

Nicholas B. Sullivan

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[Google Scholar Profile](#)

FIELDS of RESEARCH and ACADEMIC INTERESTS

Sedimentology and Stratigraphy
Cyclostratigraphy and Astrochronology
Critical mineral deposits in sedimentary rocks
Inorganic and stable isotope geochemistry

EDUCATION

University of Wisconsin-Madison

2022: Doctor of Philosophy in Geoscience with a minor in Statistics.

- Dissertation (Adviser – Stephen R. Meyers): *Antarctic ice sheet history, Neogene cyclostratigraphy, and quantitative biostratigraphy in the Southern Ocean*

The University of Cincinnati

2013: Master of Science in Geology.

- Master's Thesis (Adviser – Carlton E. Brett): *Refinements to the Depositional History of Lower Silurian Strata in the Northeastern United States by means of Conodont Biostratigraphy, $\delta^{13}\text{C}$ Chemostratigraphy, Sequence Stratigraphy, and Magnetic Susceptibility*

State University of New York at Geneseo

2010: Bachelor of Arts, with Honors in Geological Sciences and a minor in Mathematics.

- Undergraduate Thesis (Adviser – D. Jeffrey Over): *The Eifelian-Givetian Boundary (Middle Devonian) at Tsakhir, Gobi Altai Region, Southern Mongolia*

EXPERIENCE

Scientific and Teaching Positions

Sept 2024-present: Postdoctoral Scholar. Pennsylvania State University. State College, PA.

Jan 2024-present: Lecturer in Geosciences. Buffalo State University. Buffalo, NY.

Sept 2022 – Dec 2023: Honorary Fellow. University of Wisconsin – Madison. Madison, WI.

June 2014 – July 2017: Geologist at Chemostrat Inc. Houston, TX.

Jan. 2014 – May 2014: Lecturer in Geology at Westminster College. Salt Lake City, UT.

June 2012 - Oct. 2013: Research Assistant at the Geological and Natural History Survey. Madison, WI.

Internships

2021: Intern for the Basin Framework Team / GEMS, Chevron Energy Technology Company. Collaboration with the Eurasia Business Unit. Houston, TX.

2020: Intern for the Basin Framework Team, Chevron Energy Technology Company. Houston, TX.

2009: Undergraduate Researcher for the Keck Geology Consortium Expedition to Shine Jinst, Mongolia

2009: Research Assistant in the Department of Geological Sciences, S.U.N.Y Geneseo. Geneseo, NY.

2008: Geocorps Intern at the Bureau of Land Management, Royal Gorge Field Office. Cañon City, CO.

2007: Lab Assistant at the Paleontological Research Institution. Ithaca, NY.

Graduate Assistantships, Teaching Assistantships, and Academic Tutoring

2017-2018 | 2020-2022: Graduate Assistant, Department of Geosciences, University of Wisconsin.

2018-2020: Graduate Teaching Assistant, Department of Geosciences, University of Wisconsin.

2017-2020: Academic coach for geoscience courses, Division of Diversity, Equality and Educational Achievement (DDEEA) – University of Wisconsin.

2010-2012: Graduate Teaching Assistant in the Department of Geology, University of Cincinnati.

2008-2010: Undergraduate Teaching Assistant in the Department of Geological Sciences, State University of New York at Geneseo.

2009-2010: Advanced Opportunities Placement (AOP) Tutor for Classes in the Department of Geological Sciences, State University of New York at Geneseo

PEER-REVIEWED PUBLICATIONS

- Sullivan, N. B.** & White, T. S. (in review). Lithium in Pennsylvanian Clay Strata from the Appalachian Foreland Basin. *GSA Today*.
- Forsythe, I. J., Brett, C. E., Da Silva, A.-C., & **Sullivan, N. B.** (2026). Orbits, Ice, and Invaders: Cincinnati Strata as an Encoded Record of Earth's Movement Through Space. *Geology*, 54(7), 695–700. 10.1130/G54314.1
- Zhang, L., Algeo, T. J., **Sullivan, N. B.**, Zhao, L., Chen, Z.-Q., Poulton, S. W., Zhang, Z., Lyu, Z., & Li, C. (2026). Testing Early Triassic timescales based on orbital cyclostratigraphy in South China. *GSA Bulletin*. 10.1130/B38969.1
- Patterson, M., Rosenberg, C., Seki, O., Yamamoto, M., Romero, O., Nelissen, M., Sangiorgi, F., Golledge, N., Grant, G., Arnuk, W., Keisling, B., Naish, T., Levy, R., Meyers, S., **Sullivan, N.**, Ash, J., Kulhanek, D., Romans, B., Varela, N., Jones, H., Beny, F., Browne, I., Cortese, G., Cordeiro de Sousa, I., Dodd, J., Esper, O., Gales, J., Harwood, D., Ishino, S., Kim, S., Kim, S., Laberg, J. S., Leckie, R., Müller, J., Shevenell, A., Singh, S., Sugisaki, S., van de Flierdt, T., van Peer, T., Xiao, W., De Santis, L., & McKay, R. (2026). Spatially variable response of Antarctica's ice sheets to orbital forcing during the Pliocene. *Nature Geoscience*. 10.1038/s41561-025-01840-y
- Sullivan, N. B.**, Meyers, S. R., Levy, R. H., McKay, R. M., van de Flierdt, T., Marschalek, J., Perotti, M., Zurli, L., Talarico, F., Harwood, D., De Santis, L., Florindo, F., Naish, T. R., Grand, G. R., Patterson, M. O., & Expedition 374 Scientists. (2025). Obliquity disruption and Antarctic ice sheet dynamics over a 2.4-Myr astronomical grand cycle. *Science Advances*, 11(17), eadl1996, 1–11. 10.1126/sciadv.adl1996
- Sullivan, N. B.**, Meyers, S. R., Levy, R. H., McKay, R. M., Golledge, N. R., & Cortese, G. (2023). Millennial-scale variability of the Antarctic Ice Sheet during the Early Miocene. *Proceedings of the National Academy of Sciences*, 120(39), e2304152120. 10.1073/pnas.2304152120
- Marschalek, J. W., Zurli, L., Talarico, F., van de Flierdt, T., Vermeesch, P., Carter, A., Beny, F., Bout-Roumzeilles, V., Sangiorgi, F., Hemming, S. R., Pérez, L. F., Colleon, F., Prebble, J. G., van Peer, T. E., Perotti, M., Shevenell, A. E., Browne, I., Kulhanek, D. K., Levy, R., Harwood, D., **Sullivan, N. B.**, Meyers, S. R., Griffith, E. M., Hillenbrand, C.-D., Gasson, E., Siegert, M. J., Keisling, B., Licht, K. J., Kuhn, G., Dodd, J. P., Boshuis, C., De Santis, L., & McKay, R. M. (2021). A large West Antarctic Ice Sheet explains early Neogene sea-level amplitude. *Nature*, 600(7889), 450–455. 10.1038/s41586-021-04148-0
- Dent, L., Normore, L., **Sullivan, N. B.**, Zhen, Y. Y., & Forbes, A. (2021). First record of Lower – Middle Ordovician (Tremadocian – Dapingian) carbon isotope ($\delta^{13}\text{C}_{\text{carb}}$) chemostratigraphy in the Canning Basin, Western Australia; calibrated with geochronology/biostratigraphy and implications for global correlations. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 573, 1–12. 10.1016/j.palaeo.2021.110411
- Sullivan, N. B.**, Loydell, D. K., Montgomery, P., Molyneux, S. G., Zalasiewicz, J., Ratcliffe, K. T., Campbell, E., Griffiths, J. D., & Lewis, G. (2018). A record of Late Ordovician to Silurian oceanographic events on the margin of Baltica based on new carbon isotope data, elemental geochemistry, and biostratigraphy from two boreholes in central Poland. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 490, 95–106. 10.1016/j.palaeo.2017.10.016
- Thomka, J. R., Sullivan, N. B., & Brett, C. E. (2017). *Arthropycus* as a mimic of crinoid column impressions in the lower Silurian of central Kentucky, USA. *Lethaia*, 49(4), 591–603. 10.1111/let.12226
- Sullivan, N. B.**, McLaughlin, P. I., Brett, C. E., Cramer, B. D., Kleffner, M. A., Thomka, J. R., & Emsbo, P. (2016). Sequence boundaries and chronostratigraphic gaps in the Llandovery of Ohio and Kentucky: The record of early Silurian paleoceanographic events in east-central North America. *Geosphere*, 12(6), 1813–1832. 10.1130/GES01343.1
- Sullivan, N. B.**, McLaughlin, P. I., Emsbo, P., Barrick, J. E., & Premo, W. R. (2016). Identification of the late Homerian Mulde Excursion at the base of the Salina Group (Michigan Basin, USA). *Lethaia*, 49(4), 591–603. 10.1111/let.12168
- Sullivan, N. B.**, Over, D. J., Minjin, C., & Myrow, P. M. (2016). Subsidence and drowning of a carbonate platform in South-Central Mongolia (Gobi Altai Region) during the Late Eifelian to Early Givetian: A synthesis of conodont data, magnetic susceptibility, and paleoecology. *Journal of Asian Earth Sciences*, 115, 204–213. 10.1016/j.jseaes.2015.09.027
- Sullivan, N. B.**, Kleffner, M. A., & Brett, C. E. (2014). Conodont biostratigraphy, paleoecology, and taphonomy of the Second Creek Bed and Wolcott Furnace Hematite (Clinton Group) in West Central New York State. *Palaeontologia Electronica*, 17(1), 18p. 10.26879/388
- Brett, C. E., Thomka, J. R., **Sullivan, N. B.**, & McLaughlin, P. I. (2014). Anatomy of a compound sequence boundary: A basal Silurian karstic unconformity in the Cincinnati Arch region. *GFF*, 136(1), 42–27. 10.1080/11035897.2013.876657
- Sullivan, N. B.**, Brett, C. E., McLaughlin, P. I., Kleffner, M. A., & Cramer, B. D. (2014). Correlation of the Waco Member (Telychian; Llandovery; Silurian) in East-Central Kentucky and South-Central Ohio. *GFF*, 136(1), 254–258. 10.1080/11035897.2014.882978
- Sullivan, N. B.** & Brett, C. E. (2013). Integrating magnetic susceptibility data with sequence stratigraphy in the ironstone bearing successions (Lower Silurian) of Eastern North America. *Stratigraphy*, 10(4), 261–279. 10.29041/strat.10.4.06

PUBLICATIONS IN PREP

- Sullivan, N. B., Grant, G. R., Crampton, J. R., Sadler, P. M., Levy, R., McKay, R. M., Harwood, D. M., Meyers, S. R., Ohneiser, C., Cortese, G., Riesselman, C., Prebble, J., & Kulhanek, D. N. (in prep.). Neogene patterns of deposition and faunal turnover in the Southern Ocean revealed by constrained optimization (CONOP).
- Sullivan, N. B., White, T. S., Schoonover, E., Garber, J., Wonderling, N., Zimudzi, T. J., Feineman, M., Heaney, P., & French, K. (in prep.). Mineralogical partitioning of Lithium in refractory clays from the Pennsylvanian of the Northern Appalachian Basin.
- Ishii, H., McKay, R., Grant, G., Meyers, S. R., Sullivan, N. B., Golledge, N., Desy, B., De Santis, L., Ishino, S., Kulhanek, D. K., Patterson, M. O., Romans, B. W., Seki, O., Sugisaki, S., & Varela, N. (in prep.). Centennial to Millennial-scale West Antarctic Ice Sheet Discharge events during the Late Pliocene.
- McKay, R., van de Flierdt, T., Golledge, N., Patterson, M., Keller, E., Grant, G., Turton, N., Bertram, R., Jimenez-Espejo, F. J., Meyers, S., Marschalek, J., Naish, T., Levy, R., Dunbar, G., Sullivan, N. B., Riesselman, C., Williams, T., De Santis, L., & Escutia, C. (in prep.). A 6 million year record of ice sheet collapse in the Wilkes Subglacial basin, East Antarctica.

FIELD TRIP GUIDEBOOKS

- Sullivan, N. B.; and Brett, C. E.; (2025). Field Trip B3: Clinton ironstones of the Silurian in their type area of central New York. *in* Tewksbury, B. J., and Bailey, D. G. (eds.), *New York State Geological Association Centennial Guidebook: New York State Geological Association 100th annual meeting*. pp. B3-1 - B3-26. 10.6084/m9.figshare.30074998
- Sullivan, N. B.; Brett, C. E.; and McLaughlin, P. I.; (2012). Ironstones, condensed beds, and sequence stratigraphy of the Clinton Group (Lower Silurian) in its type area, central New York. *in* Rayne, T. W.; ed.; *Field Trip Guidebook for the 84th Annual Meeting of the New York State Geological Association*. pp. B5-1-B5-40.
- Brett, C. E.; McLaughlin, P. I.; Schramm, T. J.; Sullivan, N. B.; and Thomka, J. R.; (2012). Middle Paleozoic Sequence Stratigraphy and Paleontology of the Cincinnati Arch: Part 1 Central Kentucky and Southern Ohio. *in* Brett, C. E.; Cramer, B. D.; and Gerkie, T. L.; eds.; *Field Trip Guidebook for the International Geoscience Programme (IGCP) Project 591, 2nd Annual Meeting and 1st Foerste Symposium*. pp. 1-162.

CONFERENCE PROCEEDINGS

- Sullivan, N. B.; Brett, C. E.; McLaughlin, P. I.; Kleffner, M. A.; Cramer, B. D.; Thomka, J. R.; (2013). Constraints on the Age and Correlation of Two Problematic Telychian (Llandovery; Silurian) Stratigraphic Units in Ohio and Kentucky: Synthesizing Biostratigraphy, $\delta^{13}\text{C}_{\text{carb}}$ Chemostratigraphy, and Sequence Stratigraphy. *in* Lindskog, A.; and Mehlqvist, K. (eds.) *Proceedings from the International Geoscience Programme (IGCP) Project 591 3rd Annual Meeting*. GFF Vol. 135, No. 2. pp. 309-310
- Sullivan, N. B.; (2010). The Eifelian Givetian boundary (Middle Devonian) at Tsakhir, Gobi Altai region, southern Mongolia. *in* de Wet, A.P. and Heister, L. eds: *Keck Geology Consortium. Proceedings of the 23rd Annual Keck Research Symposium in Geology*. pp. 237-246

INVITED TALKS

- Sullivan, N. B. (2026). Strategies for using constrained optimization (CONOP) to quantify chronostratigraphic uncertainty. *GSA Connects—Denver, CO. 11-14 October, 2026*.
- Sullivan, N. B. (2026). Integration of Constrained Optimization (CONOP) and cyclostratigraphy: A high-resolution path forward toward quantifying chronostratigraphic uncertainty. Geological Society of America Penrose Conference, June 1, 2026.
- Sullivan, N. B. & White, T. S. (2025). Patterns and Processes of Lithium Enrichment in Coal Measure Strata from the Northern Appalachian Basin. Penn State Earth Talks, December 15, 2025.
- Sullivan, N. B. (2023). Planetary Motions Recorded in the Deep Sea: Characterizing Milankovitch Cycles from Neogene strata in the Southern Ocean. Department of Geology, Colorado College, March 16, 2023.
- Sullivan, N. B. (2013). The Many Faces of a Stratigraphic Succession: Using Multiple Proxies to Distinguish Local and Global Signals in the Lower Silurian of the northern Appalachian Basin and Cincinnati Arch. Wisconsin Geological and Natural History Survey, March 5, 2013.

ORAL PRESENTATIONS

- Sullivan, N. B. & White, T. S. (2026). Diagnosing a Pennsylvanian Critical Mineral Deposit: Volcanic Sourcing and Mineralogical Partitioning of Lithium in Mercer Formation Paleosols. *GSA Connects—Denver, CO. 11-14 October, 2026*.
- Burns, J., McKay, R., Golledge, N., Meyers, S., & Sullivan, N. B. (2026). An Evaluation of Millennial-Scale Antarctic Ice-Sheet Variability During Contrasting Orbital Configurations of the Early–Middle Miocene. 12th SCAR Open Science Conference, Oslo, Norway, August 10–14, 2026.

- Ishii, H., McKay, R., Grant, G., Meyer, S., Sullivan, N. B., Golledge, N., Desy, B., Seki, O., & Ishino, S. (2026). Centennial to millennial-scale West Antarctic Ice Sheet discharge events during the late Pliocene. 12th SCAR Open Science Conference, Oslo, Norway, August 10–14, 2026.
- Sullivan, N. B.** & White, T. S. (2025). Patterns of lithium enrichment in Pennsylvanian paleosols from the Northern Appalachian Basin. *Sedimentary Geology and Energy Transitions Research Conference (SEPM)*, June 2–6, 2025.
- Sullivan, N. B.** & White, T. S. (2025). Sequence Stratigraphy and Depositional Environments of the Mercer Formation (Pottsville Group) and Controls on the Distribution of Critical Minerals in Underclays Through the North Appalachian Basin. *Geological Society of America Abstracts with Programs*, 57(3). <https://doi.org/10.1130/abs/2025NE-408604>
- Golledge, N., Levy, R., Meyers, S., Weber, M., Clark, P., Burns, J., Ishii, H., Knahl, H., Lowry, D., McKay, R., Naish, T., Grant, G., & **Sullivan, N.** (2025). East Antarctic Ice Sheet regime shifts during climate transitions. *European Geosciences Union General Assembly 2025 (EGU25)*.
- Sullivan, N. B.**, Meyers, S. R., Levy, R. H., & McKay, R. M. (2022). Astronomically influenced millennial-scale cyclicity of the Antarctic Cryosphere during the Early Miocene. *Geological Society of America Abstracts with Programs*, 54(5). <https://doi.org/10.1130/abs/2022AM-383483>
- Sullivan, N. B.**, Meyers, S. R., Levy, R. H., Sadler, P. M., Crampton, J. S., & McKay, R. M. (2019). Astronomical forcing of the Antarctic Ice Sheet and strategies for integrating proxy data into regional chronostratigraphic frameworks generated by constrained optimization (CONOP). *AGU Fall Meeting*, San Francisco, CA.
- Zambito, J. J., **Sullivan, N. B.**, & McLaughlin, P. I. (2018). Sea-level history of Cambrian-Ordovician boundary interval strata on the Wisconsin Arch. *Geological Society of America Abstracts with Programs*, 50(6).
- Sullivan, N. B.**, Hildred, G. V., Riley, D. A., Pearce, T. J., & Roach, C. (2017). Assessing the utility of stable isotope chemostratigraphy in Jurassic and Cretaceous strata on the eastern margin of Canada: refining correlations and the history of Atlantic rifting. *Abstracts from the Canadian Society of Petroleum Geologists Meeting – Geoconvention*.
- Riley, D. A., Pearce, T. J., Hildred, G. V., Roach, C., & **Sullivan, N. B.** (2017). Whole Rock Inorganic Elemental Data Toolkit: case studies from East Coast Canada. *Abstracts from the Canadian Society of Petroleum Geologists Meeting – Geoconvention*.
- Sullivan, N. B.**, Montgomery, P., Ratcliffe, K. T., Mathia, E., Pierce, J. D., Willis, K. H., & Umbriaco, J. T. (2017). Investigating links between climate and nutrient cycling in the Early Permian: an integrated study of new inorganic geochemistry and stable isotope data from the Midland Basin of west Texas. *Geological Society of America Abstracts with Programs*, 48(7).
- Sullivan, N. B.**, Montgomery, P., Mathia, E., Ratcliffe, K., Dawson, B., Carson, A. E. B., & Chhajlani, R. (2017). Chronostratigraphy, Correlation, and Depositional History of the Marcellus Shale in the Central Appalachian Basin: A Study of Inorganic Geochemistry, Stable Isotopes, and Magnetic Susceptibility Data From Pennsylvania and West Virginia. *AAPG Annual Convention and Exhibition*.
- Hutchison, M. P., **Sullivan, N. B.**, Fraser, T. A., & Hildred, G. V. (2016). The application of $\delta^{13}\text{C}_{\text{carb}}$ stable isotope chronostratigraphy to correlate upper Palaeozoic black shales of the northwestern frontier, Yukon Territory, Canada. *AAPG Annual Convention and Exhibition*, Calgary, Alberta, Canada, Abstract #90259.
- Griffiths, J. G., Hildred, G. V., Roach, C., Lees, B., Porter, S., **Sullivan, N. B.**, & Ratcliffe, K. R. (2015). The Use of Elemental and Stable Isotope Chemostratigraphy for Regional Correlation of the Duvernay Formation, Western Canada. *GeoConvention 2015 – Geoscience New Horizons*.
- Sullivan, N. B.**, Brett, C. E., McLaughlin, P. I., Kleffner, M. A., Cramer, B. D., & Thomka, J. R. (2014). New Chronostratigraphic Data from the Telychian (Llandovery; Silurian) of the Northern Appalachian Basin and its Implications for Existing Sequence Stratigraphic Frameworks. *Geological Society of America Abstracts with Programs*.
- Zambito, J., Stewart, E. K., McLaughlin, P. I., **Sullivan, N. B.**, & Hurth, M. (2014). New Insights into the Cambrian-Ordovician Boundary Interval Sea-Level History on the Wisconsin Arch. *Geological Society of America Abstracts with Programs*.
- McLaughlin, P. I., **Sullivan, N. B.**, Emsbo, P., & Brett, C. E. (2013). Chronomap: Chronostratigraphy-Guided Geologic Mapping and Resource Assessment in the United States. *Geological Society of America Abstracts with Programs*, 45(7).
- Sullivan, N. B.**, Brett, C. E., & Kleffner, M. A. (2012). Age, Taphonomy, and Paleoecology of a Pyritic-Phosphatic Lag Bed in the Llandovery (Late Telychian) of West Central New York State. *Abstracts from the International Geoscience Program (IGCP) Project 591 2nd Annual Meeting and 1st Foerste Symposium*, p. 33.
- Sullivan, N. B.**, Brett, C. E., McLaughlin, P. I., & Thomka, J. R. (2012). Revised Sequence Stratigraphic Framework in Aeronian and Telychian Strata (Llandovery; Silurian) of the East Cincinnati Arch. *Geological Society of America Abstracts with Programs*, 44(5), p. 17.
- Brett, C. E., McLaughlin, P. I., Thomka, J. R., & **Sullivan, N. B.** (2011). Widespread, Time-Specific Facies Motifs in the Late Llandovery-Early Wenlock: A Signature of Unique Paleooceanographic Conditions? *Abstracts and Programme of the International Subcommission on Silurian Stratigraphy Meeting*, p. 5.

Over, D. J., **Sullivan, N. B.**, Peteya, J., Minjin, C., Myrow, P., & Soja, C. (2011). Conodonts from the Tsagaanhaalga Formation (Emsian?–Eifelian) and the Tentaculite Member of the Govialtai Formation (Eifelian–Givetian), Tsakhir Well Section, Gobi Altai Terrane, Southern Mongolia. *Geological Society of America Abstracts with Programs*, 43(1), p. 75.

POSTER PRESENTATIONS

- Sullivan, N. B. (2026). A Microscopic View of Global Events: Iron Sequestration during Silurian Oceanographic Disturbances Revealed by Mineral Mapping. *GSA Connects— Denver, CO. 11-14 October, 2026*.
- Sullivan, N.B.; Meyers, S.R.; Levy, R.H.; McKay, R.M.; van de Flierdt, T.; Marschalek, J.; Perotti, M.; Zurli, L.; Talarico, F.M.; Harwood, D.M.; De Santis, L.; Florindo, F.; Naish, T.; Grant, G.R.; Patterson, M. (2022). The astronomical evolution of Antarctica's ice sheets *AGU Fall Meeting 2022*.
- McKay, R.M.; Patterson, M.; Grant, G.R.; Turton, N.; van de Flierdt, T.; Jimenez, F.J.; Keller, E.D.; Golledge, N.R.; Naish, T.; Levy, R.H.; Dunbar, G.B.; Riesselman, C.R.; Duke, G.; Sullivan, N.B.; Meyers, S.R.; Williams, T.; Escutia, C. (2022). Eccentricity modulation of East Antarctic Ice Sheet in Wilkes Land over the past 6 million years *AGU Fall Meeting 2022*.
- Sullivan, N. B.; Sadler, P. M.; Grant, G.; Meyers, S. R.; Crampton, J. S.; Levy, R. H.; McKay, R. M.; (2022). Strategies for the integration of astrochronology and constrained optimization (CONOP) in the Southern Ocean. *Geological Society of America Abstracts with Programs* Vol. 54, No. 5. doi:10.1130/abs/2022AM-383410
- Sullivan, N. B.; Meyers, S. R.; Levy, R.; McKay, R.; Marschalek, J.; van de Flierdt, T.; Perotti, M.; Zurli, L.; Harwood, D.; De Santis, L.; Grant, G. (2021). Astronomical pacing of the Antarctic Cryosphere: Terrestrial vs. Marine-based Ice Sheet Responses during the Early Miocene. *AGU Fall Meeting 2021*.
- Sullivan, N. B.; Febo, L. A.; (2021). The application of cyclostratigraphic methods to calibrate rock accumulation rates using petrophysical log data: a case study from the Eagle Ford Group. *AAPG | SEG Image '21*.
- Sullivan, N. B.; Meyers, S. R.; Sadler, P.; Grant, G. R.; Levy, R. H.; McKay, R. M.; (2020). The intercalibration of astrochronological data with composite sections produced by constrained optimization (CONOP): A case study from Neogene strata in the Southern Ocean. *AGU Fall Meeting 2020, PP037-0010*.
- Sullivan, N. B.; Meyers, S. R.; Sadler, P. M.; Crampton, J. S.; Levy, R.; McKay, R.; (2018). High-resolution Earth history: A synthesis of astrochronology and constrained optimization (CONOP). *Geological Society of America Abstracts with Programs*, Vol. 50, No. 6.
- Sullivan, N. B.; Loydell, D.; Montgomery, P.; Molyneux, S.; Zalasiewicz, J. A.; Ratcliffe, K.; and Griffiths, J. D.; (2017) Organic Carbon Isotopes and Silurian Chronostratigraphy in Eastern Europe. *AAPG Annual Convention and Exhibition*.
- Sullivan, N. B.; Jablonski, D.; Forbes, A.; Bond, A.; (2016). Inorganic and stable isotope geochemistry of Ordovician strata in the Canning Basin: the manifestation of global bioevents in northern Gondwana. *Geological Society of America Abstracts with Programs*. Vol. 48, No. 7.
- Thomka, J. R.; Sullivan, N. B.; Brett, C. E.; (2016). False crinoid column impressions in the lower Silurian Estill Shale of central Kentucky. *Geological Society of America Abstracts with Programs*. Vol. 48, No. 7.
- Sullivan, N. B.; Ratcliffe, K. R.; Hildred, G. V.; Roach, C.; (2015). Integration of Stable Isotope Chemostratigraphy to Characterize Paleoenvironmental Diachroneity in the Duvernay Formation (Mid-Frasnian), a Mixed Carbonate Siliciclastic Unconventional Play in the Western Canada Basin. American Association of Petroleum Geologists Annual Convention and Exhibition. Search and Discovery Article #90216. Abstract
- Hutchison, M. P.; Fraser, T. A.; Sullivan, N. B.; Hildred, G. V.; (2015). Canol Formation chronostratigraphy: $\delta^{13}\text{C}_{\text{org}}$ stable isotope results from the Richardson Mountains, north Yukon. *GeoConvention 2015 – Geoscience New Horizons*.
- Sullivan, N. B.; McLaughlin, P. I.; Emsbo, P.; Barrick, J. E.; (2014). Integrated Conodont Biostratigraphy and Chemostratigraphy ($\delta^{13}\text{C}_{\text{carb}}$, $^{87}\text{Sr}/^{86}\text{Sr}$, Major and Trace Elements) of the Waubakee Formation (Upper Silurian) in Eastern Wisconsin: A New Approach to an Unresolved Chronostratigraphic Problem. *Geological Society of America Abstracts with Programs*.
- Danielson, E.; Over, D. J.; Sullivan, N. B.; Smith, D. M.; Minjin, C.; Myrow, P. M.; Soja, C. M.; (2013). Lower Silurian Conodonts and Trilobites from the Gobi Altai – Mandalovoo Terrane, Southern Mongolia. *Geological Society of America Abstracts with Programs*
- Sullivan, N. B. (2013). A Multi-Proxy Approach to Determining Basin Architecture and Facies Distribution: Integrating Sequence Stratigraphy, Biostratigraphy, and Chemostratigraphy. *Poster Presentation at the 2013 AAPG – SEG Student Expo in Houston Texas*.
- Sullivan, N. B.; Brett, C. E.; and Thomka J. R.; (2012). Co-Occurrence of a Burrowed Firmground and a Negative Shift in Magnetic Susceptibility: Implications for Correlation and Sequence Stratigraphy. *Geological Society of America Abstracts with Programs*, Vol. 43, No. 5, pp. 604.
- Sullivan, N. B.; Over, D. J.; Minjin, C.; Soja, C.; Myrow, P. M.; (2010). The Eifelian Givetian Stage Boundary (Middle Devonian) at Tsakhir, Gobi Altai Region, Southern Mongolia. *Poster Presentation at the 23rd Keck Geology Consortium Undergraduate Research Symposium*.

Sullivan, N. B.; Day, J. E.; (2008). Very Late Frasnian (Upper Devonian) Brachiopod Fauna of the *Theodossia scopulorum* Zone in the Paleoequatorial Mackenzie Shelf (Northwest Territories-Canada) – Western Laurussia. *Geological Society of America Abstracts with Programs*, Vol. 40, No. 6, pp. 475

GRANTS and CONTRACTS RECEIVED

2020 – International Ocean Discovery Project: *Schlanger Fellowship*: \$30,000
2018 - Geological Society of America: *Graduate Student Research Grant*: \$1000
2018 - NSF – *Travel Scholarship for Urbino Summer School of Paleoclimatology*: \$4000
2012 - Geological Society of America: *Graduate Student Research Grant*: \$2000

SHORT-COURSES and WORKSHOPS ATTENDED

Urbino Summer School of Paleoclimatology – Urbino, Italy (July – August 2018)
IsoAstro – Rock Springs, Wyoming (May 2019)
IGCP 591 Annual Meeting – Cincinnati, Ohio (May 2012)

SERVICE

Led Earth Science demonstrations for Buffalo Public School field trips to Buffalo State (2024)
Science Olympiad Coach (Dynamic Planet: Oceanography) Madison West High School. (2019-2021)
Merit Badge Counselor for the Boy Scouts Geology Merit Badge in Cincinnati, OH. (2011-2012)
Volunteer at the Paleontological Research Institution / Museum of the Earth. Ithaca, NY. (2002-2006)

REVIEW ACTIVITIES

Reviewer of Publications

Bulletins of American Paleontology [2 reviews]
Bulletin of Geosciences [2 reviews]
Chemical Geology [3 reviews]
Discover Geoscience [2 reviews]
Earth-Science Reviews [2 reviews]
Geologica Carpathica [2 reviews]
Geological Society of America Bulletin [5 reviews]
Geology [10 reviews]
GFF [3 reviews]
Global and Planetary Change [3 reviews]
International Geology Review [2 reviews]
Journal of African Earth Sciences [2 reviews]
Journal of the Geological Society [2 reviews]
Journal of Sedimentary Research [2 reviews]
Nature Communications [3 reviews]
Palaeogeography, Palaeoclimatology, Palaeoecology [8 reviews]
Paleoceanography and Paleoclimatology [9 reviews]
Science Advances [1 review]
Scientific Reports [2 reviews]
Sedimentary Geology [3 reviews]
SEPM – Special Publications [2 reviews]
Terra Nova [2 reviews]

PROFESSIONAL AFFILIATIONS

Geological Society of America
American Geophysical Union
Buffalo Geological Society

AWARDS and HONORS

Thomas E. Berg Award for Excellence in Teaching, University of Wisconsin (Spring 2019)
William H. and Virgie Twenhofel Award for Sedimentary Geology, University of Wisconsin (Spring 2019)
Graduate Teaching Award, Department of Geology, University of Cincinnati (Spring 2010)
Geological Science Alumni Award, State University of New York at Geneseo (Spring 2008)

COURSES TAUGHT

As the instructor of record

Westminster College
GEO 110 - *Introduction to Geology*
GEO 214 - *Sedimentology and Stratigraphy*

University of Cincinnati

GEOL 113 – *Introduction to Cincinnati Paleontology and Stratigraphy*

Buffalo State University

GES 302 – *Invertebrate Paleontology*

GES 301 – *Sedimentology and Stratigraphy*

As a Teaching Assistant

SUNY Geneseo

University of Cincinnati

University of Wisconsin - Madison

MENTORSHIP

UNDERGRADUATE RESEARCH PROJECTS

- *Andrew Monteforte* (Fall 2024) Buffalo State University
 - **Project Title:** Links between Sequence Stratigraphy and Paleoecology in the Middle Devonian and lower Silurian of Western NY
- *Anthony Puleo* (Fall 2024) Buffalo State University
 - **Project Title:** Taphonomy, Paleoecology, and Evolution of Cephalopods through Time: A Re-appraisal of the paleontological collections at Buffalo State University