.G. (eds.) *Facets of the Ordovician Geology of the Upper Mississippi Valley Region*, Iowa Geological Survey Guidebook Series No. 24, p. 38-41.
- (24) 2005 **Leslie, S.A.** and Bergström, S.M. Conodont biostratigraphy across the Turinian-Chatfieldian Stage transition (Late Ordovician, Mohawkian) in the Upper Mississippi Valley, p. 31-34. In Ludvigson, G.A., and Bunker, B.G. (eds.) *Facets of the Ordovician Geology of the Upper Mississippi Valley Region*, Iowa Geological Survey Guidebook Series No. 24, p. 30-33.
- (23) 2005 Karam, P.A. and **Leslie, S.A.** Changes In Terrestrial Natural Radiation Levels Over the History of Life on Earth, Naturally Occurring Radiation, The Natural Radiation Environment VII, Radioactivity in the Environment, Volume 7, Elsevier.
- (22) 2005 Lehnert, O., Miller, J.F., **Leslie, S.A.**, Repetski, J.E., and Ethington, R.L. Cambro-Ordovician sea level fluctuations and sequence boundaries: the missing record and the evolution of new taxa. *Special Papers in Palaeontology*, 73:117-134.
- (21) 2005 Eriksson, M., **Leslie, S.A.**, and Bergman, C.F. Mud-Dwelling Jawed Polychaetes From The Upper Sylvan Shale (Upper Ordovician), Oklahoma, USA, *Journal of Paleontology*, 79(3):486-496.

- (20) 2005 Babcock, L.E., Grunow, A.M., Sadowski, G.R., and **Leslie, S.A.** *Corumbella*, An Ediacaran-Grade Organism from the Late Neoproterozoic of Brazil. *Palaeogeography, Palaeoceanography, and Palaeoecology*, 220(1-2):7-18
- (19) 2004 Bergström, S.M., W.D. Huff, M.R., Saltzman, D.R., Kolata, and **S.A. Leslie**. The greatest volcanic Ash Falls in the Phanerozoic: trans-Atlantic relations of the Ordovician Millbrig and Kinnekulle K-bentonites. *The Sedimentary Record*, 2:4-8.
- (18) 2003 **Leslie, S.A.** and S.M. Bergström. Widespread, prolonged late Middle to Late Ordovician upwelling in North America: A proxy record of glaciation?: Comment and Reply, *Geology Forum*, e28-e29.
- (17) 2003 Eriksson, M. and **S.A. Leslie**. Microfossils from the upper Sylvan Shale (Late Ordovician), Oklahoma, USA, p. 295-296 in Albanesi, G.L., Beresi, M.S., and Peralta, S.H. (eds.) *Ordovician from the Andes*. Instituto Superior de Correlación Geológica Insuge, Serie Correlación Geológica, No. 17.
- (16) 2001 Karam, P.A., **S.A. Leslie**, and A. Anbar. The effects of changing atmospheric oxygen concentrations and background radiation levels on radiogenic DNA damage rate. *Health Physics*. 81(5):545-553.
- (15) 2001 Babcock, L.E., W. Zhang, and **S.A. Leslie**. The Chengjiang Biota: record of the Early Cambrian diversification of life and clues to exceptional preservation of fossils. *GSA Today* 11(2):4-9.
- (14) 2000 **Leslie, S.A.**, Mohawkian (Upper Ordovician) conodonts of Eastern North America and Baltoscandia. *Journal of Paleontology* 74(6): 1122–1147.
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- (15) 1997 **Leslie, S.A.** Conodont Apparatus Architecture of *Belodina compressa* based on fused clusters from the Middle Ordovician (Turinian) Plattin Limestone of Missouri and Iowa. GSA Abstracts with Programs, South-Central Section, 29(2):20.
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- (13) 1996 Karam, P.A., and **Leslie, S.A.** Is potassium the spring for the molecular clock?: effects of variations in K-40 radiation levels through geologic time on evolution. GSA Abstracts with Programs, Annual Meeting 28(7):A297.
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- (3) 1992 Bergström, S.M., **S.A. Leslie**, D.R. Kolata, and W.D. Huff. Distribution of marine fossils in the Millbrig-"Big Bentonite" interval in the Middle Ordovician of Europe and North America: No evidence of a faunal extinction event caused by a gigantic ash fall. GSA Abstracts with Programs, Annual Meeting 24(7):197.
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- (1) 1990 **Leslie, S.A.**, P.E. Isaacson, and W.L. Weideman. Preliminary Stratigraphy, Paleontology, and Greenstone Geochemistry of the Snow Canyon Formation

of the Valmy Group, northeastern Nevada. GSA Abstracts with Programs, 22(6):19.

Articles with students in non-refereed publications

- (4) 2004 Guttery, L.C. and **S.A. Leslie**. Age and Depositional Environment of the Middle Ordovician Blakely Sandstone in the Ouachita Mountains of Central Arkansas Using Conodont Microfossils. Proceeding Journal of the Arkansas Undergraduate Research Conference: 43-47.
- (3) 1999 Young, S.A. and **S.A. Leslie**. The search for K-bentonite beds in Arkansas and their potential for regional correlation. Proceeding Journal of the Arkansas Undergraduate Research Conference and Space Grant Symposium: 231-234.
- (2) 1998 Beland, P.E. and **S.A. Leslie**. Conodont Biostratigraphy of the Middle Ordovician Joachim Dolomite of North-Central Arkansas. Proceeding Journal of the Fifth Annual (Arkansas) Undergraduate Research Conference: 13-15.
- (1) 1998 Clegg-Scala, C. and **S.A. Leslie**. Lithofacies Analysis the Middle Ordovician Joachim Dolomite of North-Central Arkansas. Proceeding Journal of the Fifth Annual (Arkansas) Undergraduate Research Conference: 31-36.

Proprietary Reports

15 reports to Cameco, Inc. on age, stratigraphy, tectonic setting and thermal maturation of Paleozoic strata for the REN project, Nevada.

13 reports to Independence Mining Company, Inc. on age, stratigraphy, tectonic setting and thermal maturation of Paleozoic strata of the Independence Mountains, Elko County Nevada.

2 reports to Hunsaker, Inc. on the on age, stratigraphy, and thermal maturation of Paleozoic samples for northeastern Nevada.

2 reports to Alligator Ridge Exploration, Placer Dome U.S. Inc. on age, stratigraphy and thermal maturation of Early Mississippian strata of the southern Ruby Mountains, Elko and White Pine counties, Nevada.

1 report to Orvana Resources on age and thermal maturation of Ordovician and Pennsylvanian strata in northeastern Nevada.

SELECTED DEPARTMENT, COLLEGE, AND UNIVERSITY COMMITTEES

Major University-wide Committees Assignments

- Academic Affairs Strategic Planning Task Force 2018-2020
- JMU ACT/SAT Committee, 2015-16
- JMU Radiation Safety Committee, Chair 2014-2015.
- JMU Schedule of Classes Committee, 2015.
- JMU Restricted Programs Advisory Committee, 2015.
- JMU A Team (Associate Deans and Associate Directors), 2015.
- JMU Philosophy and Religion Academic Program Review committee chair, 2015
- JMU COACHE Task Force, 2012-13

- JMU University Advising Academic Program Review committee, 2012-13
- JMU Institute for Energy and Environmental Research (IEER) Steering Committee, 2010-12
- JMU STEM Retention Committee, 2010-11
- JMU New College Task Force, 2009-2010
- JMU Executive Committee Member for Environmental Minors, 2008-present
- JMU Chair, Environmental Science Minor Committee, 2008
- UALR Campus Campaign Steering Committee, 2005- 2007
- UALR Faculty Handbook Review Committee, 2005- 2006
- UALR Faculty Senate, 2003-2007
- UALR Athletics Committee, 2004-5
- UALR Provost Assessment Advisory Group, Member, 2000-2002
- UALR College Core Committee, Member 2000 – 2002
- UALR College of Science and Mathematics Dean Search Committee, 1999-2000
- UALR Graduate Council, Member, 1999-2002
- North-Central Self Study Committee on Assessment of Student Academic Achievement, Member, 1999
- UALR Core Assessment Committee, Member and Group Chair, 1997-1999

Major College-wide Committee Assignments

- JMU Madison Awards for Academic Excellence and Second Century Scholar Scholarships, CSM College Chair 2015
- Faculty Assistance Committee, Chair, 2015-16
- College Choices Presentations 2011-2015,
- JMU Chair, College of Science and Mathematics Biology Department Head Search Committee, 2010-11
- UALR College Assembly President, 2005-2006
- UALR Noyce Scholarship Committee, 2005-2006.
- UALR Strategic Planning Committee, 2002-2003
- UALR Program Assessment Review Committee, Chair 2000-2002, Member 1998, 1999
- UALR Curriculum Committee, Secretary, 1996-2001
- UALR Research Space Committee, Member, 1997-1998

ADMINISTRATIVE DUTIES OTHER THAN COMMITTEE WORK

- Faculty advisor for the UALR Geology Club, 1996-2001
- Management of the UALR Department of Earth Sciences web page, 1996-2001
- UALR Library Liaison, 1996-2004

SELECTED PROFESSIONAL ACTIVITIES

- ***Invited Seminar Facilitator*** for the *Council of Colleges of Arts and Sciences Seminar* for Department Chairs/Heads: February 2015, Alexandria, VA; October 2015, San Diego, CA.
- ***Associate Editor*** *Journal of Paleontology*, 2003-05, 2005-07, 2007-09, 2009-11, 2011-13, 2013-15, 2015-2017, 2017-2019, 2019-pres.
- ***Voting Member*** (2008-present) of the ICS Subcommittee on Ordovician Stratigraphy ***Corresponding member***, 1999-2008,

- **Chair and Host of International Symposium on the Ordovician System meeting** held at JMU June, 2015
- **Founding Co-editor** of The Sedimentary Record, SEPM Society for Sedimentary Geology, 2003-2006.
- **Guest Editor-in-Chief** for *Stratigraphy* Theme Issue of invited papers from the 12th ISOS meeting on The Ordovician System
- **Board Member** on the Arkansas State Board of Registration for Professional Geologists, 2005-2007. (**Vice Chair 2005-2006, Chair by Governor appointment 2006-2007**)
- **Paleontology Councilor** for SEPM Society for Sedimentary Geology, 2004-2005
- **Workshop Organizer** for the 3rd International Palaeontological Congress: How conodonts lived and ate: food processing functions of conodont elements.
- **Workshop Co-leader** at the Virginia State Teachers Conference – Professional Development Institute (with Chris Kaznosky) 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016.
- **Management Board Member**, Geological Society of America South-Central Section, 1998 – 2000. **Board Member-at-Large**, 2006-2007.
- **Local Committee Chair** that organized the Arkansas Academy of Science's 86th Annual Meeting at the University of Arkansas at Little Rock. April 5-6, 2002
- **Manuscript reviewer** (e.g., Geological Magazine; GSA Special Papers; GSA Bulletin; Geology; Journal of Paleontology; Palaeontology, Palaeogeography, Palaeoceanography, and Palaeoecology; Journal of Geoscience Education, GFF, Ameghiniana)
- **Grant Reviewer** (National Science Foundation; American Chemical Society-Petroleum Research Fund; AAPG student grants; GSA student grants)
- **Textbook reviewer** for "An Introduction to Dinosaurs," Addison Wesley/Pearson Ed., 2001 and Blackwell Science, 1999.
- Earth Sciences **Advisory Board Member** for Science in Dispute, a 3-part book series that contains pro/con essays about controversial or disputed topics in science, 2001
- Pander Society Representative to the Association of North American Paleontological Societies, 1998-2001.
- **Mentor** for the Science Teachers Research Involvement for Vital Education (STRIVE) program, 1999.
- **Mentor** for the Ronald E. McNair Scholars Program, 1998, 1999.
- **Session Chairperson over 20 times 1993-present**, Geological Society of America
- **Meeting Coordinator/Organizer** for the 3rd Annual Tri-City Paleontology Conference, Columbus, Ohio, 1994.

STUDENTS SUPERVISED

Undergraduate Student Research Supervised

Elle Derwent	Macrofossils from the Mt. Kindle Formation, Northwest Territories, Canada, 2015-present
Brendon Euker	Using oxygen and carbon isotopes and conodont biostratigraphy to assess paleoclimate of the GICE and HICE intervals Late Ordovician, Siljan, Sweden. 2014-present
Stacey Law	Using oxygen and carbon isotopes and conodont biostratigraphy to assess paleoclimate of the GICE interval, Late Ordovician, Gadsden, Alabama. 2014-present

Holly Doherty	Upper Reedsville Shale, Germany Valley, WV. 2014-15
Kattie Meierdiercks	Conodont biostratigraphy and paleoclimatology of the GICE interval, Late Ordovician, Tidwell Hollow, Alabama 2013-15
Jason Booker	Conodont biostratigraphy of the Oranda-Martinsburg succession in Woodstock, VA, 2013-14
Kimberly Mervine	Dapingian-Sandbian Ordovician conodont biostratigraphy of Inner Mongolia, 2013-14
Adriane Lam	Planktic foram biostratigraphy and paleoclimatic interpretations of Holocene- Late Pleistocene USGS Core MD02-2535, Tunica Mound, Gulf of Mexico, 2011-12 (with Dr. Kristen St. John)
Phil Duntemann	Late Ordovician to Early Silurian rocks from the Northwest Territories, Canada, 2010-12
Adam Robinnette	Planktonic foraminifera biostratigraphy & paleoenvironmental interpretation of the upper sedimentary section from a sediment core, Kane Spur, Gulf of Mexico, 2011-12 (with Dr. Kristen St. John)
Adam Roddy	Conodont biostratigraphy of the Oranda-Martinsburg transition, Woodstock, VA, 2009-2010
Allison Seward	Conodont biostratigraphy and chemostratigraphy of the Lenoir Limestone -Athens Shale transition in Alabama, 2009-2010
Richie Blessing	Conodont biostratigraphy and chemostratigraphy of the Beekmantown-New Market contact near Strasburg, VA, 2009-2010
David Craven	Sedimentology for Several Hypersaline Lakes of San Salvador, 2009-2010 (REU at Univ. of Akron)
Ian Knoerl	Conodont lab methods, 2009-2010
Michael Tracy	Conodont lab methods, 2008-2009
Drew Hawkins	Conodont biostratigraphy of Dolly Ridge, WV, 2008-2009
Lisa DeRose	Conodonts in deep-water siliciclastics. 2008-2009
Nick Rosenau	Late Ordovician oxygen isotope chemostratigraphy, 2006-2007
Jonathan Skyles	Conodonts in deep-water siliciclastics, 2006-2007
Joshua Blackstock	Facies interpretation of the Clifty Sandstone, 2006-2007
Tina South	Teaching the Geology of Arkansas, 2006
Brandy Rakes	The Upper Ordovician GSSP site at Black Knob Ridge, OK 2006
Georgia Birdsall	Fossils of the Mazon Creek Flora 2005
Lisa Guttery	Conodont biostratigraphy of Dolly Ridge, West Virginia, 2004-2005
Lyle Lewis	Conodonts of the Black Knob Ridge Section, Oklahoma, 2004-2005
John Spenser	Paleoflora of Poteau Mt., AR, 2004
Georgia Birdsall	Paleoflora of Poteau Mt., AR, 2004
Lisa Guttery	Conodonts from the Blakely Sandstone, Ouachita Mountains, 2003
Vickie Terry	Geology and micropaleontology of the Brassfield Limestone, 2003
Danny Jimenez	Plant and Insect Fossils from the Green River Formation 2002
Jeremy Gannaway	Plant and Insect Fossils from the Green River Formation 2002
Autumn Fernald	Bivalved arthropods from the Mazon Shale, 2001-2002
Scott Ausbrooks	Angular unconformities in "flat-lying" rocks?, 2000-2001
Leah Lucio	Laboratory techniques in paleontology, 2000
Joyce Presley	Epibionts on <i>Rugosochonetes chesterensis</i> , 2000
Jonathan Lovett	The Cambrian Explosion and the Burgess Shale, 2000
Seth Young	Upper Middle Ordovician conodont biofacies, 1999-2000
Seth Young	Possible K-bentonite beds in Arkansas, 1999-2000
Dorothy Lakey	Mosasaurs of the Arkadelphia Marl, 1999
Peta Elsen	Dinosaur nesting behavior: a phylogenetic view, 1999

Cathy Clegg-Scala	Carbonate petrography of the Joachim Dolomite, 1998
Stephanie Veach	Chonetid brachiopods from the Pitkin Limestone, 1998
Cathy Clegg-Scala	Carbonate petrography, 1998
Peter Beland	Ordovician conodonts, 1998
Dorothy Lakey	Clasic dikes in Ordovician rocks of northern Arkansas, 1998
Cathy Clegg-Scala	Ordovician conodonts of northern Arkansas, 1997
Peter Beland	Conodonts in the Joachim Dolomite, 1997
Shawn Jackson	Hawaii and global change, 1997

Graduate Students Supervised

Bryan Sell	PhD, 2011, Syracuse University (Committee Member)
Cathy Riley	Conodont biostratigraphy of the Cotter-Powell interval in north-central Arkansas (Spring 2005) MS Integrated Science and Mathematics program, Geology-Biology option. (Advisor)
Dorothy Lakey	A Late Cretaceous (Santonian) <i>Enchodus petrosus</i> from the Marlbrook Formation in Arkadelphia, Arkansas (Fall 2004) MS Integrated Science and Mathematics program, Geology-Biology option. (Advisor)

SOCIETY AFFILIATIONS

- Paleontological Society
- Association for Women Geoscientists
- American Association of Petroleum Geologists
- SEPM Society for Sedimentary Geology
- Geological Society of America
- Geological Society of Washington
- Arkansas Professional Geologist #1803
- Pander Society (conodont micropaleontology society)
- Virginia Association of Science Teachers