

SUSAN T. GOLDSTEIN
PROFESSOR EMERITUS, DEPARTMENTS OF GEOLOGY AND MARINE SCIENCES
CURRICULUM VITAE, 2024

Address:

Department of Geology
University of Georgia
Athens, GA 30602
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Education:

Ph.D.; University of California, Berkeley; 1984, (Paleontology)
“Biology of a *Saccamina* (Foraminifera) from San Francisco Bay”
Major Professor: Zach M. Arnold (deceased)
M.S.; University of Florida; 1976, (Geology)
“The Distribution and Ecology of Benthic Foraminifera in a South Florida Mangrove Environment”
Major Professor: David Nicol (deceased)
B.S.; Bowling Green State University; 1974, (Geology and Biology)

Employment and Positions:

2021 – Present: Professor Emerita, University of Georgia
Fall, 2009: Guest Investigator, Woods Hole Oceanographic Institution; Woods Hole, MA
2000 - 2006: Head, Department of Geology, Univ. of Georgia.
1999 - 2020: Professor, Geology and Marine Sciences; Univ. of Georgia
1992 - 1999: Associate Professor, Geology and Marine Sciences; Univ. of Georgia
1990 - 1992: Associate Professor (with tenure), Geology, Univ. of Georgia
1984 - 1990: Assistant Professor, Geology, University of Georgia

Honors and Awards:

Fellow, Paleontological Society
Cushman Foundation for Foraminiferal Research: Board of Directors, Member, 1999 – 2021.
President: 2007-2008; 2012-2013.
Editor – *Journal of Foraminiferal Research*, 1998-2000.
Honorary Director: 2022 – Present.
Marine Ecology Progress Series: Featured Article, vol. 437, September, 2011.
Diatome Awards: Second Place (1998), Third Place (2006, 2011); presented at the Microscopy & Microanalysis Annual Meetings.
U.S. Antarctic Service Medal, 2001.
W. Storrs Cole Memorial Research Award (Geological Society of America); 1998.
General Sandy Beaver Teaching Award (Franklin College of Arts and Sciences, Feb. 15, 1988.
Teacher of the Year, Department of Geology, University of Georgia (voted by geology undergraduates), Spring, 1987.

RESEARCH

Research Focus:

Research has focused on modern benthic foraminifera. Projects include foraminiferal life cycles and reproductive strategies; dispersal; test morphogenesis, especially among foraminiferal basal clades; the ecology, taphonomy, and paleoecology of salt marsh foraminifera, including applications of salt marsh foraminifera to studies on Holocene sea level change. Recent research focuses on dispersal mechanisms and recruitment in benthic foraminifera, understanding foraminiferal biodiversity, and the effects of selected pollutants on foraminifera.

Publications -- Edited Volumes:

Goldstein, S.T. and Bernhard, J.M. (Editors), 1997, Theme Issue: Biology of Foraminiferida: Applications in Paleoceanography, Paleobiology, and Environmental Sciences: *Journal of Foraminiferal Research*, 27(4).

Martin, R.E., Patterson, R.T., Goldstein, S.T., and Kumar, A. (Editors), 1999. Special Issue: Taphonomy as a Tool in Paleoenvironmental Reconstruction and Environmental Assessment: *Palaeogeography, Palaeoclimatology, Palaeoecology*, 149(1-4):vii-434.

Cedhagen, T., Goldstein, S.T., and Gooday, A.J., (Editors), 2002, Theme Issue: Biology and Biodiversity of Allogromiid Foraminifera: *Journal of Foraminiferal Research*, v. 32, no. 4, p. 331-458.

Book Chapters:

Goldstein, S.T., 1999. Foraminifera: A Biological Overview, p. 37-56, in B.K. Sen Gupta (Ed.) *Modern Foraminifera*; Kluwer, Dordrecht, The Netherlands.

Alve, E., and Goldstein, S.T. 2014. The propagule method as an experimental tool in foraminiferal ecology. p. 1-12, In: Kitazato, H., and Bernhard, J.M. (Eds.), *Experimental Approaches in Foraminifera: Collection, Maintenance and Experiments*, Springer.

Published Papers: (+ indicates a publication not refereed)

Langer, M.R., Trubin, Y., Tian S.Y., and Goldstein, S.T., 2024. Heterogeneity among juvenile megalospheres in *Peneroplis pertusus* (Forskål) from the Line Islands (Pacific Ocean): size range, morphotypes, and test deformations: *Journal of Foraminiferal Research*, 54(3):264-270.

Timmons, C., Le, Kristine, Rappaport, H., Sterner, E.G., Maurer-Alcalá, X.X., Goldstein, S.T., and Katz, L.A., 2024. Foraminifera as a model of eukaryotic genome dynamism: *mBio* (10.1128mbio.003379-23).

Goetz, E.J., Greco, M., Rappaport, H.B., Weiner, A.K.M., Walker, L.M., Bowser, S., Goldstein, S., and Katz, L.A., 2022. Foraminifera as a model of the extensive variability in genome dynamics among eukaryotes: *BioEssays*, 44:2100267. <https://doi.org/10.1002bies.202100267>.

Goldstein, S.T., Ballero, D.A., Richardson, E.A. and Bowser, S.S., 2022. *Allogromia arnoldi* n. sp.: distribution, phylogenetic placement, culture methods, and fine structure of a new monothalamid foraminiferan: *Journal of Foraminiferal Research*, 52:179-188.

Smith, C.W., and Goldstein, S.T., 2021. Effects of varied temperature and salinity on assemblages of foraminifera grown with exposure to heavy metal pollutants (nickel and zinc): *Journal of Foraminiferal Research*, 51:99-114.

Weinmann, A.E., Goldstein, S.T., Trianaphyllou, M.V., and Langer, M.R., 2021. Community responses of intertidal foraminifera to pH variations: a culture experiment with propagules: *Aquatic Ecology*, 55:309-325. <https://doi.org/10.1007/s10452-021-09833-w>.

Smith, C.W., Fehrenbacher, J.S., and Goldstein, S.T. 2020. Incorporation of heavy metals in experimentally grown foraminifera from Sapelo Island, Georgia and Little Duck Key, Florida, USA: Marine Micropaleontology, doi.org/10.1016/j.marmicro.2020.101850.

Smith, C.W., and Goldstein, S.T. 2019. The effects of selected heavy metals (arsenic, cadmium, nickel, zinc) on experimentally grown foraminiferal assemblages from Sapelo Island, Georgia and Little Duck Key, Florida, U.S.A.: Journal of Foraminiferal Research, 49:303-217.

Weinmann, A.E., Goldstein, S.T., Triantaphyllou, M.V., and Langer, M.R., 2019. Effects of sampling site, season, and substrate on foraminiferal assemblages grown from propagule banks from lagoon sediments of Corfu Island (Greece, Ionian Sea), PLoS ONE, 14(6):e0219015. <https://doi.org/10.1371/journal.pone.0219015> (27 pages)

Brouillette Price, E., Kabengi, N., and Goldstein, S.T. 2019. Effects of heavy-metal contaminants (Cd, Pb, Zn) on benthic foraminiferal assemblages grown from propagules, Sapelo Island, Georgia (USA): Marine Micropaleontology, 147:1-11. doi.org/10.1016/marmicro.2019.01.004

+Goldstein, S.T., and Bowser, S.S., 2018. Memorial to Zach McLendon Arnold (1921-2015): Journal of Foraminiferal Research, 48:183-185.

Goldstein, S.T., and Richardson, E.A., 2018. Fine structure of the foraminifer *Haynesina germanica* (Ehrenberg) and its sequestered chloroplasts: Marine Micropaleontology, 138:63-71. doi.org/10.1016/j.marmicro.2017.10.010

Weinmann, A.E., and Goldstein, S.T. 2017. Landward directed dispersal of benthic foraminiferal propagules at two shallow-water sites in the Doboy Sound area (Georgia, U.S.A.): Journal of Foraminiferal Research, 47:325-336.

Phalen, W.G., Bernhard, J.M., Bowser, S.S., and Goldstein, S.T. 2016. Distribution, abundance, and laboratory calcification of *Homotrema rubrum* from Tennessee Reef, Florida Keys: Journal of Foraminiferal Research, 46:409-419.

Weinmann, A.E., and Goldstein, S.T. 2016. Changing structure of benthic foraminiferal communities: implications from experimentally grown assemblages of coastal Georgia and Florida, U.S.A., Marine Ecology, 37:891-906. doi: 10.1111/maec.12368

+Goldstein, S.T. 2016. 2015 Joseph A. Cushman Award to Pamela Hallock Muller: Journal of Foraminiferal Research, 46:1-2.

Altin-Ballero, D.Z., Habura, A., and Goldstein, S.T., 2013. *Psammophaga sapela* n. sp., a new monothalamous foraminiferan from coastal Georgia, U.S.A.: fine structure, gametogenesis, and phylogenetic placement: Journal of Foraminiferal Research, 43:113-126.

Goldstein, S.T., and Alve, E. 2011. Experimental assembly of foraminiferal communities from coastal propagule banks: Marine Ecology Progress Series, 437:1-11. [Featured Article for this issue]

Goldstein, S.T., Habura, A., Richardson, E.A., and Bowser, S.S., 2010. *Xiphophaga minuta*, and *X. allominuta*, nov. gen., nov. spp., new monothalamid Foraminifera from coastal Georgia (USA): cryptic species, gametogenesis, and an unusual form of chloroplast sequestration: Journal of Foraminiferal Research, 40:3-15.

Bernhard, J.M., Goldstein, S.T., and Bowser, S.S. 2010. An ectobiont-bearing foraminiferan, *Bolivina pacifica*, that inhabits microoxic pore waters: cell-biological and paleoceanographic insights: *Environmental Microbiology*, 12(8):2107-2119.

Alve, E., and Goldstein, S.T. 2010. Dispersal, survival and delayed growth of benthic foraminiferal propagules: *Journal of Sea Research*, 63:36-51.

Altin, D.Z., Habura, A., Goldstein, S.T. 2009. A new allogromiid foraminifer *Niveus flexilis* nov. gen., nov. sp., from coastal Georgia, USA: fine structure and gametogenesis: *Journal of Foraminiferal Research*, 39(2): 73-86.

Habura, A., Goldstein, S.T., Broderick, S., and Bowser, S.S. 2008. A bush, not a tree: The extraordinary diversity of cold-water basal foraminiferans extends to warm-water environments: *Limnology and Oceanography*, 53(4):1339-1351.

Habura, A., Goldstein, S.T., Parfrey, L., and Bowser, S.S., 2006. Phylogeny and ultrastructure of *Miliammina fusca*: Evidence for secondary loss of calcification in a miliolid foraminifer: *Journal of Eukaryotic Microbiology*, 53(3):204-210.

+Goldstein, S.T., Arnold, A.J., and McLaughlin, P.P., Jr., 2006, The Joseph A. Cushman Award to Barun K. Sen Gupta: *Journal of Foraminiferal Research*, 36(1):1-2.

Alve, E. and Goldstein, S.T. 2003. Propagule transport as a key method of dispersal in benthic Foraminifera (Protista): *Limnology and Oceanography*, 48:2163-2170.

Goldstein, S.T. and Richardson, E.A. 2002. Comparison of test and cell body ultrastructure in three modern allogromiid foraminifera: Application of high pressure freezing and freeze substitution: *Journal of Foraminiferal Research*, 32:375-383.

Alve, E. and Goldstein, S.T. 2002. Resting stage in benthic foraminiferal propagules: a key feature for dispersal? Evidence from two shallow water species: *Journal of Micropaleontology*, 21:95-96.

+ Goldstein, S.T. 2002. (book review) *Monitoring in Coastal Environments Using Foraminifera and Thecamoebian Indicators*. *Quarterly Review of Biology*, 77:226.

Goldstein, S.T., and Watkins, G.T. 1999. Taphonomy of salt-marsh foraminifera: An example from coastal Georgia: *Palaeogeography, Palaeoclimatology, Palaeoecology*, 149(1-4):103-114.

Walker, S.E., and Goldstein, S.T. 1999. Experimental field taphonomy: Taphonomic tiering of molluscs and foraminifera above and below the sediment-water interface: *Palaeogeography, Palaeoclimatology, Palaeoecology*, 149(1-4):227-244.

+ Martin, R.E., Goldstein, S.T., and Patterson, R.T., 1999, Taphonomy as an environmental science: *Palaeogeography, Palaeoclimatology, Palaeoecology*, 149(1-4):vii-viii.

Goldstein, S.T. and Watkins, G.T. 1998. Elevation and the distribution of salt-marsh foraminifera, St. Catherines Island, Georgia: A taphonomic approach: *Palaeo*, 12(6):570-580.

Goldstein, S.T. 1997. Gametogenesis and the antiquity of reproductive pattern in the Foraminiferida: *Journal of Foraminiferal Research*, 27:319-328.

+ Goldstein, S.T. and Bernhard, J.M. 1997. A theme issue on biology of the Foraminiferida: applications in paleoceanography, paleobiology, and the environmental sciences: *Journal of Foraminiferal Research*, 27:253.

Goldstein, S.T., Watkins, G.T., and Kuhn, R.M. 1995. Microhabitats of salt marsh foraminifera: St. Catherines Island, Georgia: *Marine Micropaleontology*, 26(1-4):7-30.

Goldstein, S.T. and Corliss, B.H. 1994. Deposit feeding in selected deep-sea and shallow-water benthic foraminifera: *Deep Sea Research*, 41:229-241.

Goldstein, S.T. and Moodley, L. 1993. Gametogenesis and the life cycle of the foraminifer *Ammonia beccarii* (Linné) forma *tepida* (Cushman): *Journal of Foraminiferal Research*, 23:213-220.

Goldstein, S.T. and Harben, E.B. 1993. Taphofacies implications of infaunal foraminiferal assemblages in a Georgia salt marsh, Sapelo Island: *Micropaleontology*, 39:53-62.

Goldstein, S.T. and Barker, W.W., 1990, Gametogenesis in the monothalamous agglutinated foraminifer *Cribrorhammina alba*: *Journal of Protozoology*, 37:20-27.

Goldstein, S. T., 1988b, Foraminifera of relict salt marsh deposits, St. Catherines Island, Georgia: taphonomic implications: *PALAIOS*, 3:327-334.

Goldstein, S. T., 1988a, On the life cycle of *Saccammina alba* Hedley: *Journal of Foraminiferal Research*, 18:311-325.

Goldstein, S. T. and Barker, W. W., 1988, Test ultrastructure and taphonomy of the monothalamous agglutinated foraminifer *Cribrorhammina* n. gen. *alba* (Heron-Allen and Earland): *Journal of Foraminiferal Research*, 18:130-136.

Goldstein, S. T. and Frey, R. W., 1986, Salt marsh foraminifera, Sapelo Island, Georgia: *Senckenbergiana maritima*, 18:97-121.

Gregg, J., Goldstein, S. T. and Walters, L. J., 1978, Occurrence of strained quartz in the siliceous frustules of cultured fresh-water diatoms: *Journal of Sedimentary Petrology*, 47:1623-1629.

Theme Sessions & Symposia Chaired / Co-Chaired:

“Foraminiferal Biology in a Changing World,” Chairs: Joan M. Bernhard and Susan T. Goldstein; International Symposium on Foraminifera, 2018; Edinburgh, Scotland (June 17-22, 2018).

Invasions, Dispersal and Biogeographic Range Expansions of Foraminifera: Lessons from Earth History; International Symposium on Foraminifera, 2014, Concepcion, Chile; Chairs: Martin R. Langer, Anna E. Weinmann, Susan T. Goldstein.

Conservation Paleobiology – The Microfossil Record; Susan T. Goldstein and Jere Lipps, Chairs; Geological Society of America, Annual Meeting (Denver, CO), 2013

Frontiers in Foraminiferal Research : Biology/Ecology/Paleoecology; Pamela Hallock and Susan Goldstein; Geological Society of America, Annual Meeting (Minneapolis, Minnesota). 2011

Biogeography of Foraminifera; International Symposium on Foraminifera, 2010; Bonn, Germany; (Chairs: M. Langer and S.T. Goldstein)

Systematics and Evolution of Protists: Fossils, Morphology and Molecules; International Symposium on Foraminifera, 2006; Natal Brazil; (Chairs: J. Lipps and S.T. Goldstein)

Protistan Paleobiodiversity: Understanding Evolutionary Patterns (Cushman Foundation); Geological Society of America Annual Meeting, 2004. (Chairs: S.T. Goldstein and B. Huber)

Biology of the Foraminiferida: Applications in Paleoceanography, Paleobiology, and the Environmental Sciences, Cushman Foundation; Geological Society of America Annual Meeting, 1996. (Chairs: S.T. Goldstein and J.M. Bernhard)

Tahonomy of Microfossils: Paleoenvironmental Reconstruction and Environmental Assessment, Cushman Foundation; Geological Society of America Annual Meeting, 1995. (Chairs: R.E. Martin and S.T. Goldstein)

Local, Regional, and Global Change: Microfauna as Tools, Cushman Foundation; Linked Earth Systems: 1st SEPM Congress on Sedimentary Geology, 1995. (Chairs: D.B. Scott and S.T. Goldstein)

Workshop Presentations (Invited):

Workshop on the Biology of the Foraminifera (July 27-30, 1997), Lizard Island Marine Station (Northern Great Barrier Reef, Australia -- in conjunction with the 10th International Congress of Protozoology)

- 1) Ultrastructural Methods for Foraminifera (with Sam Bowser)
- 2) Life Cycles of the Foraminifera (with John Lee and Jan Pawlowski)

“Standardisation of methods in foraminiferal studies”, presented with J.-P. Debenay, (Feb., 2002); Forams 2002 – International Symposium on Foraminifera, Perth, Western Australia.

“Allogromiid Foraminifera”, presented with S.S. Bowser; International Symposium on Foraminifera, 2006, Natal Brazil

“Workshop on Monothalamid Foraminifera” – S.T. Goldstein and I. Voltski; The Bathsheva de Rothschild Workshop: Live foraminifera as a new model system for monitoring and reconstructing marine environments; 10-16 September, 2016, Inter University Institute (IUI) Eilat, Israel.

Extended Field Work:

Antarctica, New Harbor: Oct – Nov, 1999; Oct – Dec, 2016.

Abstracts since 2010 (**=invited papers)

**Goldstein, S.T., 2024. The multifaceted foraminiferal life cycle underpins community-level resilience and responses in a changing world: International Society of Protistologists Annual Meeting, Seattle, Washington, Abstracts, p. 141.

Goldstein, S.T., and Richardson, E.A., 2023. Growing deformed benthic foraminifera from propagules with exposure to Zinc: Forams 2023, June 26th – 30th, 2023 – Perugia, Italy, Abstracts with Programs, p. 131.

Weinmann, A.E., Hassenrück, C., Raposo, D., Goldstein, S.T., Langer, M.R., Li, Q., Triantaphyllou, M.V., and Mourard, R., 2023. Tracking community turnover through time: A combined approach of propagule culture experiments and eDNA metabarcoding: Forams 2023, June 26th – 30th, 2023 – Perugia, Italy, Abstracts with Programs, p. 267.

Weinmann, A.E., Goldstein, S.T., Langer, M.R., and Triantaphyllou M.V. 2020. Compositional shifts in shallow-water foraminiferal assemblages in response to pH variations: Insights from a culture experiment with propagules: Geological Society of America Annual Meeting (Virtual Meeting).

Smith, C.W., Fehrenbacher, J.S., and Goldstein, S.T. 2019. Incorporation of heavy metals in experimentally grown foraminifera from Sapelo Island, Georgia and Little Duck Key, Florida, USA; Geological Society of America Annual Meeting, (Phoenix, AZ), 51(5): doi: 10.1130/abs/2019AM-331649.

Weinmann, A.E., Goldstein, S.T., Triantaphyllou, M.V., and Langer, M.R., 2019. Ecology and community structure of modern intertidal foraminifera from Corfu Island (Greece): insights from propagule experiments? Geological Society of America Annual Meeting, (Phoenix, AZ), 51(5):doi: 10.1130/abs/2019AM-334247.

Weinmann, A.E., Goldstein, S.T., Triantaphyllou, M.V., Langer, M.R. 2018. Growth experiments reveal “exotic” propagule assemblages of benthic foraminifera in the Chalikiopoulou Lagoon, Corfu (Greece) – A glimpse of future community structures? Ocean Sciences Meeting 2018 (Portland, OR; 12-16 Feb 2018); A34A-1374.

Goldstein, S.T., 2018. On the tandem evolution of the test and life cycle in marine, benthic foraminifera: International Symposium on Foraminifera 2018, Edinburgh, Scotland, June 17-22, 2018, Abstracts, p. 231.

Smith, C.W., and Goldstein, S.T. 2018. Effects of selected heavy metals on shallow-water benthic foraminiferal assemblages from Sapelo Island, Georgia and Little Duck Key, Florida (USA): An investigation using the propagule method: International Symposium on Foraminifera 2018, Edinburgh, Scotland, June 17-22, 2018, Abstracts, p. 592.

Weinmann, A.E., Goldstein, S.T., Triantaphyllou, M.V., and Langer, M.L. 2018. New insights from propagule experiments in a shallow-water lagoon in Corfu (Greece, Ionian Sea): International Symposium on Foraminifera 2018, Edinburgh, Scotland, June 17-22, 2018, Abstracts, p. 681.

Smith, C.W. and Goldstein, S.T., 2017. Effect of selected heavy metal elements on shallow-water benthic foraminiferal assemblages from Sapelo Island, Georgia and Little Duck Key, Florida: an

investigation using the propagule method: Geological Society of America Annual Meeting, Seattle, Washington, Abstracts with Programs, 49(6): doi: 10.1130/abs/2017AM-305996

**Goldstein, S.T. 2016. Applications of the Propagule Method in Foraminiferal Ecology. The Bathsheva de Rothschild Workshop: Live foraminifera as a new model system for monitoring and reconstructing marine environments; 10-16 September, 2016, Eilat, Israel; Meeting Handbook & Abstracts, p. 41. [Invited, keynote talk]

Weinmann, A.E., and Goldstein, S.T., 2016. Biding their time – Insights from propagule experiments into the assemblage composition of shallow-water foraminifera under environmental change: EGU General Assembly 2016, Geophysical Research Abstracts, Vol. 18, EGU2016-417.

Goldstein, S.T., 2015. Dispersal, dormancy, and the evolution of the test and life cycle in foraminifera: Geological Society of America, Abstracts with Programs (Baltimore, Maryland).

Goldstein, S.T. 2015. Fine structure of *Allogromia* sp. ZG, an easily cultured foraminiferan from Long Key, Florida (USA): Proceedings of the Southeastern Microscopy Society, 35:34.

Weinmann AE, Goldstein ST (2015) Potentially changing structures of foraminiferal communities of coastal Georgia and Florida (U.S.A.). 86. Jahrestagung der Paläontologischen Gesellschaft, 14-17 September 2015, Schiffweiler, ZfB Scriptum 4 (2015): 56.

Weinmann, A.E., and Goldstein, S.T., 2014. Dispersal of shallow-water foraminifera: A key to current and potential future distribution patterns: American Geophysical Union (AGU), Fall Meeting, San Francisco, CA.

Goldstein, S.T., Ballero, D.Z.A., and Richardson, E.A., 2014. *Allogromia* sp. revisited: a new strain of a well-known foraminiferan: Geological Society of America, Abstracts with Programs (Vancouver, British Columbia, Canada), 46(6):336.

Ballero, D.Z. A., and Goldstein, S.T., 2014. Anatomy of an orphaned monothalamid foraminiferan: fine structure and phylogenetic position: Geological Society of America, Abstracts with Programs (Vancouver, British Columbia, Canada), 46(6):336.

** Goldstein, S.T. 2014. Morphology, molecules, and the monothalamous Foraminifera: Overview of works in progress: International Symposium on Foraminifera: Forams 2014; Chile, 19-24, 2014, Abstract Volume, p. 1; published by the Grzybowski Foundation. [Keynote Talk]

Goldstein, S.T., Edgcomb, V.P., Lang, D. and Bernhard, J.M. 2014. Dispersal of benthic foraminifera in the western north Atlantic: Pattern, processes, and population dynamics: International Symposium on Foraminifera: Forams 2014; Chile, 19-24, 2014, Abstract Volume, p. 45-46; published by the Grzybowski Foundation.

Lang, D.M., Bernhard, J.M., and Goldstein, S.T., 2013. Dispersal and the growth of allochthonous benthic foraminifera in shelf to bathyal settings, western North Atlantic: Geological Society of America, Annual Meeting (Denver, CO), Abstracts with Programs, 45(7):323.

Ballero, D.Z.A., Habura, A., and Goldstein, S.T., 2013. In or out? Application of a multi-gene analysis testing the fidelity of the morphologically diverse clade E allogromiid foraminifera: Geological

Society of America, Annual Meeting (Denver, CO), Abstracts with Programs, 45(7):474.

Goldstein, S.T., Edgcomb, V.P., Lang, D.M., Bernhard, J.M., 2013. Warming oceans and potential range expansion of “smaller” benthic foraminifera: insights from propagule experiments: Geological Society of America, Annual Meeting (Denver, CO), Abstracts with Programs, 45(7):532.

Platsky, A. L.-A., Sclafani, J. A., and Goldstein, S.T., 2012, The effect of increased salinity on foraminiferal assemblages in Georgia salt marshes: Southeastern GSA Section Meeting, Asheville, NC, Abstracts with Programs, 44(4):18.

Lang, D.M., Graham, L.N., Thompson, J., Bernhard, J.M., and Goldstein, S.T. 2012, Dispersal and propagule banks of benthic foraminifera: shelf to bathyal settings, western North Atlantic: Geological Society of America Annual Meeting & Exposition, Abstracts with Programs, 44(7):86.

Ballero, D.Z., Habura, A., Schroeder, P.A., and Goldstein, S.T., 2012, Fine structure, reproduction and phylogenetic placement of a species of *Psammophaga* (Foraminifera) from coastal Georgia, USA: Geological Society of America Annual Meeting & Exposition, Abstracts with Programs, 44(7):90.

** Goldstein, S.T., Alve, E., and Bernhard, J.M., 2012, The propagule bank as an experimental tool in foraminiferal ecology: Geological Society of America Annual Meeting & Exposition, Abstracts with Programs, 44(7):523.

Goldstein, S.T., Edgcomb, V.P., and Bernhard, J.M., 2011. Propagules of benthic foraminifera and the offshore dispersal of modern shallow-water taxa: Geological Society of America, Annual Meeting (Minneapolis, Minnesota), Abstracts with Program:43(5):555.

Lipps, J.H., and Goldstein, S.T., 2011. Life history and dispersal in foraminifera: Geological Society of America, Annual Meeting (Minneapolis, Minnesota), Abstracts with Program:43(5):555.

Radford, D.T., Overstreet, L.D., Bernhard, J.M., and Goldstein, S.T., 2011. Experimentally grown foraminiferal assemblages from the “mud patch” continental shelf site (Cape Cod, USA): the roles of temperature and diet: Geological Society of America, Annual Meeting (Minneapolis, Minnesota), Abstracts with Program:43(5):596.

Goldstein, S.T., Bowser, S.S., and Richardson, E.A., 2011. Toward understanding the biodiversity of gromiids: the fine structure of *Gromia* sp. from Zane Grey Creek, Florida Keys: *Microscopy and Microanalysis*, 17(Suppl. 2):348.

** Goldstein, S.T., Alve, E., and Bernhard, J.M. 2011. Applications of the foraminiferal propagule bank: a novel approach to understanding the ecology of foraminifera: Geological Society of America, Southeastern Section, 42(2):71.

Overstreet, L.D., Radford, D.T., Bernhard, J.M., and Goldstein, S.T. 2011. A comparison of in situ and experimentally grown foraminiferal assemblages from the “mud patch” continental shelf site (Cape Cod, USA): the role of temperature: Geological Society of America, Southeastern Section, 42(2):4.

Goldstein, S.T., Bernhard, J.M., and Edgcomb, V.P., 2010. Propagule dispersal in benthic

foraminifera: biogeography and the occurrence of “exotic” taxa: Geological Society of America Annual Meeting, Abstracts with Program, 42(5):374.

** Goldstein, S.T. 2010. On the ecology and evolution of the foraminiferal life cycle: ISOP (International Society of Protozoologists), Canterbury, UK, July 18-23, 2010, Abstracts, p. 32 (plenary talk)

Goldstein, S.T., Bernhard, J.M., and Edgcomb, V.P., 2010. Propagule dispersal in benthic foraminifera and the occurrence of “exotic” taxa: Forams 2010 - International Symposium on Foraminifera, Bonn; Abstracts Volume with Program, p. 96.

Goldstein, S.T., 2010. Foraminiferal ectobionts and the occurrence of aberrant test morphologies: Forams 2010 - International Symposium on Foraminifera, Bonn; Abstracts Volume with Program, p. 96.

Altin-Ballero, D.Z., Habura, A., and Goldstein, S.T., 2010. Phylogeny reconstruction of selected Clade E allogromiid foraminifera using multiple genetic markers: Forams 2010 - International Symposium on Foraminifera, Bonn; Abstracts Volume with Program, p. 46.

Bowser, S.S., Loncarek, J., Goldstein, S.T., and Travis, J.L., 2010. Pseudopodia of *Gromia* and *Allogromia*: sister organelles or long (long) lost cousins?: Forams 2010 - International Symposium on Foraminifera, Bonn; Abstracts Volume with Program, p. 62.

Goldstein, S.T., and Bernhard, J.M., 2010. Dispersal in benthic Foraminifera and dynamics of the “propagule bank,” Benthic Ecology Meeting 2010, Wilmington, NC, Abstracts, p. 73.

INSTRUCTION

Courses Taught:

GLY 116 Historical Geology (for non-majors): Prior to 1998

GEOL 1122 Earth's History of Global Change

GLY 126 Historical Geology: Prior to 1998

GLY 236H / GEOL 1122H Honors Historical Geology

GLY 235H/236H/499H Summer Honors Field Geology

GLY 403/603 Invertebrate Paleontology, Prior to 1998

GEOL 4010 Life, Environments, and Ecologies of the Past: Prior to 2001

GLY 4/6510 Marine Micropaleontology

GLY 802N or GEOL 8060 Advanced Topics in Paleobiology

GEOL 8130 Paleocommunities

International Summer School in Innsbruck, Austria: administered by the University of New Orleans (with Univ. of Georgia, Univ. of Florida); GEOL 1001 (Physical Geology) and GEOL 1002 (Historical Geology), Summer, 1996

Course Coordination:

GLY 116/GEOL 1122L: coordinate labs and train TAs: Fall, 1995 - 2020

Student and Post Doctoral Advising:

Post-Doctoral Advisement:

Anna Weinmann: Max Kade Post-doctoral Fellowship, Ph.D. from University of Bonn, 2014-2015.

“Dispersal of shallow-water benthic foraminifera: A key to current and potential future

distribution patterns and biogeography”

PhD Dissertations directed:

Christopher Smith: “Foraminiferal response to heavy metals: An examination of potential bioindicators and incorporation using the propagule method” – Completed, December, 2019

Deniz Altin-Ballero: “The application of the total evidence phylogenetic approach for phylogenetic reconstruction of selected allogromiid foraminifera of Sapelo Island, Georgia, USA,”
Completed December, 2013

M.S. Theses directed:

Darin Lang: “Dispersal and propagule banks of benthic foraminifera: shelf to bathyal settings, western North Atlantic” – Completed December, 2013

Ellen Brouillette: “An Experimental Approach to Understand the Responses of Benthic Foraminifera to Cd, Pb, Hg, and Zn”, Department of Geology, University of Georgia, completed Summer, 2009.

Robert M. Kuhn, "Distribution, Taphonomy and Paleoenvironmental Reliability of Salt Marsh Foraminifera, South End Marsh, St. Catherines Island, Georgia", Department of Geology, University of Georgia, completed Winter, 1994.

G. Todd Watkins, "Southeastern U.S. Backbarrier Salt Marsh Foraminifera (St. Catherines Island, Georgia): Factors Controlling Assemblage Distribution", Department of Geology, University of Georgia, completed Fall, 1993.

William B. Egeland, "Diversity and distribution of benthic foraminifera in the nearshore zone off the coast of Georgia and South Carolina", Department of Geology, University of Georgia, completed Spring, 1992.

Barbara A. Murphy, "Quantitative stratigraphic distribution of Quaternary benthic foraminifera on the continental shelf off South Carolina", Department of Geology, University of Georgia, completed Spring, 1987.

Bachelors Candidates

Senior Honors Theses directed:

Emily C. Bagwell, "Infaunal Foraminifera in a Georgia Salt Marsh", Department of Geology, University of Georgia, completed Fall, 1988

Stephen K. Wilson, "Selective preservation of foraminifera in a Georgia salt marsh", Department of Geology, University of Georgia, completed Spring, 1986.

Directed Research: (BIO 496H), Erica Key, Winter, 1996; Jon Judy, 2005-2006, Dylan Radford, 2010-2011, Lauren Overstreet, 2010-2011, Nicole Graham, 2010-2013, James Thompson, 2011-2012

Service on numerous other M.S. and Ph.D. Committees

SERVICE

Service has included participation on numerous departmental and university committees, the faculty senate, and graduate and university councils at the University of Georgia; review work for numerous professional journals and funding agencies; and service to professional organizations, particularly the Cushman Foundation for Foraminiferal Research and the Paleontological Society. I served as Editor for the Journal of Foraminiferal Research (3-yr term September, 1997 - September, 2000).