

CURRICULUM VITAE

Daniel Goldman

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EDUCATION

Ph.D. Paleobiology/Sedimentology, State University of New York at Buffalo, 1993.
Dissertation Topics: Graptolite Evolution and Ecology; K-bentonite chronostratigraphy; Taconic Basin Analysis. Faculty Advisor: Dr. Charles E. Mitchell.
M.A. Paleobiology/Stratigraphy, State University of New York at Buffalo, 1987.
B.A. Geology, State University of New York at Buffalo, 1985.

ACADEMIC EXPERIENCE

06/15 – present	Professor and Chair, Department of Geology - University of Dayton
07/11 – 06/15	Associate Professor and Chair, Department of Geology - University of Dayton
12/06 – 06/11	Associate Professor, Department of Geology - University of Dayton
8/04 – 11/06	Assistant Professor, Department of Geology - University of Dayton. Associate Graduate Faculty, Department of Geology – Wright State University
8/97 – 7/03	Lecturer, Department of Geology, University of Dayton.
7/95 - 7/97	Research Assistant Professor; University at Buffalo.
7/94 to 6/95	Post-doctoral University Fellow, The Ohio State University.

AWARDS

2012 – University of Dayton STARS Research and Scholarship Award
2009 – UD Chapter of Sigma Xi George Noland Award for Faculty Research
1991 - Best Student Paper, Evolutionary Biology Colloquium, SUNY @ Buffalo.
1989 - Outstanding in Concept and Presentation, Geological Society of America Grant Proposal.

RESEARCH GRANTS

2010 – 2016: *Collaborative Research: Graptolite Biogeography, Paleo-GIS, and Evolutionary Dynamics of Early Paleozoic Zooplankton*. **D. Goldman Principal**, S-Y. Wu, C.E. Mitchell, H.D. Sheets, Co-Principals. National Science Foundation, Funded. \$465,584.

2013 – 2017: *Collaborative Research: Testing the Impact of Species Sorting on Global Patterns of Biodiversity: A Phylogenetically-grounded Case Study of Biodiversity, Biogeography and Evolutionary Innovation in the Graptoloidea*. D. Bapst, Principal, **D. Goldman, Co-Principal**, C.E. Mitchell, H.D. Sheets, M.J. Melchin Co-Principals. National Science Foundation, Not Funded. \$562,478.

2009: *Quantitative Paleobiogeography: Unraveling Macroevolutionary Patterns in Fossil Plankton Using Geographic Information Systems (GIS) Software and the new Geobiodiversity Database*. **D. Goldman Principal**. UD Research Council Seed Grant, Funded. \$7,500.

2007 – 2013: *Monitoring the Ecological Restoration of a Mitigation Wetland*. J.L. Kavanaugh, Principal, **D. Goldman, Co-Principal**, D.R. Geiger, S-Y. Wu, Co-Principals, Contract, Miami Valley Hospital, Funded. \$76,560.00,.

2005 – 2008: *Refining the Geologic Time Scale: An integrated biostratigraphic Approach*. **D. Goldman Principal**, S.A. Leslie, Co-Principal. American Chemical Society/Petroleum Research Fund, Funded. \$50,000.

2005: *Refining the Geologic Time Scale: An integrated biostratigraphic Approach*. **D. Goldman Principal**. UD Research Council Seed Grant, Funded. \$9,000.

2003 – 2003: *International Supplement to: Graptolite Macroevolution: Phylogenetic analysis and testing Hypotheses of directional change*. **D. Goldman Principal**, National Science Foundation, Funded. \$12,058.00

2001 – 2005: *Graptolite Macroevolution: Phylogenetic analysis and testing Hypotheses of directional change*. **D. Goldman Principal**, C.E. Mitchell, Co-Principal. National Science Foundation, Funded. \$117,107.

1999: Geodynamic Interpretation of Regional Unconformities: Eustacy or Tectonics? C.E. Mitchell Principal, **D. Goldman, Sub-contract**. American Chemical Society/Petroleum Research Fund, Funded. \$6,500

PEER REVIEWED PUBLICATIONS

- Serra, F., Feltes, N., Albanesi, G.L., and **Goldman, D.** *Submitted*. High resolution conodont biostratigraphy from the Darriwilian Stage (Middle Ordovician) of the Argentine Precordillera and biodiversity analyses: a CONOP9 approach. *Lethaia*.
- Bergström, S.M. and **Goldman, D.** *In press*. $\delta^{13}\text{C}$ Chemostratigraphy of the Ordovician-Silurian Boundary Interval. In, A. Sial (ed.), *Chemostratigraphy of Geological Boundaries*. John Wiley & Sons, Inc. Hoboken, NJ.
- Boyle, J.T., Sheets, H.D., Wu, S-Y., **Goldman, D.**, Melchin, M.J., Cooper, R.A., Sadler, P., and Mitchell, C.E. 2016. The impact of geographic range, sampling, ecology, and time on extinction risk in the volatile clade Graptoloidea. *Paleobiology* **46 (1): 85-113**. (DOI: <https://doi.org/10.1017/pab.2016.33>)
- Chen, X., Zhang, Y., **Goldman, D.**, Fan, J., Bergström, S.M., Wang, Z., Finney, S.C., and Chen, Q. 2016. *Darriwilian to Katian (Ordovician) Graptolites from Northwest China*. (Book). Elsevier, Waltham MA, and Zhejiang University Press, Hangzhou, China. 354 pp.
- Goldman, D.**, Nölvak, J., and Maletz, J. 2015. Mid to Late Ordovician Graptolite and Chitinozoan Biostratigraphy of the Kandava-25 Drill Core in Western Latvia. *GFF* **137: 197-211**. (DOI: 10.1080/11035897.2015.1021375)
- Boyle, J.T., Sheets, H.D., Wu, S-Y., **Goldman, D.**, Melchin, M.J., Cooper, R.A., Sadler, P., and Mitchell, C.E. 2014. A re-examination of the contributions of biofacies and geographic range to extinction risk in Ordovician graptolites. In, M. Calner, O. Lehnert, G.L. Albanesi, L.E. Babcock, D.A.T. Harper, and M.J. Melchin, (eds.), *Early Palaeozoic Global Change*. *GFF* **136: 38-41**. (DOI: 10.1080/11035897.2013.861864)
- Goldman, D.**, Maletz, J., Melchin, M.J., & Fan, J. 2013. Lower Palaeozoic Graptolite Biogeography. In D.A.T. Harper and T. Servais (eds.), *Early Palaeozoic Palaeobiogeography and Palaeogeography*. *Geological Society of London Memoir* **38: 415-428**. ([dx.doi.org/10.1144.M38.26](https://doi.org/10.1144/M38.26))
- Zhang, L., Fan, J., Melchin, M.J., Chen, Q., Wu, S-Y., **Goldman, D.**, Mitchell, C.E., and Sheets, H.D. 2013. The applications of species distribution models in palaeontology. *Acta Palaeontologica Sinica* **52(2): 146-160**.
- Fan, J.X., Chen, Q., Hou, X.D., Miller, A.I., Melchin, M.J., Shen, S.Z., Wu, S-Y., **Goldman, D.**, Mitchell, C.E., Yang, Q., Zhang, Y.D., Zhan, R.B., Wang, J., Leng, Q., Zhang, H., Zhang, L.N. 2013. Geobiodiversity Database: a comprehensive section-based integration of stratigraphic and paleontological data. *Newsletters on Stratigraphy*, **46(2): 111-136**. (DOI: 10.1127/0078-0421/2013/0033).

- Goldman, D.**, Bergström, S. M., Sheets, H. David, and Pantle, C. 2013. A CONOP9 composite taxon range chart for Ordovician conodonts from Baltoscandia: A framework for biostratigraphic correlation and maximum-likelihood biodiversity analyses. **GFF** **136**: 342-354. (doi:10.1080/11035897.2013.809549).
- Goldman, D.**, Mitchell, C.E., Melchin, M.J., Wu, S-Y., Fan, J., & Sheets, H.D. 2011. Biogeography and mass extinction: Extirpation and re-invasion of *Normalograptus* species (Graptolithina) in the Late Ordovician palaeotropics. **Proceedings of the Yorkshire Geological Society**, **58**: 227–246.
- Goldman, D.**, Bergström, S. M., Sheets, H. David, and Pantle, C. 2011. A CONOP9 Composite-taxon range-chart for Ordovician conodonts from Baltoscandia: A framework for biodiversity analyses. In, J.C. Gutiérrez-Marco, I. Rábano and D. García-Bellido (eds.), *Ordovician of the World. Cuadernos del Museo Geominero*, **14**. Instituto Geológico y Minero de España, p. 179 – 188. Madrid.
- Gutiérrez-Marco, J.C., **Goldman, D.**, Reyes-Abril, J., and Gómez, J. 2011. A preliminary study of some Sandbian (Upper Ordovician) graptolites from Venezuela. In, J.C. Gutiérrez-Marco, I. Rábano and D. García-Bellido (eds.), *Ordovician of the World. Cuadernos del Museo Geominero*, **14**. Instituto Geológico y Minero de España, p. 199 – 206. Madrid.
- Sheets, H. David, **Goldman, D.**, Bergstrom, S. M., and Pantle, C. 2011. Conodont biodiversity dynamis from the Ordovician of Baltoscandia In, J.C. Gutiérrez-Marco, I. Rábano and D. García-Bellido (eds.), *Ordovician of the World. Cuadernos del Museo Geominero*, **14**. Instituto Geológico y Minero de España, p. 559 – 565. Madrid.
- Zhang Yuandong, Chen Xu, **Goldman, D.**, Zhang Ju, Cheng Junfeng, & Song Yanyan. 2010. Diversity and palaeobiogeographic patterns of Early and Middle Ordovician graptolites in distinct environments of South China. **Science in China (Earth Science)**, v. **53**: 1811-1827.
- Chen, X., Bergstrom, S. M., **Goldman, D.**, Chen, Q., & Zhang, Y. 2010. Upper Ordovician (Sandbian-Katian) graptolite and conodont biozonation in the Yangtze Region, China. **Transactions of the Royal Society of Edinburgh** **101**: 1-24.
- Goldman, D.**, & Wu, S-Y.. 2010. Paleogeographic, Paleooceanographic, and Tectonic Controls on Early Late Ordovician Graptolite Diversity Patterns. In S.C. Finney and W.B.N. Berry eds., *The Ordovician Earth System. Geological Society of America Special Paper* **466**, p. 149-161. The Geological Society of America, Denver, CO.
- Goldman, D.**, Leslie, S. A., Bergstrom, S. M., Nolvack, J., Young, S. A., & Finney, S. C. 2008. An Ordovician Global Reference Section Recently Selected in Oklahoma. **Oklahoma Geology Notes**, **68(1-2)**, 15-18.
- Mitchell, C. E., Maletz, J., & **Goldman, D.** 2008. What is Diplograptus? **Bulletin of Geosciences**, **83(4)**, 1-8.

- Goldman, D.**, Leslie, S.A., Nölvak, J., Young, S., Bergström, S.M., & Huff, W.D. 2007. The Global Stratotype Section and Point (GSSP) for the base of the Katian Stage of the Upper Ordovician Series at The Black Knob Ridge, Southeastern Oklahoma, USA. **Episodes 30 (4): 258-270.**
- Goldman, D.**, Leslie, S.A., Nolvak, Jaak, & Young, Seth. 2007. "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 46, (Suppl.): 144-154.**
- Goldman, D.**, Mitchell, C.E.; Maletz, J., Riva, J.F.V., Leslie, S.A., & Motz, G. J. 2007. "Ordovician graptolites and conodonts of the Trail Creek Region of central Idaho: a revised, integrated biostratigraphy" **Acta Palaeontologica Sinica 46, (Suppl.): 155-162.**
- Brussa, E., Maletz, J., Mitchell, C.E., & **Goldman, D.** 2007. *Nemagraptus gracilis* (J. Hall) in Bolivia and Peru. **Acta Palaeontologica Sinica 46, (Suppl.): 57-63.**
- Mitchell, C.E., **Goldman, D.**, Klosterman, S.L., Maletz, J., Sheets, H.D., & Melchin, M.J. 2007. Phylogeny of the Ordovician Diplogrptoidea. **Acta Palaeontologica Sinica 46, (Suppl.): 332-339.**
- Zhang Yuandong, Chen Xu, & **Goldman, Daniel.** 2007. Diversification patterns of the Early to Middle Ordovician graptolites in South China. **Geological Journal 42: 315 - 338.**
- Nölvak, Jaak, & **Goldman, Daniel.** 2007. Biostratigraphy and taxonomy of three-dimensionally preserved nemagraptids from the Middle and Upper Ordovician of Baltoscandia. **Journal of Paleontology 81: 254 - 260.**
- Bergström, S.M., Finney, S.C., Chen Xu, **Goldman, D.**, & Leslie, S.A. 2006. Three new Ordovician global stage names. **Lethaia 39: 287-288.**
- Maletz, J, **Goldman, D.**, & Cone, M. 2005. The Early to Middle Ordovician graptolite faunal succession of the Trail Creek region, central Idaho, U.S.A. **Geological Acta 3(4): 395-409.**
- Goldman, Daniel.** 2003. The *Diplocanthus caudatus* Zone: a proposal for a new, globally recognizable, Upper Ordovician graptolite zone. *In, Ordovician From The Andes*, G.L. Albenesi, M.S. Beresi, and S.H. Peralta, eds. Instituto Superior De Correlacion Geologica INSUGEO, Serie Correlacion Geologica No. 17, p. 65 - 70.
- Goldman, D.**, & Wright, S.J. 2003. A revision of "*Climacograptus caudatus*" (Lapworth) based on isolated three-dimensional material from the Viola Springs Formation of Central Oklahoma, USA. *In, Proceedings of the 7th International Graptolite Conference*, G. Ortega, and G.F. Acenolaza, eds. Instituto Superior De Correlacion Geologica INSUGEO, Serie Correlacion Geologica No. 18, p. 33 - 37.
- Mitchell, C.E., **Goldman, D.**, Maletz, J., Cone, M., & Janousek, H.M. 2003. Ordovician Graptolites of the Phi Kappa Formation at Trail Creek, Central Idaho: a revised biostratigraphy. *In Proceedings of the 7th International Graptolite Conference*, G. Ortega, and G.F.

Acenolaza, eds. Instituto Superior De Correlacion Geologica INSUGEO, Serie Correlacion Geologica No. 18, p. 69 - 72.

Goldman D., Rahl, J.A., & Campbell, S.M. 2002. Three-dimensionally preserved specimens of *Amplexograptus* (Ordovician, Graptolithina) from the North American Midcontinent: taxonomic and biostratigraphic significance. **Journal of Paleontology** **76(5): 917-923**.

Goldman D., Mitchell, C.E., & Joy M.A. 1999. The stratigraphic distribution of graptolites in the classic upper Middle Ordovician Utica Shale of New York: an evolutionary succession or a response to sea-level change? **Paleobiology** **25(3): 273-294**.

Goldman, D. & Bergström, S.M. 1997. Biostratigraphy, biofacies, and taxonomy of Upper Ordovician graptolites from the North American Midcontinent. **Palaeontology** **40: 965-1010**.

Goldman D. 1995. Taxonomy, evolution, and biostratigraphy of the *Orthograptus quadrimucronatus* species group (Graptolithina). **Journal of Paleontology** **69(3): 516-540**.

Goldman, D., Mitchell, C.E., & Bergström, S. M. 1995. Revision of the Zone 13 graptolite biostratigraphy in the Marathon, Texas Standard succession and its bearing on Upper Ordovician graptolite biogeography. **Lethaia** **28(2): 115-128**.

Samson, S.D., Matthews, S., Mitchell, C.E., & **Goldman, D.** 1995. Tephrochronology of highly altered ash beds: The use of trace element and strontium isotope geochemistry of apatite phenocrysts to correlate K-bentonites. **Geochimica et Cosmochimica Acta** **59(12): 2527-2536**.

Goldman, D. & Mitchell, C.E. 1994. Three-dimensional graptolites from the upper Ordovician Neuville Formation, Quebec. In Ed Landing (ed.), Studies in Paleontology and Stratigraphy in Honor of Donald W. Fisher. **New York State Museum Bulletin** **481: 87-100**.

Goldman, D., Mitchell, C.E., Bergström, S.M., Delano, J.W, & Tice, S.J. 1994. Relations between K-bentonites and graptolite biostratigraphy in the Middle Ordovician of New York State and Quebec: A new chronostratigraphic model. **Palaios** **9: 124-143**.

Bergström, S.M., & **Goldman, D.** 1994. Conodont biostratigraphy and biofacies from the Jacques Cartier River Ordovician Section, Quebec. In Ed Landing (ed.), Studies in Paleontology and Stratigraphy in Honor of Donald M. Fisher. **New York State Museum Bulletin** **481: 1-4**.

Delano, J.W, Tice, S.J., Mitchell, C.E., & **Goldman, D.**, 1994. Rhyolitic glass in Ordovician K-bentonites: A new stratigraphic tool. **Geology** **22(3): 115-118**.

Delano, J.W, Tice, S.J., Mitchell, C.E., & **Goldman, D.**, 1994. Rhyolitic glass in Ordovician K-bentonites: A new stratigraphic tool: Reply. **Geology** **22(12): 1152-1153**.

Mitchell, C.E., **Goldman, D.**, Delano, J.W., Samson, S.D., & Bergström, S.M. 1994. Temporal and spatial distribution of biozones and facies relative to geochemically correlated K-bentonites in the Middle Ordovician Taconic Foredeep. **Geology** **22: 715-718**.

Goldman, D. & Mitchell, C.E. 1991. Revision of the Upper Ordovician graptolite *Diplograptus (Amplexograptus) recurrens richmondensis*. **Journal of Paleontology** **65**: 1016-1017.

Goldman, D. & Mitchell, C.E. 1990. Morphology, systematics, and evolution of Middle Devonian Ambocoeliidae (Brachiopoda), western New York. **Journal of Paleontology** **64**: 79-99.

PUBLISHED ABSTRACTS AND FIELD GUIDES

2016

Goldman, D., Sheets, H.D., Bergström, S.M., Nölvak, J., and Podhalańska, T. High-resolution stratigraphic correlation and biodiversity dynamics of Middle and Late Ordovician marine fossils from Baltoscandia and Poland. *In*, H. Ortner, *ed.*, **Abstract Volume of GeoTirol2016 - Annual Meeting of DGGV and PANGEO**, pg. 87. Innsbruck, Austria.

2015

Goldman, D., Sheets, H.D., Bergström, S.M., Nölvak, J., and Podhalańska, T. High-resolution stratigraphic correlation and biodiversity dynamics of Middle and Late Ordovician marine fossils from Baltoscandia and Poland. *In*, S.A. Leslie, D. Goldman, and R.C. Orndorff *eds.*, *The Ordovician Exposed: Short Papers, Field Guides, and Abstracts for the 12th International Symposium on the Ordovician System*. **Stratigraphy** 12 (3-4): 105.

Boyle, J.T., Sheets, H.D., **Goldman, D.**, and Mitchell, C.E. A Bayesian method for identifying graptolite biotopes. **Geological Society of America Abstracts with Programs** 47 (7), p. 501. Baltimore, MD.

Fan, J.X., **Goldman, D.**, Chen, Q., Chen, X. and Zhang, Y.D. Evolution of the darriwilian to Katian graptolites from NW China. *In*, S.A. Leslie, D. Goldman, and R.C. Orndorff *eds.*, *The Ordovician Exposed: Short Papers, Field Guides, and Abstracts for the 12th International Symposium on the Ordovician System*. **Stratigraphy** 12 (3-4): 102.

Ma, X., Chen, X., and **Goldman, D.** A taxonomic restudy of *Ningxiagraptus* Geh, 2002. *In*, S.A. Leslie, D. Goldman, and R.C. Orndorff *eds.*, *The Ordovician Exposed: Short Papers, Field Guides, and Abstracts for the 12th International Symposium on the Ordovician System*. **Stratigraphy** 12 (3-4): 119-120.

Mitchell, C.E., Sell, B.K., Leslie, S.A., and **Goldman, D.** Chronostratigraphic correlation of the North American Upper Ordovician standard: The 2015 edition. *In*, S.A. Leslie, D. Goldman, and R.C. Orndorff *eds.*, *The Ordovician Exposed: Short Papers, Field Guides, and Abstracts for the 12th International Symposium on the Ordovician System*. **Stratigraphy** 12 (3-4): 123-124.

Westrop, S. R., Amati, L., Brett, C.E., Swisher, R.E., Carlucci, J.R., **Goldman, D.**, Leslie, S.A., and Burkhalter, R. The more the merrier? Reconciling sequence stratigraphy, chemostratigraphy, and multiple biostratigraphic indices in the correlation of the Katian

reference section, central Oklahoma. *In*, S.A. Leslie, D. Goldman, and R.C. Orndorff *eds.*, The Ordovician Exposed: Short Papers, Field Guides, and Abstracts for the 12th International Symposium on the Ordovician System. **Stratigraphy** 12 (3-4): 139.

Leslie, S.A., and **Goldman, D.** Integrated conodont and graptolite biostratigraphy of the lower Hartfell Shale (Sandbian-Katian, Late Ordovician), near Moffat, Scotland. **Geological Society of America Abstracts with Programs** 47 (7), p. 272. Baltimore, MD.

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. *In*, S.A. Leslie, D. Goldman, and R.C. Orndorff *eds.*, The Ordovician Exposed: Short Papers, Field Guides, and Abstracts for the 12th International Symposium on the Ordovician System. **Stratigraphy** 12 (4): 144-202.
<http://dx.doi.org/10.2110/sepmord.015>

Leslie, S.A., **Goldman, D.**, and Orndorff, R.C. (eds.) 2015. The Ordovician Exposed: Contributions from the 12th International Symposium on the Ordovician System. **Stratigraphy** 12 (3-4): 1-318.

Leslie, S.A., **Goldman, D.**, and Orndorff, R.C. (eds.) 2015. The Ordovician Exposed: Short Papers, Field Guides, and Abstracts for the 12th International Symposium on the Ordovician System. **On-line supplement to Stratigraphy** 12 (3-4): 10-413.
<http://dx.doi.org/10.2110/sepmord.015>

2014

Song, Y., Zhang Y., **Goldman, D.**, Wang, Z., Fang, X., and Ma, X. Latest Darriwilian to Early Sandbian Graptolite Biostratigraphy in Chengkou, northern Chongqing, South China. Science Press, Beijing, P.R. China. *In*, Zhang Yuandong et al. *eds.*, Field Excursion Guidebook, **International Geoscience Programme Project 591, Field Workshop**, Kunming, China.

Sales, R.K., **Goldman, D.**, Paris, F., and Sheets, H.D. Chitinozoan biodiversity in the Ordovician of Gondwana: an interval-free approach using the quantitative stratigraphic correlation program CONOP9. **Geological Society of America Abstracts with Programs** 46 (6), p. 754. Vancouver, B.C., Canada.

Leslie, S.A., and **Goldman, D.** Insights into *Amorphognathus* paleobiology and taxonomy from bedding plane occurrences of *A. tvaerensis*. **Geological Society of America Abstracts with Programs** 46 (6), p. 821. Vancouver, B.C., Canada.

Boyle, J.T., **Goldman, D.**, Wu, S-Y., Melchin, M.J., Sheets, H.D., and Mitchell, C.E. Distinguishing sampling and ecologic effects on geographic range and duration in graptolites. **Geological Society of America Abstracts with Programs** 46 (6), p. 626. Vancouver, B.C., Canada.

2013

Goldman, D., Sheets, H.D., Bergström, S.M., Nölvak, J., Podhalańska, T., Mitchell, C.E., and Vandenbrouke, T.R.A. High-resolution stratigraphic correlation and biodiversity dynamics of Middle and Late Ordovician marine fossils from Baltoscandia and Poland. **Geological Society of America Abstracts with Programs**. Vol. 45, No. 7, p. 236.

Goldman, D., Mitchell, C.E., Podhalańska, T., Nölvak, J., Melchin, M.J., Sheets, H.D., and Fan, J. Late Middle and Late Ordovician Graptolite biostratigraphy and biogeography – a reassessment from Polish and Baltoscandian drill core data. **International Geoscience Programme Project 591**, 3rd Annual Meeting, Lund, Sweden.

Goldman, D., Oxman, M., Nölvak, J., Sheets, H.D., Wu, S-Y, and Mitchell, C.E. Ordovician Chitinozoan Biogeography and Paleoecology: Examining the Effect of Habitat on Species Longevities. **International Geoscience Programme Project 591**, 3rd Annual Meeting, Lund, Sweden.

Boyle, J.T., Sheets, H.D., Wu, S-Y., **Goldman, D.**, Melchin, M.J., Cooper, R.A., Sadler, P, and Mitchell, C.E. Analysis of Early Paleozoic zooplankton (Graptoloidea) extinction risk using model-choice. **Geological Society of America Abstracts with Programs**. Vol. 45, No. 7, p. 236.

Melchin, M.J., Mitchell, C.E., Holmden, C., Štorch, P, and **Goldman, D.** Changing plankton community structure in the Late Katian-Early Hirnantian: Evidence from graptolites and Nitrogen isotopes. **Geological Society of America Abstracts with Programs**. Vol. 45, No. 7, p. 236.

2012

Oxman, M., Goldman, D., Nölvak, J., Sheets, H.D., and Wu, S-Y. Ordovician Chitinozoan Biogeography and Paleoecology: Examining the Effect of Habitat on Species Longevities. **Geological Society of America Abstracts with Programs**, Vol. 44, No. 7, p. 401, Charlotte, NC.

Sheets, H.D., Goldman, D., Wu, S-Y, and Mitchell, C.E. One hundred years of range charts: extracting and managing taxonomic presence-absence data sheets. **Geological Society of America Abstracts with Programs**, Vol. 44, No. 7, p. 90, Charlotte, NC.

Goldman, D., Podhalańska, T., Sheets, H. David, Bergström, S. M., Nölvak, J., and Reinhart, K. High Resolution Stratigraphic Correlation and Biodiversity Dynamics of Middle and Late Ordovician Marine Fossils from Poland and Baltoscandia, *in* **GeoShale 2012: Recent Advances in Geology of Fine Grained Sediments, Abstracts and Field Trip Guidebook**, p. 35. Polish Geological Institute and National Research Institute, Warsaw, Poland.

Goldman, D., Mitchell, C.E., Melchin, M., Wu, S-Y, Fan, J., and Sheets, H.D. Biogeography and Mass Extinction: Extirpation and re-invasion of *Normalograptus* species (Graptolithina) in the Late Ordovician Palaeotropics. **Geological Society of America Abstracts with Programs**, Vol. 44, No. 5, p. 18, Dayton, OH.

Sandy, M.R., and Goldman D. (eds.) On and Around the Cincinnati Arch and Niagara Escarpment. **Geological Society of America Field Guide 27**. 130 pp. Boulder, CO.

2011

Johnson, C. A., Goldman, D. , Wu, S.-Y. Graptolite biogeography: using paleo-GIS to examine the evolutionary dynamics of early Paleozoic zooplankton. **Geological Society of America Abstracts with Programs 43(3)**, p. 13, New Orleans, LA.

Pantle, C., Goldman, D., Bergstrom, S. M. , Sheets, H. D. "Using Constrained Optimization (CONOP9) to Examine Conodont Diversity Dynamics from the Ordovician of Baltoscandia. **Geological Society of America Abstracts with Programs 43(3)**, p. 13, New Orleans, LA.

2010

Goldman, D., Pantle, C.A., Sheets, H.D., and Bergström, S.M. A Composite Taxon Range Chart and Conodont Biodiversity Dynamics from the Ordovician of Baltoscandia. **Geological Society of America Abstracts with Programs 42(2): 9**, Branson, MO.

Leslie, S.A, Sell, B., K., Lance, Goldman, D., Samson, S.D., Mitchell, C.E., and Sadler, P. Conodonts preserved as alunite casts and why there are no apatite phenocrysts in K-bentonites from the Katian (Late Ordovician) GSSP site. **Geological Society of America Abstracts with Programs 42(5)**, Denver, CO.

2009

Goldman, Daniel; Sheets, H. David; Bergström, S. M.; Nölvak, Jaak "Middle and Late Ordovician Biodiversity Dynamics in Marine Microfossils from Baltoscandia" **9th North American Paleontology Convention Abstracts**, Cincinnati Ohio, p. 167.

Goldman, Daniel; Leslie, S.A., Hawkins, A.D., and Derose, L.M. "Bedding Plane Co-Occurrence of Biostratigraphically Useful Conodonts and Graptolites in Ordovician Shale Sequences" **9th North American Paleontology Convention Abstracts**, Cincinnati Ohio, p. 225.

Leslie, S.A., Goldman, D., Williams, N.A., Derose, L.M., and Hawkins, A.D. 2009. Conodont and Graptolite Co-Occurrence in Ordovician Dark Shale Sequences. Newsletter of the Subcommittee on Permian Stratigraphy, Number 53, p. 27-28.

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