

Morgan L. Vis

Current Address:

Environmental and Plant Biology, Porter Hall
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Education:

B.A. Biology, Kalamazoo College 1989
M.S. Botany, University of Rhode Island 1991
Ph.D. Biology, Memorial University of Newfoundland 1995

Academic Positions Held:

Professor: Ohio University, September 2008-present
Associate Professor: Ohio University, September 2002-2008
Assistant Professor: Ohio University, September 1996-2002
Postdoctoral Researcher – Univ. of Guelph, Aug. 1995–1996, Mol. Biol. Freshwater Red Algae.
Postdoctoral Researcher – MUN, Nov. 1994–June 1995, Mol. Biol. Greenland Halibut.

Ongoing Professional Activities:

President, International Phycological Society 2020-2021
Chair, Board of Trustees, Phycological Society of America 2018-2022
Sigma Xi Ohio Univ. Chapter, Treasurer 2013-present
Associate Editor, *Journal of Phycology* August 2012-present
Editorial Board Member – *Fottea* 2017-present

Professional Honors:

2019 Fulbright Scholar, Brazil (August-December 2019)
2019 University Professor (chosen by the UG students of Ohio University)
2018 Ohio University Presidential Research Scholar (3-year award)
2016 College of Arts & Sciences Outstanding Faculty Research & Scholarship Award
2014 Frank Shipley Collins Award - Northeast Algal Society for meritorious service
2013 Distinguished Mentor Award, Honors Tutorial College, Ohio U.
2011 Fulbright Scholar, Brazil (Feb.-April 2012)
2011 Invited Professor - Museum National d'Histoire Naturelle (Sept. 15-Dec. 15 2011)
2009-2011 President, Northeast Algal Society
2006 President of the Phycological Society of America
2004 Delivered Graduate Commencement Address; an honor given to the person who was the Outstanding Graduate Faculty Member in the previous year
2003 Awarded Outstanding Graduate Faculty Member at Ohio University by the Graduate Student Senate (one award for the university per year)
2003 Arts & Sciences Dean's Outstanding Teacher Award
1997 Elected to Sigma Xi

Patents:

"Enhanced Practical Photosynthetic CO₂ Mitigation," 60/218,871 (with D. Bayless & G. Kremer), issued 12/23/2003, Patent Number 6667171

“Apparatus and method for growing biological organisms for fuel and other purposes,” (with D. Bayless, B. Stuart and G. Kremer) issued June 25, 2013. Patent Number US 8,470, 584 B2.

“Flow-controlling header,” 12/599,722 (with D. Bayless, B. Stuart & G. Kremer), issued 04/22/2014, Patent Number 8703478 B2.

Grants:

External Funding:

1. 2017-2020. National Science Foundation (NSF), “OPUS: Synthesizing systematic research of freshwater red algae,” PI M.Vis, \$136,617.
2. 2009-2014. National Science Foundation (NSF), “Collaborative Research, RedToL - Phylogenetic and Genomic Approaches to Reconstructing the Red Algal (Rhodophyta) Tree of Life,” \$3,000,000 total \$392,971 to OU (PI-Vis) (collaborative grant with HS. Yoon, J. Lopez-Bautista, D. Bhattacharya). REU supplements in 2010, 2011, 2013, 2014, \$6,900, \$6900, \$6,255 & \$6253, respectively.
3. 2010-2013. Institute of Nature Conservation, Polish Academy of Science, “Species Diversity and Geographic Distribution of Freshwater Rhodophyta of Selected Water Ecosystems in Poland and Genetic Diversity within European Populations - Freshwater Red Algae of Poland.” PI – Kwandrans, Subcontract to ML Vis \$5,000.
4. 2010. OHIO DEPARTMENT OF DEVELOPMENT. Ohio Third Frontier Wright Projects Program (OTFWPP): Center for Algal Engineering Research and Commercialization. PI – Bayless, CoPIs, Riefler, Vis, Stuart. \$500,000.
5. 2009-2013. National Science Foundation (NSF), “The Appalachian Ohio Herbarium Database Network: Infrastructural Enhancements, Resource Building, and Database Completion,” \$494,019 total PI – H. Ballard, Co-PI M.L. Vis, P.D. Cantino & B.C. McCarthy.
6. 2008. Ohio Biological Survey, “The Role of Algal Diversity in Ecosystem Functions of Acid Mine Drainage Impaired and Remediated Streams”, PIs M. Vis & N. Smucker, \$500.
7. 2007-2010. National Science Foundation (NSF), “REVSYS: Systematics of the batrachospermalean *Contorta* clade (Rhodophyta),” PI M.L. Vis & CoPI O. Necchi Jr., \$150,696. REU supplements in 2008, 2009, \$7,000, \$7,110, respectively.
8. 2006. National Science Foundation (NSF), “Acquisition of equipment for a core genomics facility at Ohio University,” PI S. Wyatt & CoPI M. Vis, \$448,509.
9. 2005. Ohio Biological Survey, “Autecology of *Batrachospermum helminthosum* (Rhodophyta) in a small woodland stream of southeastern Ohio, PIs M. Vis & J. Zalack, \$500.
10. 2004. Environmental Protection Agency (EPA), “Development of Watershed Classification systems for diagnosis of biological impairment in watershed and their receiving water bodies.” PI – Ed Rankin, Co-PIs J. Dyer, K. Johnson, D. Lopez, G. Springer, M. Stoertz, B. Stuart, M. Vis, C. Yoder \$869,440.

11. 2003-2007. National Science Foundation (NSF), "A robust phylogeny of the Batrachospermales (Rhodophyta)," M.L. Vis \$151,164. REU supplements in 2004, 2005, \$7,004, \$6,000, respectively.
12. 2001-2004. U.S. Department of Energy (DOE), "Adaptive, Full-Spectrum Solar Energy Systems," PI D. Bayless, CoPIs M. Vis & G. Kremer, \$133,000 (sub-contract).
13. 2000. U.S. Department of Energy (DOE), "Enhanced Practical Photosynthetic CO₂ Mitigation", PI D. Bayless, CoPIs M. Vis & G. Kremer, \$1.07 Million. Supplement of \$50,000 received in 2004.
14. 2000. Cacapon Institute, "Periphyton Identification & Quantification," Contract to M.L. Vis, \$2,600.
15. 1999. Ohio Biological Survey Institutional Grant, "Aquatic Algal Flora of Deep Woods Farm, Hocking County, OH", M. Vis \$500.
16. 1999. U.S. Department of Energy (DOE), "Carbon Dioxide Mitigation through Controlled Photosynthesis," \$50,000, PI D. Bayless & CoPI M. Vis.
17. 1998. Ohio Biological Survey Institutional Grant, "The Bryoflora of Dysart Woods, an Ohio Old Growth Forest," M. Vis \$500.
18. 1998. Ohio Biological Survey. "All Taxa Survey of Deep Woods, Hocking County, OH," PI M. Vis, CoPIs S. Moody & B. McCarthy \$2,500.
19. 1997. Ohio Biological Survey Institutional Grant, "Aquatic Flora of the Hocking River Drainage Basin," M. Vis \$500.
20. 1997. Ohio Board of Regents Eisenhower Professional Development Program, "The Environment for the Next Millennium." K. Albertson (P.I.), J.P. Braselton (Science Coordinator), M.L. Vis & I.K. Smith (Workshop coordinators) \$45,070.

Internal Funding:

1. 2020-2021. Program to Aid Career Exploration (PACE), "Research Assistant in Algal Biology," funding for an undergraduate researcher to work for 10 hours per week during the academic year.
2. 2018. Ohio University 1804, "Ohio University Aquatic Mesocosm Facility," V. Popescu PI, co PIs K. Johnson, N. Kruse, M. Vis \$49,670.
3. 2017. Ohio University 1804, "Acquisition of Covaris Instrumentation to Enhance Research Infrastructure," S. Wyatt PI, co PIs J. Kopchick, D. Berryman, M. Burdick, E. Murphy, M. Vis, Z. Hua, \$63,545.
4. 2017-2018. Program to Aid Career Exploration (PACE), "Research Assistant in Stream Ecology," funding for an undergraduate researcher to work for 10 hours per week during the academic year.

5. 2016-2018. Ohio University Research Committee Grant, "Comparative microbiomes of freshwater red algae," \$8,000.
6. 2016. Arts and Sciences Faculty Development Grant. "Attendance of Computational & Comparative Genomics Workshop at Cold Spring Harbor." \$1,500.
7. 2016. Innovation Planning Grant, "Partnership for Digitally Connected Environmental Monitoring," N. Kruse PI, co-PIs H. Kruse, Campbell, Hodson, Alexander, Ostermann, Cheji, Crist, Vis, Lynch, Johnson, DeForest, Bowman, Dabelko, Conley, Zimmer, \$20,000.
8. 2013. Ohio University Research Committee Grant, "A new lipid profile method to quickly and inexpensively assess acid mine drainage impacts," DeForest-PI, Vis-coPI, \$6,980.
9. 2012. Baker Fund, "Systematic revision of the freshwater red algal genera, *Lemanea* & *Paralemanea*," \$10,264.
10. 2008-2016. Program to Aid Career Exploration (PACE), "Research Assistant in Phycology," "Research Assistant in Stream Ecology," funding for two undergraduate researchers to work for 10 hours per week during the academic year.
11. 2009. International Travel Fund, "Research trip to China," \$500.
12. 2007. International Travel Fund, "Research trip to Guam, Palau & Chuuk," \$210.
13. 2007. Baker Fund, "Phylogeography of *Batrachospermum gelatinosum* (Rhodophyta) in North America," \$7,500.
14. 1997-2007. Program to Aid Career Exploration (PACE), "Research Assistant in Phycology," funding for an undergraduate researcher to work for 10 hours per week during the academic year.
15. 2006. International Travel Fund, "Research trip to Malaysia," \$500.
16. 2006. 1804 Fund Award, "Biodiesel production from algal biomass feedstocks," PIs B. Stuart, G. Riefler, M. Vis, G. Kremer & D. Bayless, \$26,281.
17. 2006. Office of the Vice President for Research, "Construction of a Biodiesel Production and Analysis Laboratory" PIs D. Bayless, B. Stuart, G. Kremer & M. Vis, \$50,000.
18. 2001. 1804 Fund, "Greenhouse Gas and Nitrogen Emissions Bioremediation using Applications of Translating Slug Flow," PI B. Stuart, CoPIs D. Bayless, G. Kremer, M. Prudich, M. Vis \$32,000.
19. 2001. Summer Incentives Pool, "Neotropical Rainforest Ecology," M. Vis & H. Ballard \$2,400. "Island Biology," M. Vis & H. Ballard \$8,214.
20. 2000. 1804 Fund, "Integrating Undergraduate Natural Science Education Research Training and International Experience in a New Global Studies in Plant Biology Program," H.E. Ballard (P.I.) & M.L. Vis (Co. P.I.) \$44,955.

21. 2000. Baker Fund, "A better understanding of *Batrachospermum helminthosum* (Rhodophyta) population biology through detailed analysis of ITS sequence data," \$10,000.
22. 1999. Arts and Sciences Faculty Development Committee, "One-Week Bryophyte Workshop," \$865.
23. 1999. 1804 Fund, "Reducing Greenhouse Gas Emissions through Controlled Photosynthesis," PI G. Kremer, CoPIs D. Bayless & M. Vis \$27,000.
24. 1998. Ohio University Research Committee, "A Phylogeography of a freshwater red alga, *Batrachospermum helminthosum*." \$7,000.
25. 1998. Arts and Sciences Faculty Development Committee, "Attendance of a National Grant Writing Seminar in order to Create Outstanding Proposals," \$393.
26. 1998. 1804 Fund, "An Automated DNA Sequencing Facility for Increased Research Productivity," PI M. Vis, CoPI H. Ballard \$86,050.
27. 1997. Arts and Sciences Faculty Development Grant. "Field Course on Moss, Liverwort, & Sphagnum Moss Identification." \$1,005.

Book/ Book Chapters:

1. **Vis, M.L.** 2016. Biogeography of River Algae, in *River Algae*, ed. Necchi, O. Jr. Springer Nature, DOI 10.1007/978-3-319-31984-1, pgs. 219-244.
2. Sheath, R.G. & **Vis, M.L.** 2015. Red Algae, Book Chapter for 2nd edition of *Freshwater Algae of North America*, edited by Wehr, J.D., Sheath, R.G. & Kociolek, J.P. Elsevier, DOI: 10.1016/B978-0-12-385876-4.00005-0, pgs. 237-264.
3. Necchi, O. Jr. & **Vis, M.L.** 2012. Monograph of the genus *Kumanoa* (Rhodophyta, Batrachospermales). *Bibliotheca Phycologica* 116. J. Cramer. Pp. 78. ISBN 978-3-443-60043-3.

Publications in Refereed Journals:

Graduate student or postdoctoral advisees in *italics*, undergraduate advisees underlined.

1. **Vis, M.L.**, Lee, J., Eloranta, P., Chapuis, I.S., Lam, D.W. & Necchi, O. Jr. 2020. *Paludicola* gen. nov. and revision of the species formerly in *Batrachospermum* section *Turfosa* (Batrachospermales, Rhodophyta). *Journal of Phycology* (in press).
2. Szinte, A.L., Taylor, J.C., Abosede, A.T. & **Vis, M.L.** 2020. Current status of the freshwater red algal diversity (Rhodophyta) of the African continent including description of new taxa (Batrachospermales). *Phycologia* (in press).
3. *Evans, J.R.* & **Vis, M.L.** 2020. Relative expression analysis of light-harvesting genes in the freshwater red alga *Lympha mucosa* (Batrachospermales, Rhodophyta). *Journal of Phycology* <https://onlinelibrary.wiley.com/doi/10.1111/jpy.12967>
4. *Wolf, D.I.* & **Vis, M.L.** 2019. Stream algal biofilm community diversity along an acid mine drainage recovery gradient using multi-marker metabarcoding. *Journal of Phycology* (online).DOI: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/jpy.12935>

5. Necchi, O. Jr., Garcia, A.S. Fo., Paiano, M.O. & **Vis, M.L.** 2019. Revision of *Batrachospermum* section *Macrospora* (Batrachospermales, Rhodophyta) with the establishment of the new genus *Montagnia*. *Phycologia* 58: 582-591. DOI: <https://doi.org/10.1080/00318884.2019.1624143>
6. Redmond, A.M., Hollingsworth, E.K. & **Vis, M.L.** 2019. Survey of freshwater red algae from the Batrachospermales (Rhodophyta) in South Carolina. *Southeastern Naturalist* 18: 451-468. DOI: <https://doi.org/10.1656/058.018.0311>
7. Evans, J.R., St. Amour, N., Verbruggen, H., Salomaki, E.D., & **Vis, M.L.** 2019. Chloroplast and mitochondrial genomes of *Balbiana investiens* (Balbianiales, Nemaliophycidae). *Phycologia* DOI: <https://doi.org/10.1080/00318884.2019.1573349>
8. Drerup, S.A. & **Vis, M.L.** 2018. Seasonality of Total Fatty Acid Profiles in Acid Mine Drainage Impaired Streams. *Environmental Monitoring and Assessment* 190:467 DOI: <https://doi.org/10.1007/s10661-018-6832-y>
9. Necchi, O. Jr., Agostinho, D.C. & **Vis, M.L.** 2018. Establishment of the genus, *Virescentia* stat. nov., from *Batrachospermum* section *Virescentia* and revision of species (Batrachospermales, Rhodophyta). *Cryptogamie Algologie* 39: 1-36. <https://doi.org/10.7872/crya/v39.iss3.2018.313>
10. Johnston, E.J., Dixon, K.R., West, J.A., Buhari, N. & **Vis, M.L.** 2018. Three gene phylogeny of the Thoreaales (Rhodophyta) reveals high species diversity. *Journal of Phycology* DOI 10.1111/jpy.12618.
11. Entwisle, T.J., Evans, J.R., **Vis, M.L.** & Saunders, G.W. 2018. *Ottia meiospora* (Ottiaceae, Rhodophyta), a new genus and family endophytic within the thallus of *Nothocladus* (Batrachospermales, Rhodophyta). *Journal of Phycology* DOI <https://doi.org/10.1111/jpy.12603>
12. Wolf, D.I., Evans, J.R. & **Vis, M.L.** 2017. Complete mitochondrial genome of the freshwater red alga *Lympha mucosa* (Rhodophyta). *Mitochondrial DNA Part B*. DOI: 10.1080/23802359.2017.1390417
13. Evans, J.R., Chapuis, I.A. & **Vis, M.L.** 2017. Adding to the freshwater red algal diversity in North America: *Lympha mucosa* gen. et sp. nov. (Batrachospermales, Rhodophyta). *Algae* 32: 171-179. DOI <https://doi.org/10.4490/algae.2017.32.9.8>
14. Chapuis, I.S., Necchi, O. Jr., Zuccarello, G.C., Xie, S.-L., Aboal, M., Sanchez Castillo, P.M. & **Vis, M.L.** 2017. A new genus, *Volatus* and four new species of *Batrachospermum sensu stricto* (Batrachospermales, Rhodophyta). *Phycologia* 56: 454-468. DOI <https://doi.org/10.2216/16-73.1>
15. Saber, A.A., Cantonati, M., **Vis, M.L.**, Anesi, A. & Guella, G. 2016. Multifaceted characterization of a *Lemanea fluviatilis* (Batrachospermales, Rhodophyta) population from a glacial stream in the south-eastern Alps. *Fottea* 16: 234-243.

16. Drerup, S.D. & Vis, M.L. 2016. Extracellular enzyme activity suggests phosphorus limitation of biofilm productivity in acid mine drainage remediated streams. *Hydrobiologia* DOI 10.1007/s10750-016-2877-5.
17. Drerup, S.D. & Vis, M.L. 2016. Responses of stream biofilm phospholipid fatty acid profiles to acid mine drainage impairment and remediation. *Water, Air & Soil Pollution* 227:159 DOI 10.1007/s10750-016-2877-5.
18. DeForest, J.L., Drerup, S.D. & Vis, M.L. 2016. Using fatty acids to fingerprint biofilm communities: A means to quickly and accurately assess stream quality. *Environmental Monitoring & Assessment* 188:277 DOI 10.1007/s10661-016-5290-7.
19. Entwisle, T.J., Johnston, E.T., Lam, D.W., Stewart, S.A. & Vis, M.L. 2016. *Nocturama* gen. nov, *Nothocladus* s. lat. and other taxonomic novelties resulting from the further resolution of paraphyly in Australasian members of *Batrachospermum* (Batrachospermales, Rhodophyta). *Journal of Phycology* 52: 384-396. DOI: 10.1111/jpy.12401.
20. Lam, D.W., Verbruggen, H., Saunders, G.W. & Vis, M.L. 2016. Multigene phylogeny of the red algal subclass Nemaliophycidae. *Molecular Phylogenetics and Evolution* 94: 730-736. (DOI 10.1016/j.ympev.2015.10.015).
21. García-Fernández, M. E., Vis, M. L. & Aboal, M. 2015. *Kumanoa mahlacensis* S. Kumano & W. A. Bowden-Kerby (Batrachospermales, Rhodophyta) in a Mediterranean wetland, a new species for the European continental algal flora. *Anales del Jardín Botánico de Madrid* 72: e0182015. DOI: 10.3989/ajbm.2324.
22. Morales, E.A., Rivera, S.F., Rubin, S., Vis, M.L. & Houk, V. 2015. *Aulacoseira kruegeri* (Bacillariophyta, Coscinodiscophyceae): a new centric diatom from high-elevation Andean streams of Bolivia. *Diatom Research* 30: 269-277. DOI:10.1080/0269249X.2015.1076523
23. Drerup, S.A., Gonzalez, D.A. & Vis, M.L. 2015. Photosynthetic characteristics of some temperate freshwater red algal taxa (Rhodophyta). *Phycologia* 54: 609-616.
24. Keil, E.J., Macy, T.R., Kwadrans, J., Eloranta, P., Tomas, P., Aboal, M. & Vis, M.L. 2015. Phylogeography of *Batrachospermum gelatinosum* (Batrachospermales, Rhodophyta) shows post-glacial expansion in Europe. *Phycologia* 53: 176-182.
25. Abdelahad, N., Bolpangi, R., Lasinio, G.J., Vis, M.L., Amadio, C., Laini, A. & Keil, E.J. 2015. Distribution, morphology and ecological niche of *Batrachospermum* and *Sheathia* species (Batrachospermales, Rhodophyta) in the *fontanili* of the Po plain (northern Italy). *European Journal of Phycology* 50: 318-329.
26. Chiasson, W.B., Salomaki, E.D. & Vis, M.L. 2014. New collections of freshwater red algae (Batrachospermales, Rhodophyta) from historically important areas in France. *Cryptogamie Algologie* 35: 303–316.
27. Drerup, S.A. & Vis, M.L. 2014. Contrasting phenologies of *Batrachospermum gelatinosum* gametophytes (Batrachospermales, Rhodophyta) in two low-order streams. *Fottea* 14:121-127.

28. Smucker, N.J., Drerup, S.A. & Vis, M.L. 2014. REVIEW: Roles of benthic algae in the structure, function, and assessment of stream ecosystems affected by acid mine drainage. *Journal of Phycology* 50: 425-436.
29. Johnston, E.T., Lim, P.-E., Buhari, N., Keil, E.J., Djawad, M.I. & Vis, M.L. 2014. Diversity of freshwater red algae (Rhodophyta) in Malaysia and Indonesia from morphological and molecular data. *Phycologia* 53: 329-341.
30. Shea, T.B., Sheath, R.G., Chhun, A., Vis, M.L., Chiasson, W.B. & Müller, K.M. 2014. Distribution, seasonality and putative origin of the non-native red alga *Bangia atropurpurea* (Bangiales, Rhodophyta) in the Laurentian Great Lakes. *Journal of Great Lakes Research* 40: 27-34.
31. Salomaki, E.D., J. Kwandrans, P. Eloranta & Vis, M.L. 2014. Molecular and morphological evidence for *Sheathia* gen. nov. (Batrachospermales, Rhodophyta) and three new species. *Journal of Phycology* 50: 526-542.
32. Necchi, O. Jr., Silva Garcia Filho, A., Salomaki, E.D., West, J.A., Aboal, M. & Vis, M.L. 2013. Global sampling reveals low genetic diversity within the genus, *Compsopogon* (Compsopogonales, Rhodophyta). *European Journal of Phycology* 48: 152-162.
33. Gray, J.B. & Vis, M.L. 2013. Reference diatom assemblage response to restoration of an acid mine drainage stream. *Ecological Indicators* 29: 234-245.
34. Pool, J.R. Kruse, N. & Vis, M.L. 2013. Assessment of mine drainage remediated streams using diatom assemblages and biofilm enzyme activities. *Hydrobiologia* 709: 101-116.
35. Smucker, N.J. & Vis, M.L. 2013. Can pollution severity affect diatom succession in streams, and could it matter for stream assessment? *Journal of Freshwater Ecology* DOI:10.1080/02705060.2013.764356.
36. Lam, D.W., García-Fernández, M., Aboal, M. & Vis, M.L. 2013. *Polysiphonia subtilissima* (Ceramiales, Rhodophyta) from freshwater habitats in North America and Europe is confirmed as conspecific with marine collections. *Phycologia* 52: 156-160.
37. Fuelling, L.J., Adams, J.A., Badik, K.J., Bixby, R.G., Caprette, C.L., Caprette, H.E., Chiasson, W.B., Davies, C.L., Glascock, K.I., Hall, M.M., Perry, W.L., Schultz, E.R., Taylor, D.A., Vis, M.L., & Verb, R.G. 2012. Occurrence of Freshwater Red Algal *Chantransia* on Rusty Crayfish. *Nova Hedwigia* 94: 355-366.
38. Lam, D.W., Entwisle, T.J., Eloranta, P., Kwandrans, J. & Vis, M.L. 2012. Molecular phylogeny of the genus *Sirodotia* (Batrachospermales, Rhodophyta). *European Journal of Phycology* 47: 42-50.
39. Vis, M.L., Necchi, O. Jr., Chiasson, W.B. & Entwisle, T.J. 2012. Molecular phylogeny of the genus *Kumanoa* (Batrachospermales, Rhodophyta). *Journal of Phycology* 48: 750-758.
40. McDade, L.A., Maddison, D.R., Guralnick, R., Piwowar, H.A., Jameson, M.L., Helgen, K.M., Herendeen, P.S., Hill, A., & Vis, M.L. 2011. Biology Needs a Modern Assessment System for Professional Productivity. *Bioscience* 61: 619-625.

41. Csavina, J., Stuart, B., Riefler, R., & **Vis, M.L.** 2011. Growth Optimization of Algae for biodiesel production. *Journal of Applied Microbiology* 111: 312-318.
42. *Smucker, N.J. & Vis, M.L.* 2011. Acid mine drainage affects the development and function of epilithic biofilms in streams. *Journal of the North American Benthological Society* 30: 728-738.
43. *Smucker, N.J. & Vis, M.L.* 2011. Diatom biomonitoring of streams: reliability of reference sites and the response of metrics to environmental variations across temporal scales. *Ecological Indicators* 11: 1647-1657.
44. *Smucker, N.J. & Vis, M.L.* 2011. Spatial factors contribute to benthic diatom structure in streams across spatial scales: considerations for biomonitoring. *Ecological Indicators* 11: 1191-1203.
45. *Smucker, N.J. & Vis, M.L.* 2011. Contributions of habitat sampling and alkalinity to diatom diversity and distributional patterns in streams: implications for conservation. *Biodiversity and Conservation* 20: 643-661.
46. Morales, E.A., Ector, L., Fernandez, E., Novais, M.H., Hlubikova, D., Hamilton, P.B., Blanco, S., Vis, M.L. & Kociolek, J.P. 2011. The genus *Achnantheidium* Kützing (Achnanthesales, Bacillariophyceae) in Bolivian streams: a report of taxa found in recent investigations. *Algological Studies* 136: 89-130.
47. *Smucker, N.J. & Vis, M.L.* 2010. Using diatoms to assess human impacts on streams benefits from multiple habitat sampling. *Hydrobiologia* 654: 93-109.
48. *Hollingsworth, E.K. & Vis, M.L.* 2010. The spatial heterogeneity of diatoms in eight southeastern Ohio streams: how far does a single riffle reach? *Hydrobiologia* 651: 173-184.
49. **Vis, M.L.**, Feng, J., Chiasson, W.B., Xie, S.-L., Stancheva, R., Entwisle, T.J., Chou, J.-Y. & Wang, W.-L. 2010. Investigation of the molecular and morphological variability in *Batrachospermum arcuatum* (Batrachospermales, Rhodophyta) from geographically distant locations. *Phycologia* 49: 545-553.
50. *House, D.L., VandenBroek, A.M. & Vis, M.L.* 2010. Intraspecific genetic variation of *Batrachospermum gelatinosum* (Batrachospermales, Rhodophyta) in eastern North America. *Phycologia* 49: 501-507.
51. Necchi, O. Jr., **Vis, M.L.** & Oliveira, M.C. 2010. Phylogenetic relationships in *Kumanoa* (Batrachospermales, Rhodophyta) species in Brazil with the proposal of *Kumanoa amazonensis* sp. nov. *Phycologia* 49: 97-103.
52. *Zalack, J.T., Smucker, N.J. & Vis, M.L.* 2010. Development of a diatom index of biotic integrity for acid mine drainage impacted streams. *Ecological Indicators* 10: 287-295.
53. *Smucker, N.J., DeForest, J.L. & Vis, M.L.* 2009. Improving consistency: Comparing methods for measuring epilithic extracellular enzyme activities in lotic biofilms and storage duration effects. *Hydrobiologia* 636:153–162.

54. Smucker, N.J. & Vis, M.L. 2009. Using diatoms to assess agricultural and coal mining impacts on streams, and a multi-assemblage case study. *Journal of the North American Benthological Society* 28: 659-675.
55. Stancheva, R. & Vis, M.L. 2009. Notes on distribution of *Batrachospermum arcuatum* and *B. gelatinosum* (Batrachospermales, Rhodophyta) in Bulgaria. – In: Ivanova, D. (ed.), Plant, fungal and habitat diversity investigation and conservation. *Proceedings of IV Balkan Botanical Congress*, Sofia, 20–26 June 2006. Pp. 128–133. Institute of Botany, Sofia. ISBN 978-954-9746-14-3.
56. Vis, M.L. & Kapustin D.A. 2009. *Batrachospermum keratophytum* Bory emend. R.G. Sheath, M.L. Vis et K.M. Cole, A new freshwater red algal species for Ukraine. *Algologia* 19: 226-229.
57. Entwisle, T.J., Vis, M.L., Chiasson, W.B., Necchi, O. Jr. & Sherwood, A.R. 2009. Systematics of the Batrachospermales – A Synthesis. *Journal of Phycology* 45: 704-715.
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Papers Submitted or In Revision:

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Papers Presented:

1. **Vis, M.L.** & Necchi, O. Jr. Synthesis of Freshwater Red Algal Diversity (Rhodophyta). Phycological Society of America, Vancouver, BC, Canada, July 2018.
2. *Wolf, D.I. & Vis, M.L.* Multi-marker metabarcoding assessment of biodiversity within stream biofilm communities along an acid mine drainage recovery gradient. Society for Freshwater Science, Detroit, MI, May 2018.
3. **Vis, M.L.** & Necchi, O. Jr. Review of recent taxonomic changes in freshwater red algae (Rhodophyta). Northeast Algal Symposium, New Haven, CT, April 2018.
4. **Vis, M.L.** Müller, K.M., Kwandrans, J., Sheath, R.G., Eloranta, P., Aboal, M. & Sánchez P. Systematic revision of the sister genera *Lemanea* and *Paralemanea* (Batrachospermales, Rhodophyta). International Phycological Congress, Szczecin, Poland, August 2017.
5. **Vis, M.L.** Biogeographic trends in freshwater red algae. Phycological Society of America, Monterey, CA, June 2017.
6. **Vis, M.L.** Using fatty acids to fingerprint biofilm communities: a means to quickly and accurately assess stream quality, DeForest, J.L., Drerup, S.A. Vis, M.L. Innovative Environmental Monitoring Technology Symposium, Athens, OH, October 2016.
7. **Vis, M.L.** Freshwater red algal systematics and biogeography: recent advances using molecular data. International conference – Problems of taxonomy and geography of aquatic plants, Borok, Russia October 2015 (note: poster was sent for display; did not attend).
8. **Vis, M.L.** Biogeography of Freshwater Red Algae: Changing ideas about cosmopolitan and endemic floras. 9th Use of Algae for Monitoring Rivers and comparable habitats (UAMRICH) and International Workshop on Benthic Algae Taxonomy (InBAT), Trento, Italy, June 2015. Invited Talk.
9. *Drerup, S.A. & Vis, M.L.* A call for incorporating functional measures into stream monitoring protocols, 9th Use of Algae for Monitoring Rivers and comparable habitats (UAMRICH) and

- International Workshop on Benthic Algae Taxonomy (InBAT), Trento, Italy, June 2015. (Poster).
10. **Vis, M.L.**, Lam, D.W., Salomaki, E.D., Johnston, E.T., Saunders, G.W., Verbruggen, H., Kim, K.M., & Yoon, H.S. RedToL: Advances in our knowledge of freshwater red algae. Joint Aquatic Science Meeting, Portland, OR, May 2014.
 11. **Vis, M.L.** & Chiasson, W.B. Assessment of freshwater red algal (Thoreales and Batrachospermales, Rhodophyta) type specimens in the Herbarium Cryptogamicum. International Phycological Congress, Orlando, FL, August 2013. (Poster).
 12. **Vis, M.L.** Challenges in bioassessment of acid mine drainage. Phycological Society of America, Charleston, SC, June 2012. (Plenary invited talk).
 13. **Vis, M.L.** Freshwater red algae: Historical perspective and European contributions. Riunione annuale Gruppo di Algologia, Ancona, Italy, November 2011. (Plenary invited talk).
 14. **Vis, M.**, Kwandrans, J., Lam, D., Salomaki, E., Chiasson, W., Eloranta, P., Kostkeviciene, J. & Aboal, M. Freshwater red algae in Europe: Past, present and future. 5th European Phycological Congress, Rhodes, Greece, September 2011.
 15. **Vis, M.L.**, Lam, D.W., Johnston, E.T., & Salomaki, E.D. REDToL: Insights into the phylogeny of the freshwater rhodophytes. Evolution 2011, Norman, OK, June 2011.
 16. **Vis, M.L.**, Necchi, O. Jr. Chiasson, W.B. & Entwisle, T.J. Molecular systematics of the freshwater red algal genus, *Kumanoa* (Batrachospermales, Rhodophyta). Phycological Society of America, Lansing, MI, July 2010.
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 18. **Vis, M.L.**, Entwisle, T.J., Chiasson, W.B., Necchi, O. Jr. & Sherwood, A.R. Systematics of the Batrachospermales – A Synthesis. Phycological Society of America, New Orleans, LA July 2008.
 19. **Vis, M.L.**, Chiasson, W.B., Stancheva, R., Chou, J.-Y. Phylogeographic relationships among *Batrachospermum arcuatum* (Rhodophyta) collections throughout its distribution. Phycological Society of America, Warwick, RI August 2007.
 20. **Vis, M.L.**, Entwisle, T.J., Necchi, O. Jr. & Sheath R.G. Phylogenetic relationships among *Batrachospermum* species (Rhodophyta) based on molecular data from Southern Hemisphere specimens,” 8th International Phycological Congress, Durban, South Africa August 2005.
 21. **Vis, M.L.**, Chiasson, W.B. & Sheath, R.G. Phylogenetic affinities of *Batrachospermum* specimens from French Guiana. Phycological Society of America, Williamsburg, VA August 2004.
 22. **Vis, M.L.**, Chiasson, W.B. & Sheath, R.G. *rbcL* analysis of eight *Batrachospermum* species from French Guiana. Southeastern Phycological Colloquy, Beaufort, NC October 2003.

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24. **Vis, M.L.**, Hall, M.M., Machesky, N.J. & Miller E.J. Synthesis of molecular research on *Batrachospermum helminthosum* (Rhodophyta) from stream reaches in eastern North America. Phycological Society of America, Estes Park, CO June 2001.
25. **Vis, M.L.** & McClintic, A.S. Macroalgal taxa from montane cloud forest and alpine streams in Bolivia," Northeast Algal Symposium, Plymouth, MA April 2001.
26. **Vis, M.L.**, Miller, E.M. & Hall, M.M. Biogeography of *Batrachospermum helminthosum* (Batrachospermales, Rhodophyta) in North America using molecular and morphological data. Phycological Society of America, San Diego, CA July 2000.
27. **Vis, M.L.** & Entwisle, T.J. Insights into Batrachospermales (Rhodophyta) phylogeny from *rbcL* sequence data of Australian taxa. 38th Northeast Algal Symposium, Plymouth, MA April 1999.
28. **Vis, M.L.**, Harper, T.J. & Saunders, G.W. Phylogenetic relationships among taxa of Batrachospermales (Rhodophyta) based on large subunit rDNA sequence data. International Botanical Congress, St. Louis, MO August 1999.
29. **Vis, M.L.** The applicability of inter- Simple Sequence repeats (inter- SSR) to distinguish individuals of *Batrachospermum boryanum* (Batrachospermales, Rhodophyta). 37th Northeast Algal Symposium, Plymouth, MA. April 1998.
30. **Vis, M.L.** & Sheath, R.G. A molecular investigation of the systematic relationship among *Sirodotia* species (Batrachospermales, Rhodophyta) in North America. Phycological Society of America, Flagstaff, AZ, August 1998.
31. **Vis, M.L.** Floristic Algal Studies in Southeastern Ohio. 2nd Annual Ohio Algae Meeting, November 1998.
32. **Vis, M.L.**, Chiasson, W.B. & Sheath, R.G. A survey of the splash zone macroalgae in the Great Lakes. Pennsylvania Natural History Conference, Powder Mill Biological Station, PA. April 1997.
33. **Vis, M.L.** & Sheath, R.G. A molecular and morphological investigation of the relationship between *Batrachospermum spermatoinvolutrum* and *B. gelatinosum* (Batrachospermales, Rhodophyta). 6th International Phycological Congress, Leiden, The Netherlands. August 1997.
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110. McClintic, A.S., Casamatta, D.A. & **Vis, M.L.** Algal taxa from montane cloudforest and alpine streams in Bolivia. Ohio Academy of Science, Columbus, OH, April 2002.

111. *Filkin, N.R., Sherwood, A.R. & Vis, M.L.* Macroalgae of the Hawaiian Islands: 23 additional stream segments. Ohio Academy of Science, Columbus, OH, April 2002.
112. *Hamsher, S.E., Casamatta, D.A., Filkin, N.R., McClintic, A.S., Chiasson, W.B., Verb R.G. & Vis M.L.* A new method for studying nutrient limitation of periphyton. Ohio Academy of Science, Columbus, OH, April 2002.
113. *Chiasson, W.B., Machesky, N.J. & Vis, M.L.* Phylogeography of *Batrachospermum helminthosum* (Rhodophyta) in North America. Ohio Academy of Science, Columbus, OH, April 2002.
114. *Casamatta, D.A. & Vis, M.L.* Population Genetics of *Phormidium retzii* (Cyanobacteria) in a low-order woodland stream using RAPD analysis. 15th International Association for Cyanophyte Research, Barcelona, Spain September 2001.
115. *Verb, R.G., Keiper, J.B. & Vis, M.L.* Patterns of macroalgal and periphytic assemblages from coal mine impacted lotic systems within the unglaciated Western Allegheny Plateau. North American Benthological Society, La Crosse, WI June 2001.
116. *Verb, R.G., Keiper, J.B. & Vis, M.L.* Patterns of macroalgal and periphytic assemblages from coal mine impacted lotic systems within the unglaciated Western Allegheny Plateau. Phycological Society of America, Estes Park, CO June 2001.
117. *Casamatta, D.A. & Vis, M.L.* Population genetics of *Phormidium retzii* (Cyanobacteria) mats in a headwater stream using RAPD analysis. Phycological Society of America, Estes Park, CO June 2001.
118. *Machesky, N.J. & Vis, M.L.* Assessing the utility of a mitochondrial marker for studies of specific and intraspecific relationships within the Batrachospermales (Rhodophyta). Ohio Academy of Science, Alliance, OH March 2001.
119. *Casamatta, D.A. & Vis, M.L.* Ecology and phenology of the cyanobacterium *Phormidium retzii* in a low-order woodland stream. Ohio Academy of Science, Alliance, OH March 2001.
120. *Verb, R.G., Keiper, J.B. & Vis, M.L.* Patterns of macroalgal and periphytic assemblages from coal mine impacted lotic systems within the unglaciated Western Allegheny Plateau. Ohio Academy of Science, Alliance, OH March 2001.
121. *Verb, R.G. & Vis, M.L.* Survey of the benthic diatom communities from lotic systems within the Western Allegheny Plateau. Phycological Society of America, San Diego, CA July 2000.
122. *Casamatta, D.A. & Vis, M.L.* Some phylogenetic relationships within the Oscillatoriales (Cyanobacteria) clade using 16S rDNA gene sequence data. Phycological Society of America, San Diego, CA July 2000.
123. *Hall, M.M. & Vis, M.L.* Phylogeography and within-stream genetic variation of *Batrachospermum helminthosum* (Rhodophyta) using inter-simple sequence repeats. Phycological Society of America, San Diego, CA July 2000.

124. Verb, R.G., Casamatta, D.A. & Vis, M.L. Effects of different vegetative substrates on algal composition in vernal pools. Ohio Academy of Science, Ada, OH April 2000.
125. Casamatta, D.A., Verb, R.G. & Vis, M.L. A survey of cliff and cave algae from southeastern Ohio. Ohio Academy of Science, Ada, OH April 2000.
126. Hall, M.M. & Vis, M.L. Genetic variation among individuals of *Batrachospermum helminthosum* (Rhodophyta) within and among stream reaches throughout North America. Ohio Academy of Science, Ada, OH April 2000.
127. Hall, M.M. & Vis, M.L. Genetic variation among individuals of *Batrachospermum helminthosum* (Rhodophyta) from a stream reach. International Botanical Congress, St. Louis, MO August 1999.
128. Casamatta, D.A. & Vis, M.L. Preliminary investigation of the Oscillatoriales (Cyanobacteria) clade using 16S rDNA gene sequence data. International Botanical Congress, St. Louis, MO August 1999.
129. Entwisle, T.J. & Vis, M.L. Freshwater red algae: a timely perspective on Southern Hemisphere biogeography. International Botanical Congress, St. Louis, MO August 1999.
130. Verb, R.G. & Vis, M.L. Seasonal variation of macroalgae from streams draining abandoned and reclaimed coal mines and non-impacted sites. International Botanical Congress, St. Louis, MO August 1999.
131. Verb, R.G. & Vis, M.L. A comparison of algal diversity among polluted, restored and non-polluted streams in southeastern Ohio. Phycological Society of America, Flagstaff, AZ, August 1998.
132. Rintoul, T., Sheath, R.G. & Vis, M.L. Systematics and biogeography of the Compsopogonales (Rhodophyta) with emphasis on freshwater genera in North America. Phycological Society of America, Flagstaff, AZ, August 1998.
133. Müller, K.M., Vis, M.L. & Sheath, R.G. Biogeography and systematics of the genus *Bangia* (Bangiales, Rhodophyta) using morphology and comparative sequence analysis. 48th American Institute of Biological Sciences, Botanical Society of America. August 1997.

Invited Book Reviews:

- Entwisle, T.J., Sonneman, J.A. & S.H. Lewis, *Freshwater Algae in Australia* (Sainty & Associates 1997), in *European Journal of Phycology* 33, no. 1 (1998), p. 94.
- Kumano, S., *Freshwater red algae of the world* (Biopress Publications 2002), in *Journal of Phycology* 38, no. 4 (2002), p. 834.
- Wehr, J.D. & Sheath R.G. (Eds.), *Freshwater Algae of North America: Ecology and Classification* (Academic Press 2003), in *Journal of the Torrey Botanical Society* 132, no. 3 (2005), p. 533-34.
- Entwisle, T. J., Skinner, S., Lewis, S. H. & Foard, H. J. *Algae of Australia: Batrachospermales, Thoreaales, Oedogoniales and Zygnemaceae*. (Australian Biological Resources Study/CSIRO Publishing 2007), in *Journal of Phycology* 43, no. 6 (2007), p. 1348-9.

Refereeing of Manuscripts:

In addition to being an associate editor for *Journal of Phycology*, I regularly review papers for algae focused journals such as *Phycologia*, *Algae*, *European Journal of Phycology*, *Cryptogamie Algologie* and aquatic science journals such as *Water, Air & Soil Pollution*, *Hydrobiologia*, *Ecological Indicators*. I typically review 5-6 papers per year.

Refereeing of Grant Proposals:

Typically, I review 1-2 grant proposals per year for NSF and NSERC. I have served on four NSF grant panels in my area of expertise. I have also served on two Fulbright Scholar regional panels. I have reviewed proposals for state agencies and other country agencies when my expertise was needed.

Courses Taught:

Semester System:

PBIO 1030 Plants and People Fall 2012, 2014, 2016, 2018; Spring 2013, 2019
 PBIO4200/5200 Phycology Spring 2013, 2015, 2019
 PBIO4900/5900 Freshwater Algae Spring 2016, 2018
 PBIO4170/5170 Biological Research and Science Ethics Fall 2012-present
 PBIO6970 Graduate Seminar 2013, 2014

Quarter System:

PBIO 103 Plants and People (~80 students/section), 1996-2011
 PBIO 307/507 Algal & Bryophyte Morphology 1999, 2001, 2003, 2006
 PBIO369 Ecology Andes 2000, Island Biology 2000, Neotropical Ecology 2001, 2002
 PBIO369D/569D Bryology 2008, 2010
 PBIO385 Global Studies in Plant Biology: New Zealand 2005 (co-taught with Kim Brown)
 PBIO405 Undergraduate Seminar, 2000-2002
 PBIO417/517 Biological Research and Science Ethics 2010
 PBIO 420/520 Freshwater Algae - 1997, 1998, 2000, 2002, 2005, 2007, 2009, 2011
 PBIO 696 Organismal Biology 1997-1999
 PBIO 691 Seminar - Molecular Ecology 1998, Ecology of the Andes 2000, Island Biology 2001, Neotropical Rainforest Ecology –2001, Bryophytes 2006
 PBIO 693 Phycology for Engineers – 2007
 PBIO 791 Seminar - Aquatic Botany - 1997

Teaching Evaluation:

1. Student Evaluations - My student evaluations have been high each quarter/semester. For the large non-major's course, the most recent score was a mean of 4.49 out of 5 points for the course and 4.67 for me as an instructor. For my upper division courses in algae and mosses the scores have consistently been in the range of 3.8 to 4.8. (available upon request).

Major Professor/Advisor for Graduate Students:

1. **Roseanna Crowell**, PhD candidate. Research topic – Phylogenomics of freshwater red algae.

2. **Sunil Tiwari**, MS candidate. Research topic – Investigating the effects of light on freshwater red algae using transcriptomic data.
3. **Danny Wolf**, MS August 2018. “Metabarcoding of biofilm communities along an acid mine drainage gradient.” Received funding from multiple sources totaling over \$5000. Won outstanding graduate presentation at the Northeast Algal Symposium and Phycological Society of America meeting. Immediately after graduation employed by Illumina in the research division.
4. **Josh Evans**, MS August 2017. “Transcriptional Regulation of Select Light-Harvesting Genes during Photoacclimation in *Lympha mucosa* gen. et sp. nov. (Batrachospermales, Rhodophyta).” Immediately after graduation pursued a PhD degree at University of New Brunswick.
5. **Emily Keil**, MS December 2016. “Investigation of nutrient limitation of the biofilm community in Acid Mine Drainage impaired and remediated streams.” Immediately after graduation served as an Americorp Intern with Raccoon Creek.
6. **Sam Drerup**, PhD May 2016. “Functional Response of Stream Communities to Acid Mine Drainage Remediation.” Received funding from multiple sources totaling over \$8000. Employed immediately after graduation as an Assistant Professor at Trine University, Angola, IN.
7. **Lauren Fuelling**, MS May 2013. “Interactive Effects of AMD and Grazing on Periphyton Productivity, Biomass, and Diatom Diversity.”
8. **Emily Johnston**, MS August 2012. “The Systematic Revision of the Freshwater Red Algal Order Thoreales (Nemaliophycidae, Rhodophyta).” Received funding from the Phycological Society of America and Student Enhancement Award from Ohio University as well as others totaling \$8000. Won the Bold Award at the Phycological Society of America annual meeting 2012 for best student presentation. Immediately after graduation pursued a PhD at University of Hawaii.
9. **Eric Salomaki**, MS August 2012. “A Systematic Investigation of *Batrachospermum* section *Helminthoidea* (Batrachospermales, Rhodophyta) Using Molecular and Morphological Analyses.” Received funding from the Phycological Society of America as well as others totaling \$1800. Immediately after graduation pursued a PhD at University of Rhode Island.
10. **Jonathon Gray**, MS Environmental Studies August 2011. “Reference Diatom Assemblage Response to Transplantation into a Stream Receiving Treatment for Acid Mine Drainage in Southeastern Ohio.” After graduation pursued a PhD at Kent State University.
11. **Justin Pool**, MS August 2010. “Use of Diatom Assemblages and Biofilm Enzyme Activities for Assessment of Acid Mine Remediated Streams in Southeastern Ohio.” Immediately after graduation pursued a PhD at Fordham University.
12. **Nathan Smucker**, PhD August 2010. “Comparison of water quality indices using algae in acid mine drainage impacted streams.” Garnered numerous grants including one from the Ohio Biological Survey, and internal ones totaling \$7000. Won outstanding graduate presentation at the Northeast Algal Symposium and the Indiana Water Resources Association student award for his presentation at the regional Geological Society of America

- meeting. Employed immediately after graduation as a postdoc in the Watershed diagnostics group at EPA Narragansett RI.
13. **Denise House**, MS June 2008. "Phylogeography of *Batrachospermum gelatinosum* in North America." Obtained during degree OU Graduate student senate travel grant. Employed immediately after graduation as a research technician at Ohio University College of Osteopathic Medicine.
 14. **Emily Hollingsworth**, MS Environmental Studies November 2007. "The spatial heterogeneity of periphyton in eight southeastern Ohio streams: How far can one sample take you?" PSA Croasdale Fellowship for attending a field course, OU Graduate student senate travel grant. Currently employed as a periphyton specialist for the State of South Carolina.
 15. **Sarah Stewart**, MS August 2006. "Phylogenetic affinities of Australasian specimens of *Batrachospermum* (Batrachospermales, Rhodophyta) inferred from molecular and morphological data." PSA Hoshaw Travel Award 2006. Started immediately after graduation as a **PhD student** in Genomics, Station Biologique de Roscoff, France.
 16. **Jason Zalack**, MS August 2006. "Development of a diatom-based index of biotic integrity for acid mine drainage impacted streams." CoPI Ohio Biological Survey Grant, PSA Hoshaw Travel Award 2006. Employed immediately after graduation as a **research assistant (diatom analyst)** at the Philadelphia Academy of Science in the water quality division.
 17. **Sarah Hamsher**, MS August 2003. "Analysis of acid mine drainage impacted streams using a periphyton index." Houk Research Award, 2002. PSA Hoshaw Travel Award 2002, 2003. PSA Croasdale Fellowship 2002. Employed immediately after graduation as a **biological technician** for the USDA-ARS-SDRU (USDA-agricultural research service-soil drainage research unit).
 18. **Nanda Filkin**, MS June 2003. "Phenology of *Paralemanea annulata* (Lemaneaceae, Rhodophyta) in an Ohio woodland stream." Houk Research Award, 2002. PSA Hoshaw Travel Award 2002, 2003. Employed immediately after graduation as a **research technician** in the Department of Biological Sciences, Ohio University.
 19. **Dale A. Casamatta**, PhD August 2002. "Systematics, phenotypic plasticity and biogeography of taxa from the Oscillatoriales (Cyanobacteria)." Hoshaw Travel Award 1999, 2000, 2001, PSA Grant-in-aid of Research, 1999. Ohio Biological Survey Grant 1999, 2000. Clippinger Fellow Academic Year 2000/2001. Student Enhancement Award 2001, Ohio University \$4,000. Employed after graduation as a **postdoctoral fellow** in the Department of Biology, John Carroll University for 2 years and an assistant professor at University of Northern Florida after postdoc.
 20. **Robert G. Verb**, PhD August 2001. "Comparison of algal diversity among polluted, restored and non-polluted streams in southeastern Ohio." Houk Research Award, 1997, 1998. PSA Hoshaw Travel Award, 1998, 1999, 2001, PSA Grant-in-aid of Research, 1999. Wilce Award for the best student presentation at the Northeast Algal Symposium, 1999. Student Enhancement Award, Ohio University \$6,000. Employed after graduation as tenure track **assistant professor** in the Department of Biology, Ohio Northern University.

21. **Melissa M. Hall**, MS August 2000. "Phylogeography, intra-population genetic variation and phenology of *Batrachospermum helminthosum* (Rhodophyta)." Hoshaw Travel Award 1999, 2000, Houk Research Award, 2000. Employed immediately after graduation with the Indiana Department of Environment as an **aquatic specialist**.
22. **Rachele G. Kovar**, MS Environmental Science August 1999. "A characterization of *Sphagnum* dominated wetlands from acid mine drainage in southeastern Ohio." Employed after graduation with BSA Environmental Consultants as an **environmental consultant**.
23. **Amy E. Stevens**, MS Environmental Science August 1998. "Uptake of metals by *Klebsormidium* in acid mine drainage polluted streams." Houk Research Award, 1997. Continued education with an MA in Education and taught as a **high school science teacher**.

Advising:

1. Graduate Students who have completed degrees:

Thesis/dissertation committees –

- 19 PhD (Greer, Williams, Rubino, Dunn, Tomescu, Feng, Hartman, Sanders, Havran, Wahlert, Schori, Dasa-ard, Keene, Flicker, Lunka, Parker, Hajar, Converse, Gahagen),
 36 MS (Reese, Railing, Cortes, Segovia, Hernandez-Castillo, Hill, Christensen, Peirson, Ma, Calwell, Burdick, Martin, Kinney, Gidugu, Alexander, Mears, Csavina, Anthony, Scott, Larson, Anthony, Pochtzar, Hansel, Sink, Lunka, Burke, Mielnicki, Wiley, Needler, Venkatagiri, Kumar, Fais, Indushri, Kirchner, Karisiddappa, Zumwalde)

2. Undergraduate Researchers Supervised

- a. **Alexis Bowden** Fall 2018-Spring 2019, "Multi-year investigation of the relationship of Chlorophyll a and biological/chemical monitoring in acid mine drainage."
- b. **Amanda Szinte** Fall 2017-Spring 2019, "Exploring the freshwater red algal diversity of Africa: past and present." See paper above.
- c. **Alexis Redmond** Fall 2106-Spring 2018, "Diversity of Chantransia in Ireland" and "Survey of freshwater red algae from the Batrachospermales (Rhodophyta) in South Carolina." See paper above.
- d. **Jessica Lindner** 2014-15 HTC Thesis "Exploring nutrient limitation in AMD remediated streams."
- e. **David Gonzalez** Summer 2014, "Physiology of freshwater red algae." See paper above.
- f. **Emily Keil** Summer 2013, "Phylogeography of *Batrachospermum gelatinosum* in Europe." See paper above.
- g. **Mariah Thrush** 2012-13 HTC Thesis "Analyzing algal diversity in aquatic systems using next generation sequencing."
- h. **Taylor Macy** Summer 2011, "Phylogeography of *Batrachospermum gelatinosum* in Europe" See paper above.

- i. **Emily Johnston**, 2009/2010, "Understanding the relationship of Australasian freshwater red algae using partial LSU gene sequence data."
- j. **Alex VandenBroek**, 2009, "Desiccation tolerance in freshwater red algae", "Investigation of cryptic species in *Batrachospermum boryanum* using *cox2-3* spacer and *rbcl* gene regions", and "Phylogeography of *Batrachospermum gelatinosum* in eastern North America." See paper above.
- k. **Sam Drerup**, 2008, "Phenology of *Batrachospermum gelatinosum* in two streams and preliminary phylogeographic analyses of *Batrachospermum boryanum* using mitochondrial markers."
- l. **Jason Bonham**, 2008 (summer), "Investigation of cryptic species in *Batrachospermum boryanum* using *cox2-3* spacer and *rbcl* gene regions."
- m. **Kelli Johnson**, 2007, "The effect of acid mine drainage on the interaction between benthic algae and invertebrate grazers." Awarded the Jeanette Grasselli Brown Undergraduate Research Award for \$1,000 from the College of Arts & Sciences. Awarded Voinovich Fellow for summer 2006. Awarded best undergraduate poster at OU Research Fair by Sigma Xi. Elected associate member of Sigma Xi. Pursued MS degree in aquatic ecology immediately following graduation.
- n. **Katie Snyder**, 2006, "In-stream and riparian characterization of four New Zealand stream segments containing *Batrachospermum* species (Rhodophyta)." Presented research at a regional meeting (see above).
- o. **Katie Johanson**, 2005, "Utilization of the SSU gene to evaluate genetic species boundaries between morphological similar sister taxa" and "Geographic and phylogenetic affinities of *Chantransia pygmaea* (Rhodophyta) from the Hawaiian Islands." Research published in *Phycologia* 2007.
- p. **Kevin Snyder** 2005, "Phylogeography of *Batrachospermum arcuatum* from North America." Ohio University. Awarded a Provost Undergraduate Research Fund grant for \$1,500.
- q. **J. Cameron Hodge** 2004-2005, "Phylogeography of *Batrachospermum macrosporum* from tropical/subtropical regions of North and South America." Research 'in press' in *Journal of Phycology*. Ohio University. Awarded a Provost Undergraduate Research Fund grant for \$1,392. Awarded the Jeanette Grasselli Brown Undergraduate Research Award for \$1,000 from the College of Arts & Sciences. Immediately after graduation, he was accepted into a Summer Undergraduate Research Fellowship (SURF) and then has the opportunity to go to Medical School.
- r. **Nick Sabo** 2003, "Morphometrics of *chantransia/Audouinella* specimens from streams in coastal French Guiana." Ohio University. Research published in *Phycologia* 2005.
- s. **Amy McClintic** 2001, "Macroalgal Survey of Bolivian Streams." Ohio University. Research published in *Nova Hedwigia* 2003.
- t. **Nick Machesky** 2001, "Assessing the utility of a mitochondrial marker for studies of specific and intraspecific relationships within the *Batrachospermales* (Rhodophyta)." Ohio University;

Student awarded Provost Undergraduate Research Award \$1180. Research published in *Phycologia* 2003.

- u. **Emily J. Miller** 1999, "Biogeography of *Batrachospermum helminthosum* in North America." Ohio University; Research published in *Phycologia* 2001.
- v. **Nanda R. Filkin**, 1998, "Genetic variation among individuals of *Batrachospermum helminthosum* from Spring Brook, Kalamazoo, Michigan." Kalamazoo College Senior Project.

Service:

Ohio University Departmental Service:

Library representative Fall 1996-Fall 2000
 Chemical Hygiene committee Fall 1996-Fall 1999
 Undergraduate Honors committee Fall 1996-Spring 1997
 Colloquium coordinator Fall 1997-Spring 1999
 Graduate committee Fall 1997-Fall 2003
 Curriculum committee Fall 1997-Spring 1998
 Evolution & Environmental Biology steering committee Fall 1997-Spring 1998
 Organization for Tropical Studies (OTS) representative Fall 1997-Spring 1998
 Director of Study for Honors Tutorial Program Summer 2003-Fall 2007
 Graduate Chair Fall 2004-Fall 2008, Fall 2012-Fall 2013
 Acting Chair Jan 2009-July 2009
 P&T/Evaluation Committee Chair July 2009-2011
 Department Chair 2013-June 2018

Ohio University Service:

Special Library Endowments Committee 1998-2001
 Faculty Senator 2000-2003
 Professional Relations Committee 2000-2002
 Faculty Senate - Chair, Professional Relations Committee academic year 2002-03
 Intercollegiate Athletics Committee academic year 2004-2009
 1804 Research Grant Committee 2000
 Director of Ohio University DNA Analysis Facility Fall 1998- Fall 2006
 Perspective research Magazine advisory board 2002-2004
 College of Arts and Sciences P&T Committee (2003, 2005-2007, 2008-2011)
 Ohio University Budget Planning Council Fall 2006-Spring 2008
 College of Arts and Sciences Staffing Committee Spring 2008-2011
 Chemical Security Council 2010-2012
 Goldwater Scholarship Evaluation Committee AY 2012-13, 2014-15, 2015-16
 Council on Research & Scholarship & Creative Activity, member Fall 2012-2015
 Faculty Mentor Ohio University Genomics Facility Fall 2006-June 2018
 Council on Research & Scholarship & Creative Activity, Chair Fall 2016-present
 Honors Program Task Force Spring 2018-present
 College of Arts and Sciences/Regional Campus Committee Fall 2017-present

Scientific Society Service:

Board of Trustees, Phycological Society of America 2010-2014
 President, Northeast Algal Society 2009-2011
 Co-convenor for the 2007 meeting of the Northeast Algal Symposium

Immediate Past President, Phycological Society of America 2007 (executive committee position)
President, Phycological Society of America 2006
Vice President/President Elect, Phycological Society of America 2005
Communications Director for Phycological Society of America, Executive Committee appointed position 1999-2004 (responsible for the bi-annual newsletter, website and listserver)
Web master, Phycological Society of America (ad hoc executive committee member 1998-99)
PSA Newsletter Co-editor Summer/Fall 2000 issue
PSA Newsletter Editor Winter/Spring 2001, 2002 Summer/Fall 2001 issues
Phycological Society of America Membership Committee 1998-2000
Editorial Board of *European Journal of Phycology* 1999 – 2012
Publications Committee – 2011-present
Co-convener for the 2000 meeting of the Northeast Algal Symposium (100 attendees)
Organizer for the 2001 Intermittent Great Lakes Algal Foray (45 attendees)
Elected Editorial Board of *Journal of Phycology* 2009-2011

Community Service:

District Science Day, Judge, 1997-2001, 2003, 2005-2006, 2008-2010, 2013-2016, 2018-2019
Plant Biology Volunteer for Public TV phonathon, March 1999
Volunteer Women in Science Day, April 1997- 2001, 2006, 2010, 2011
Communication via email with K-12 schoolteachers, university professors, parents, journalist and others to answer questions about algae and to allow use of my algal image collection at <http://vis-pc.plantbio.ohiou.edu/algaeindex.htm> (1998-2014)
Tech Savvy Organizing Committee, Workshop organizer 2013-2020
Young Scholars OHIO workshop organizer 2012, 2013, 2015
Science Fair project mentor for student interested in plant biology Fall 2015, Fall 2016
Various one day STEM outreach events such as Workshops for K-12, Science Café, lectures to citizen groups; typically, 2-3 per year