

## **CURRICULUM VITAE**

**Vladislav Gulis, Ph.D.**

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### **RESEARCH INTERESTS**

The role of microorganisms in carbon and nutrient cycling in freshwater ecosystems. Effects of warming, inorganic nutrients and eutrophication on fungal and bacterial biomass, production, community structure and microbially driven organic matter decomposition in streams. Microbial stoichiometry. Ecology, biodiversity and phylogeny of aquatic hyphomycetes.

### **PROFESSIONAL PREPARATION**

Belarusian State University, Minsk, Belarus	Biology	B.S. 1995
Belarusian State University & Institute of Experimental Botany, National Academy of Sciences, Minsk, Belarus	Biology	Ph.D. 1999
University of Alabama, Tuscaloosa, AL. NSF-NATO postdoctoral fellow	Aquatic microbial ecology	2000-2002
Institute of Marine Research, University of Coimbra, Portugal. Postdoctoral fellow	Aquatic microbial ecology	2002-2004

### **APPOINTMENTS**

Coastal Carolina University, Conway, SC. Professor	2018-present
Coastal Carolina University, Conway, SC. Associate Professor	2013-2018
Coastal Carolina University, Conway, SC. Assistant Professor	2007-2013
University of Alabama, Tuscaloosa, AL. Assistant Research Scientist	2004-2007
Institute of Marine Research, University of Coimbra, Portugal. Postdoctoral fellow	2002-2004
University of Alabama, Tuscaloosa, AL. NSF-NATO Postdoctoral Fellow	2000-2002
Belarusian State University, Minsk, Belarus. Instructor	1998-2000

## TEACHING EXPERIENCE

- Spring 2009 - BIOL 421/521 Microbial Ecology. Coastal Carolina University.  
present
- Fall 2016 - BIOL 429/429L Mycology (lectures and labs). Coastal Carolina University.  
present
- Fall 2007 - BIOL 330/330L Microbiology (lectures and labs). Coastal Carolina University.  
present
- Fall 2009 BIOL 121 Biological Science I. Coastal Carolina University.
- Spring 2007 Guest lecturer, BSC 472/572 Mycology. University of Alabama.
- Spring 2006 Guest lecturer, BSC 360 Plant Biology (plant phylogeny and systematics sections). University of Alabama.
- June–July 1999 & 2000 Summer field courses in Mycology & Phycology. Belarusian State University.
- Fall 1998 – Spring 2000 Instructor (full time). Mycology & Phycology (labs, seminars), Plant Morphology (labs). Belarusian State University.

## GRANTS AND FELLOWSHIPS

- 2017 – 2023 NSF, DEB, Ecosystem Science cluster. Gulis V. Collaborative research: Headwater stream networks in a warming world: predicting heterotrophic ecosystem function using theory, multi-scale temperature manipulations and modeling (\$367,030 to V. Gulis, CCU; ~\$1.9M to five collaborating institutions)
- 2010 – 2013 NSF, DEB, Ecosystem Science cluster. Gulis V. Collaborative research: Defining ecosystem heterotrophic response to nutrient concentrations and ratios (\$246,394 to V. Gulis, CCU; ~\$1.2M to three collaborating institutions)
- 2008 – 2023 Professional enhancement grant and travel awards at Coastal Carolina University (~\$11.5k)
- 2000 – 2002 NSF-NATO Postdoctoral Fellowship in Science & Engineering (~\$45k)
- 1999 ICSC-World Laboratory travel grant
- 1997 & 1998 Graduate fellowships awarded by the Belarusian Council of Ministers
- 1994 – 1995 Graduate scholarship awarded by the International Science Foundation (Soros Foundation)

## PUBLICATIONS

(PDFs of some papers are available from <http://ww2.coastal.edu/vgulis/publications.htm>)  
Google Scholar: [https://scholar.google.com/citations?user=yIUZf\\_cAAAAJ&hl=en](https://scholar.google.com/citations?user=yIUZf_cAAAAJ&hl=en)

1. Tiegs S.D., Capps K.A., Schmidt J.P., Costello D.M, Patrick C.J. *and others including Gulis V.* (2024). Human activities shape global patterns of decomposition rates in rivers. *Science* 384: 1191-1195. <https://www.science.org/doi/10.1126/science.adn1262>
2. Tomczyk N.J., Rosemond A.D., Whiteis A.M., Benstead J.P., **Gulis V.** (2023). Temperature and interspecific interactions drive differences in carbon use efficiencies and biomass stoichiometry among aquatic fungi. *FEMS Microbiology Ecology* 99: 1-10. <https://doi.org/10.1093/femsec/fiad021>

3. Tomczyk N.J., Rosemond A.D., Kominoski J.S., Manning D.W.P., Benstead J.P., **Gulis V.**, Thomas S.A., Hotchkiss E.R., Helton A.M. (2023). Nitrogen and phosphorus uptake stoichiometry tracks supply ratio during 2-year whole-ecosystem nutrient additions. *Ecosystems*. <https://doi.org/10.1007/s10021-022-00813-1>
4. Franco-Duarte R., Fernandes I., **Gulis V.**, Cássio F., Pascoal C. (2022). ITS rDNA barcodes clarify molecular diversity of aquatic hyphomycetes. *Microorganisms* 10: 1569. <https://doi.org/10.3390/microorganisms10081569>
5. Boyd A.D., Walker N.S., Valdez S.R., Zhang Y.S., Altieri A.H., **Gulis V.**, Crain C., Silliman B. (2022). Invertebrate grazing on live turtlegrass (*Thalassia testudinum*): a common interaction that may facilitate fungal growth. *Frontiers in Marine Science* 8: 789380. <https://doi.org/10.3389/fmars.2021.789380>
6. Benstead J.P., Cross W.F., **Gulis V.**, Rosemond A.D. (2021). Combined carbon flows through detritus, microbes, and animals in reference and experimentally enriched stream ecosystems. *Ecology* 102: e03279. <https://doi.org/10.1002/ecy.3279>
7. Manning D.W.P., Ferreira V., **Gulis V.**, Rosemond A.D. (2021). Pathways, mechanisms, and consequences of nutrient-stimulated plant litter decomposition in streams. In: C.M. Swan et al. (Eds.) *The Ecology of Plant Litter Decomposition in Stream Ecosystems*, Springer Nature, Switzerland, pp. 347-377.
8. **Gulis V.**, Marvanová L. & Descals E. (2020). An illustrated key to the common temperate species of aquatic hyphomycetes. In: Graça M.A.S., Bärlocher F. & Gessner M.O. (Eds.) *Methods to study litter decomposition: a practical guide*, Springer Nature, Switzerland, pp. 223-239.
9. Tiegs S.D., Costello D.M., Isken M.W., ..., **Gulis V.** and others (2019). Global patterns and drivers of ecosystem functioning in rivers and riparian zones. *Science Advances* 5: eaav0486. <https://www.science.org/doi/10.1126/sciadv.aav0486>
10. **Gulis V.**, Su R. & Kuehn K.A. (2019). Fungal decomposers in freshwater environments. In: Hurst C.J. (Ed.) *Advances in environmental microbiology*. Vol. 7. The structure and function of aquatic microbial communities. Springer Nature, Switzerland, pp. 121-155.
11. Fiuza P.O., Costa L.A., Medeiros A.O., **Gulis V.**, Gusmão L.F.P. (2019). Diversity of freshwater hyphomycetes associated with leaf litter of *Calophyllum brasiliense* in streams of the semiarid region of Brazil. *Mycological Progress* 18: 907-920.
12. Manning D.W.P., Rosemond A.D., **Gulis V.**, Kominoski J.S. (2018). Nutrients and temperature additively increase stream microbial respiration. *Global Change Biology* 24: e233-e247.
13. Kominoski J.S., Rosemond A.D., Benstead J.P., **Gulis V.**, Manning D.W.P. (2018). Experimental nitrogen and phosphorus additions increase rates of stream ecosystem respiration and carbon loss. *Limnology and Oceanography* 63: 22-36.
14. **Gulis V.**, Kuehn K.A., Schoettle L.N., Leach D., Rosemond A.D., Benstead J.B. (2017). Changes in nutrient stoichiometry, elemental homeostasis and growth rate of aquatic litter-associated fungi in response to inorganic nutrient supply. *The ISME Journal* 11: 2729-2739. <https://www.nature.com/articles/ismej2017123>
15. **Gulis V.** & Bärlocher F. (2017). Fungi: biomass, production, and community structure. In: Hauer F.R. & Lamberti G.A. (Eds.) *Methods in stream ecology*, Vol. 1, pp. 177-192. Academic Press, San Diego, CA.
16. Bush B.M., Hutchens J.J., **Gulis V.**, Godwin K.S. (2017). Impact of macroconsumers on leaf breakdown and detritivores in wetlands on a Southeastern US Coastal Plain floodplain during drought. *Wetlands* 37: 1169-1179.

17. Fiuza P.O., Cantillo-Pérez T., Monteiro J.S., **Gulis V.**, Gusmão L.F.P. (2017). Rare hyphomycetes from freshwater environments from Chapada Diamantina, Bahia, Brazil. *Nova Hedwigia* 104: 451-466.
18. Fiuza P.O., Cantillo-Pérez T., **Gulis V.**, Gusmão L.F.P. (2017). Ingoldian fungi of Brazil: some new records and a review including a checklist and a key. *Phytotaxa* 306: 171-200.
19. Manning D.W.P., Rosemond A.D., **Gulis V.**, Benstead J.P., Kominoski J.S., Maerz J.C. (2016). Convergence of detrital stoichiometry predicts thresholds of nutrient-stimulated breakdown in streams. *Ecological Applications* 26: 1745-1757.
20. Chauvet E., Ferreira V., Giller P.S., McKie B.G., Tiegs S.D., Woodward G., Eloisegi A., Dobson M., Fleituch T., Graça M.A.S., **Gulis V.**, *et al.* (2016). Litter decomposition as an indicator of stream ecosystem functioning at local-to-continental scales: insights from the European RivFunction project. *Advances in Ecological Research* 55: 99-182.
21. Rosemond A.D., Benstead J.P., Bumpers P.M., **Gulis V.**, Kominoski J.S., Manning D.W.P., Suberkropp K. & Wallace J.B. (2015). Experimental nutrient additions accelerate terrestrial carbon loss from stream ecosystems. *Science* 347: 1142-1145.
22. Ferreira V., Castagnyrol B., Koricheva J., **Gulis V.**, Chauvet E. & Graça M.A.S. (2015). A meta-analysis of the effects of nutrient enrichment on litter decomposition in streams. *Biological Reviews* 90: 669-688.
23. Manning D.W.P., Rosemond A.D., Kominoski J.S., **Gulis V.**, Benstead J.P., Maerz J.C. (2015). Detrital stoichiometry as a critical nexus for the effects of streamwater nutrients on leaf litter breakdown rates. *Ecology* 96: 2214-2224.
24. Kominoski J.S., Rosemond A.D., Benstead J.P., **Gulis V.**, Maerz J.C., Manning D.W.P. (2015). Low-to-moderate nitrogen and phosphorus concentrations accelerate microbially driven litter breakdown rates. *Ecological Applications* 25:156-165.
25. Ferreira V., Larranaga A., **Gulis V.**, Basaguren A., Eloisegi A., Graca M.A.S. & Pozo J. (2015). The effects of eucalypt plantations on plant litter decomposition and macroinvertebrate communities in Iberian streams. *Forest Ecology and Management* 335: 129-138.
26. Ferreira V., **Gulis V.**, Pascoal C., Graça M.A.S. (2014). Stream pollution and fungi. In: Jones E.B.G., Hyde K.D., Pang K.L. (Eds.) *Freshwater fungi and fungal-like organisms*, pp. 389-412. De Gruyter, Berlin.
27. **Gulis V.** (2013). Diversity of aquatic hyphomycetes in the National Park Belavezhskaia Pushcha, Belarus. In: *Modern problems in botanical and mycological research*, pp. 95-97. Belarusian State University Press, Minsk, Belarus.
28. Baschien C., Tsui C.K.M., **Gulis V.**, Szewzyk U. & Marvanová L. (2013). The molecular phylogeny of aquatic hyphomycetes with affinity to the Leotiomycetes. *Fungal Biology* 117: 660-672.
29. Toledo-Hernández C., **Gulis V.**, Ruiz-Díaz C.P., Sabat A. & Bayman P. (2013). When aspergillosis hits the fan: disease transmission and fungal biomass in diseased vs. healthy sea fans (*Gorgonia ventalina*). *Fungal Ecology* 6: 161-167.
30. **Gulis V.**, Baschien C. & Marvanová L. (2012). Two new *Tricladium* species from Alaska. *Mycologia* 104, 1510-1516.
31. Woodward G., Giller P.S., Gessner M.O., **Gulis V.**, *et al.* (2012). Continental-scale effects of nutrient pollution on stream ecosystem functioning. *Science* 336: 1438-1440.
32. Hladysz S., Woodward G., Ábjörnsson K., Chauvet E., Dobson M., Eloisegi A., Ferreira V., Fleituch T., Gessner M.O., Giller P.S., **Gulis V.**, *et al.* (2011). Stream ecosystem functioning in an agricultural landscape: the importance of terrestrial-aquatic linkages.

- Advances in Ecological Research* 44: 211-276.
33. **Gulis V.**, Kuehn K.A. & Suberkropp K. (2010) Fungi. In: G. Likens (Ed.) *Plankton of Inland Waters*, pp. 45-55. Elsevier, Oxford, U.K.
  34. Suberkropp K., **Gulis V.**, Rosemond A.D. & Benstead J.P. (2010). Ecosystem and physiological scales of microbial responses to nutrients in a detritus-based stream: Results of a 5-year continuous enrichment. *Limnology and Oceanography* 55: 149-160.
  35. **Gulis V.**, Kuehn K.A. & Suberkropp K. (2009) Fungi. In: G. Likens (Ed.) *Encyclopedia of Inland Waters*, Vol. 3, pp. 233-243. Elsevier, Oxford, U.K.
  36. Campbell J., Marvanová L. & **Gulis V.** (2009) Evolutionary relationships between aquatic anamorphs and teleomorphs: *Tricladium* and *Varicosporium*. *Mycological Research* 113: 1322-1334.
  37. Benstead J.P., Rosemond A.D., Cross W.F., Wallace J.B., Eggert S.L., Suberkropp K., **Gulis V.**, Greenwood J.L. & Tant C.J. (2009). Nutrient enrichment alters storage and fluxes of detritus in a headwater stream ecosystem. *Ecology* 90: 2556-2566.
  38. **Gulis V.**, Suberkropp K. & Rosemond A.D. (2008). Comparison of fungal activities on wood and leaf litter in unaltered and nutrient-enriched headwater streams. *Applied and Environmental Microbiology* 74: 1094-1101.
  39. Rosemond A.D., Cross W.F., Greenwood J.L., **Gulis V.**, Eggert S.L., Suberkropp K., Wallace J.B. & Dye S.E. (2008). Nitrogen versus phosphorus demand in a detritus-based headwater stream: what drives microbial to ecosystem response? *Verh. Internat. Verein. Limnol.* 30: 651-655.
  40. **Gulis V.** & Suberkropp K. (2007). Fungi: biomass, production and sporulation of aquatic hyphomycetes. In: Hauer F.R. & Lamberti G.A. (Eds.) *Methods in stream ecology*, 2nd edn., pp. 311-325. Academic Press, San Diego, CA.
  41. Gessner M.O., **Gulis V.**, Kuehn K.A., Chauvet E. & Suberkropp K. (2007). Fungal decomposers of plant litter in aquatic ecosystems. In: C.P. Kubicek & I.S. Druzhinina (Eds.) *The Mycota, Vol. IV, Environmental and Microbial Relationships*. 2nd edn., pp. 301-324. Springer, Berlin.
  42. **Gulis V.**, Kuehn K.A. & Suberkropp K. (2006). The role of fungi in carbon and nitrogen cycles in freshwater ecosystems. In: Gadd G.M. (Ed.) *Fungi in biogeochemical cycles*, pp. 404-435. Cambridge University Press, Cambridge, UK.
  43. **Gulis V.**, Ferreira V. & Graça M.A.S. (2006). Stimulation of leaf litter decomposition and associated fungi and invertebrates by moderate eutrophication: implications for stream assessment. *Freshwater Biology* 51: 1655-1669.
  44. Ferreira V., **Gulis V.** & Graça M.A.S. (2006). Whole-stream nitrate addition affects litter decomposition and associated fungi but not invertebrates. *Oecologia* 149: 718-729.
  45. Ferreira V., Elozegi A., **Gulis V.**, Pozo J. & Graça M.A.S. (2006). Eucalyptus plantations affect fungal communities associated with leaf-litter decomposition in Iberian streams. *Archiv für Hydrobiologie* 166: 467-490.
  46. **Gulis V.**, Marvanová L. & Descals E. (2005). An illustrated key to the common temperate species of aquatic hyphomycetes. In: Graça M.A.S., Bärlocher F. & Gessner M.O. (Eds.) *Methods to study litter decomposition: a practical guide*, pp. 153-167. Springer, Dordrecht, the Netherlands.
  47. **Gulis V.**, Rosemond A.D., Suberkropp K., Weyers H.S. & Benstead J.P. (2004). Effects of nutrient enrichment on the decomposition of wood and associated microbial activity in streams. *Freshwater Biology* 49: 1437-1447.
  48. **Gulis V.** & Suberkropp K. (2004). Effects of whole-stream nutrient enrichment on the

- concentration and abundance of aquatic hyphomycete conidia in transport. *Mycologia* 96: 57-65.
49. **Gulis V.** & Suberkropp K. (2003). Interactions between stream fungi and bacteria associated with decomposing leaf litter at different levels of nutrient availability. *Aquatic Microbial Ecology* 30: 149-157.
  50. **Gulis V.** & Suberkropp K. (2003). Effect of inorganic nutrients on relative contributions of fungi and bacteria to carbon flow from submerged decomposing leaf litter. *Microbial Ecology* 45: 11-19.
  51. **Gulis V.** & Suberkropp K. (2003). Leaf litter decomposition and microbial activity in nutrient-enriched and unaltered reaches of a headwater stream. *Freshwater Biology* 48: 123-134.
  52. **Gulis V.** & Suberkropp K. (2003). The effect of excluding plant litter on the aquatic hyphomycete conidia in a headwater stream. *Czech Mycology* 54: 249-260.
  53. Marvanová L. & **Gulis V.** (2002). A new name for *Sporidesmium fuscum* Gulis & Marvanová. *Mycotaxon* 82: 451.
  54. **Gulis V.** (2001). Are there any substrate preferences in aquatic hyphomycetes? *Mycological Research* 105: 1088-1093.
  55. Marvanová L. & **Gulis V.I.** (2000). Notes on aquatic hyphomycetes and streamborne spora from Austria. *Austrian Journal of Mycology (Österr. Z. Pilzk.)* 9: 125-140.
  56. **Gulis V.** & Stephanovich A.I. (1999). Antibiotic effects of some aquatic hyphomycetes. *Mycological Research* 103: 111-115.
  57. **Gulis V.** (1999). Preliminary list of aquatic hyphomycetes from central Belarus. *Mycotaxon* 72: 227-230.
  58. **Gulis V.** & Marvanová L. (1999). Three new scolecosporous hyphomycetes from waters in Belarus. *Mycotaxon* 72: 237-250.
  59. **Gulis V.** & Marvanová L. (1998). *Filospora exilis* sp. nov. on submerged plant debris from Belarus. *Mycotaxon* 68: 313-320.
  60. **Gulis V.** & Stephanovich A.I. (1998). Aquatic hyphomycetes in culture. II. Growth kinetics and production of antibiotic substances. *Proc. Natl. Acad. Sci. Belarus, Ser. Biol. Sci.* No. 4: 112-115. [In Russian].
  61. **Gulis V.** & Stephanovich A.I. (1998). New records of aquatic hyphomycetes from Belarus. *Proc. Natl. Acad. Sci. Belarus, Ser. Biol. Sci.* No. 3: 53-56. [In Russian].

### Selected Presentations (oral and poster)

1. **Gulis V.**, Pates H., Ackerman K., Hodgson R., Hopkins K., Rosemond A.D., Benstead J.P. (2024). Effects of temperature on activity of aquatic fungi: insights from a 3-year whole-stream warming experiment. 12<sup>th</sup> International Mycological Congress, Maastricht, Netherlands, Aug. 11-15, 2024.
2. Rosemond A.D., Bumpers P.M., Kominoski J.S., Benstead J.P., **Gulis V.**, Maerz J.C. (2024). Assessing algal response metrics in forest streams: how much, when, and in what way do benthic algae respond to nitrogen and phosphorus enrichment? Annual Meeting of the Society for Freshwater Science, Philadelphia, PA, June 2-6, 2024.
3. **Gulis V.**, Pates H., Natale K., Hodgson R., Hopkins K., Rosemond A.D., Benstead J.P. (2023). Effects of temperature on microbial activity: insights from a 3-year whole-stream warming experiment. Freshwater Sciences 2023, Brisbane, Australia, June 3-7, 2023.
4. Rosemond A.D., Tomczyk N., Benstead J.P., Cummins C.S., Bumpers P.M., Rogers P., Hare D., **Gulis V.**, Helton A., Hotchkiss E., Wenger S.J. (2023). What will happen to detrital carbon in a warming world? Insights from a whole-stream warming experiment. Freshwater Sciences 2023, Brisbane, Australia, June 3-7, 2023.
5. Hare D., Helton A., Bumpers P., Tomczyk N., Cummins C., Wenger S., **Gulis V.**, Hotchkiss E.R.,

- Benstead J.P., Rosemond A. (2022). The role of groundwater in stream network carbon cycling under a changing climate. Joint Aquatic Sciences Meeting, Grand Rapids, MI, May 14-20. 2022.
6. Hare D., Helton A., Briggs M.A., Johnson Z.C., Cummins C., Bumpers P., Tomczyk N., **Gulis V.**, Wenger S., Hotchkiss E., Benstead J., Rosemond A. (2021). Groundwater flow path depth influences the thermal stability of streams: implications for instream carbon cycling. Meeting of the Geological Society of America, Portland, OR, October 10-13, 2021.
  7. Tomczyk N., Kaz A., Hotchkiss E.R., **Gulis V.**, Benstead J., Rosemond A. 2021. Temperature effects on nutrient uptake in heterotrophic streams. Annual Meeting of the Society for Freshwater Science, May 23-27, 2021, virtual.
  8. Cummins C., Rosemond A., Halvorson H., Rugenski A., Wenger S., Benstead J.P., **Gulis V.**, Bumpers P., Tomczyk N. (2021). Testing the effects of temperature and carbon quality on shredder growth, survival, consumption, and development. Annual Meeting of the Society for Freshwater Science, May 23-27, 2021, virtual.
  9. Tomczyk N.J., Rosemond A.D., Hotchkiss E.R., Thomas S.A., Helton A.M., Kominoski J.S., **Gulis V.**, Manning D.W.P., Benstead J.P. (2020). Stoichiometry of net nutrient uptake in forested headwater streams. Annual Meeting of the Society for Freshwater Science, June 9-12, 2020, virtual.
  10. Rosemond A.D., Bumpers P.M., Wenger S.J., **Gulis V.**, Benstead J.P. (2019). Beyond blooms: the critical role of terrestrial carbon in uptake and retention of nutrients in freshwater ecosystems. Annual Meeting of the Ecological Society of America, Louisville, KY, August 11-16, 2019.
  11. **Gulis V.**, Pates H., Bautz N., Rosemond A., Benstead J. (2019). Effects of temperature on activity of stream microorganisms associated with decaying leaf litter. Annual Meeting of the Society for Freshwater Science, Salt Lake City, UT, May 19-23, 2019.
  12. Cummins C., Rosemond A., Bumpers P., Tomczyk N., Benstead J., **Gulis V.**, Wenger S. (2019). Temperature effects on shredder and microbial processing of leaf litter in streams depend on season and litter type. Annual Meeting of the Society for Freshwater Science, Salt Lake City, UT, May 19-23, 2019.
  13. Benstead J., Rosemond A., **Gulis V.**, Maerz J., Demi L. (2019). Experimental N and P additions relieve stoichiometric constraints on organic-matter flows through five stream food webs. Annual Meeting of the Society for Freshwater Science, Salt Lake City, UT, May 19-23, 2019.
  14. Rosemond A.D., Bumpers P.M., Manning D.W.P., Kominoski J.S., Benstead J.P., **Gulis V.**, Maerz J. (2018). Loaded but leaky: Chronic nutrient enrichment results in reduced and seasonally variable nutrient storage in detritus-based streams. Annual Meeting of the Ecological Society of America, New Orleans, LA, August 5-10, 2018.
  15. **Gulis V.**, Pates H., Bautz N., Rosemond A., Benstead J. (2018). Effects of warming on fungal and bacterial activity associated with decaying leaf litter in a stream microcosm experiment. 11th International Mycological Congress, San Juan, Puerto Rico, July 16-21, 2018.
  16. Cummins C., Rosemond A.D., Bumpers P., Benstead J.P., **Gulis V.** (2018). Using landscape gradients to test the effects of increased temperature on the fates of carbon in stream. Annual Meeting of the Society for Freshwater Science, Detroit, MI, May 20-24, 2018.
  17. Rosemond A.D., Manning D.W.P., Bumpers P., Kominoski J.S., **Gulis V.**, Benstead J.P. (2018). Nutrient-stimulated detrital loss rates from litterbags are predictive of losses at stream reach scales. Annual Meeting of the Society for Freshwater Science, Detroit, MI, May 20-24, 2018.
  18. Pates H., **Gulis V.**, Rosemond A., Benstead J. (2018). Effects of temperature on microbial parameters associated with decaying plant litter in a stream microcosm experiment. 79th Annual Meeting of the Association of Southeastern Biologists, Myrtle Beach, SC, March 28-31, 2018.
  19. **Gulis V.**, Harrington K., Benstead J.P., Rosemond A.D. (2017). Effects of temperature on activity of aquatic litter-associated fungi. 8th Conference on Plant Litter Processing in Freshwaters (PLPF8), Bilbao, Spain, July 17-20, 2017.
  20. **Gulis V.**, Harrington K., Benstead J.P., Rosemond A.D. (2017). Effects of temperature on activity of aquatic fungi and leaf litter decomposition. Annual Meeting of the Society for Freshwater Science, Raleigh, NC, June 4-8, 2017.
  21. Rosemond A.D., Benstead J.P., Maerz J.C., **Gulis V.**, Bumpers P., Manning D.W.P., Kominoski J.S.,

- Demi L. (2017). Nitrogen and phosphorus have different effects at the top and bottom of stream food webs. Annual Meeting of the Society for Freshwater Science, Raleigh, NC, June 4-8, 2017.
22. Demi L., Benstead J.P., Rosemond A.D., Cross W., Maerz J.C., **Gulis V.** (2016). Resource quality, not quantity, drives consumer production in headwater streams: results from multiple N and P enrichment experiments at Coweeta. Annual Meeting of the Society for Freshwater Science, Sacramento, CA, May 21-26, 2016.
  23. Fortino K., Andrews J., **Gulis V.**, Marcellus J., Peters K., Waters M. (2016). Impacts of terrestrial leaf litter on the sediments of small man-made ponds in central Virginia. Annual Meeting of the Society for Freshwater Science, Sacramento, CA, May 21-26, 2016.
  24. Rosemond A.D., Manning D.W., Bumpers P., Kominoski J.S., **Gulis V.**, Benstead J.P., Maerz J.C. (2016). Nutrient enrichment flips nitrogen:phosphorus ratios of diverse detrital resources. Annual Meeting of the Society for Freshwater Science, Sacramento, CA, May 21-26, 2016.
  25. **Gulis V.** (2015). Biodiversity and ecology of freshwater fungi and prospective applications. The 1st International Symposium of Freshwater Biodiversity and Human Life. Sangju, South Korea, November 25-27, 2015.
  26. Demi L., Benstead J.P., Rosemond A.D., Maerz J.C., **Gulis V.** (2015). Experimental N and P fertilization of five detritus-based headwater streams reveals effects of resource stoichiometry on consumer biomass and production. Annual Meeting of the Society for Freshwater Science, Milwaukee, WI, May 17-21, 2015.
  27. **Gulis V.**, Burns T.P., Fitzgerald J., Barrett, C.R. Kominoski J.S., Benstead J.P. Rosemond A.D. (2014). Dissolved nutrients drive microbial activity while fungi control decomposition and nutrient stoichiometry of submerged leaf litter and wood. Joint Aquatic Sciences Meeting, Portland, OR, May 18-23, 2014.
  28. Demi L.M., Benstead J.P., Rosemond A.D., Maerz J.C., **Gulis V.** (2014). Consumer biomass and production in five detritus-based stream ecosystems in response to an experimental dissolved N:P gradient. Joint Aquatic Sciences Meeting, Portland, OR, May 18-23, 2014.
  29. Manning D.W., Rosemond A.D., Kominoski J.S., **Gulis V.**, Benstead J.P., Maerz J.C. (2014). Nitrogen and phosphorus increase litter breakdown rates via different mechanistic pathways. Joint Aquatic Sciences Meeting, Portland, OR, May 18-23, 2014.
  30. Rosemond A.D., Benstead J.P., Maerz J.C., **Gulis V.**, Kominoski J.S., Manning D.W., Norris K.G. (2014). Whole-stream carbon retention decreases with nitrogen and phosphorus concentrations. Joint Aquatic Sciences Meeting, Portland, OR, May 18-23, 2014.
  31. Barrett C.R., **Gulis V.**, Burns T.P. (2014). Extracellular enzyme activity of plant litter-associated microorganisms depends on dissolved inorganic nutrient availability. Annual meeting of the Association of Southeastern Biologists, April 2-5, Spartanburg, SC.
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  35. Manning D.W., Rosemond A.D., Kominoski J.S., **Gulis V.**, Benstead J.P. & Maerz J.C. (2013). Dissolved N:P ratios differentially affect breakdown of contrasting litter species. Annual Meeting of the Society for Freshwater Science, Jacksonville, FL, May 19-23, 2013.
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- wood. Annual Meeting of the Society for Freshwater Science, Louisville, KY, May 20-24, 2012.
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  39. Manning D.W., Kominoski J.S., Rosemond A.D., **Gulis V.** & Benstead J.P. (2012). How do dissolved N:P ratios affect substrate-specific respiration rates in streams? Annual Meeting of the Society for Freshwater Science, Louisville, KY, May 20-24, 2012.
  40. Rosemond A.D., Kominoski J.S., **Gulis V.** & Benstead J.P. (2012). Thresholds in N and P concentration and ratio defined by detrital carbon loss in streams. Annual Meeting of the Society for Freshwater Science, Louisville, KY, May 20-24, 2012.
  41. Rosemond A.D., **Gulis V.**, Benstead J.P., Maerz J.C., Kominoski J.S. & Manning D.W.P. (2012). Metabolically-driven carbon transformations in streams: nutrient enrichment effects and the pivotal role of supply and substrate stoichiometry. Gordon Research Conference: Metabolic Basis of Ecology, University of New England, Biddeford, ME, July 22-27, 2012.
  42. Marsh, M.D., **Gulis V.** & Koepfler E. (2010). Microbial activity and diversity associated with decomposing *Spartina* wrack in coastal ecosystems. Joint Meeting of the American Society for Limnology and Oceanography and the North American Benthological Society. Santa Fe, NM, June 6-11, 2010.
  43. Rosemond A.D., Wallace J.B., Suberkropp K., **Gulis V.**, Eggert S.L., Benstead J.P., Cross W.F., Greenwood J.L., Davis J.M. & Tant C.J. (2010). Synthesizing results from a long-term nutrient addition to a detritus-based ecosystem: food web and carbon flow consequences. Joint Meeting of the American Society for Limnology and Oceanography and the North American Benthological Society. Santa Fe, NM, June 6-11, 2010.
  44. Rosemond A.D., Benstead J.P., **Gulis V.**, Kominoski J.S., Maerz J.C. & Manning D.W. (2010). Nutrient enrichment and detritus-based food webs: assessing relative consumer homeostasis and limitation of stream ecosystems along nitrogen and phosphorus gradients. Coweeta LTER Meeting. Otto, NC, June 29, 2010.
  45. Marsh, M.D. & **Gulis V.** (2010). The role of microorganisms in the decomposition of *Spartina* wrack in coastal ecosystems. Annual Meeting of the Association of Southeastern Biologists, Asheville, NC, Apr. 7-10, 2010.
  46. Ruppel W., Hutchens J.J., Jr. & **Gulis V.** (2010). Relationship between macroinvertebrate assemblage structure and ecosystem function in two Coastal Plain blackwater streams. Annual Meeting of the Association of Southeastern Biologists, Asheville, NC, Apr. 7-10, 2010.
  47. **Gulis V.**, Suberkropp K., Eggert S.L. & Wallace J.B. (2008). Fungi and plant litter: multiyear patterns from whole-stream litter exclusion and litter addition experiments. 5th International Meeting on Plant Litter Processing in Freshwaters. Coimbra, Portugal, 23-26 July, 2008.
  48. Fleituch T. & **Gulis V.** (2008). Fungal colonization and respiration rates of alder leaf litter in pristine and nutrient-impacted streams (southern Poland). 5th International Meeting on Plant Litter Processing in Freshwaters. Coimbra, Portugal, 23-26 July, 2008.
  49. McMillan S.M., Silliman B.R., **Gulis V.** and Demes K. (2008). Trophic associations between *Macrocystis pyrifera*, *Chlorostoma brunnea* and marine fungi. Annual Meeting of the Western Society of Naturalists, Vancouver, BC, Canada, 6-10 Nov., 2008
  50. Rosemond A.D., Suberkropp K., Wallace J.B., Cross W.F., Greenwood J.L., **Gulis V.**, Eggert S.L., Johnson B.R. & Dye S. (2007). Nutrient enrichment affects microbial to ecosystem-level dynamics in a detritus-based stream. 30th SIL Congress (International Association of Theoretical and Applied Limnology). Montreal, Canada, August 12-18, 2007.
  51. **Gulis V.**, Suberkropp K. & Rosemond A.D. (2007). Comparison of fungal importance on submerged wood and leaf litter in two headwater streams. 55th Annual Meeting of the North American Benthological Society. Columbia, SC, June 3-8, 2007.
  52. Findlay R.H., Mosher J.J., **Gulis V.** & Suberkropp K. (2006). The influence of nutrient amendments on microbial biomass and community structure of coarse particulate organic matter and sediments in headwater streams. 11th International Symposium on Microbial Ecology. Vienna, Austria, Aug. 20-

- 25, 2006.
53. **Gulis V.** & Suberkropp K. (2006). Whole-stream nutrient enrichment alters fungal biomass, production, and microbial respiration associated with decomposing wood and leaves. 91st Annual Meeting of the Ecological Society of America, Memphis, TN, Aug. 6-11, 2006.
  54. Rosemond A.D., **Gulis V.**, Greenwood J.L., Cross W.F., Davis J.M., Suberkropp K. & Wallace J.B. (2006). Consequences of nutrient enrichment to biodiversity in headwater streams: an assessment of effects on multiple taxonomic groups. 54th Annual Meeting of the North American Benthological Society, Anchorage, AK, June 4-9, 2006.
  55. Graça M.A.S., **Gulis V.** & Ferreira V. (2005). Anthropogenic perturbations may affect microbial parameters associated with litter decomposition. 4th International Meeting on Plant Litter Processing in Freshwaters. Toulouse, France, 25-28 July, 2005.
  56. Pozo J., **Gulis V.**, Elosegi A., Ferreira V., Larrañaga A., Larrañaga S., Basaguren A. & Graça M.A.S. (2005). Assessing stream functional status in the Iberian Peninsula: response of leaf breakdown process to eucalyptus afforestation. 4th International Meeting on Plant Litter Processing in Freshwaters. Toulouse, France, 25-28 July, 2005.
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  58. **Gulis V.**, Ferreira V. & Graça M.A.S. (2005). The utility of decomposition and associated microbial parameters to assess changes in stream ecosystems due to eutrophication. Joint North American Benthological Society and American Geophysical Union meeting, New Orleans, LA, May 23-27, 2005.
  59. Suberkropp K. & **Gulis V.** (2005). Effects of manipulating leaf inputs on the biomass and communities of aquatic hyphomycetes in a southern Appalachian stream. Joint North American Benthological Society and American Geophysical Union meeting, New Orleans, LA, May 23-27, 2005.
  60. **Gulis V.** & Suberkropp K. (2004). Effects of nutrient enrichment on fungal activity and community structure of aquatic hyphomycetes in a southern Appalachian stream. Annual Meeting of the Mycological Society of America, Asheville, NC, July 17-21, 2004.
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  62. Suberkropp K., **Gulis V.**, Rosemond A.D., Weyers H.S. & Benstead J.P. (2004). The effect of nutrient enrichment on the production of leaf-associated microorganisms in a headwater Appalachian stream. 52nd Annual Meeting of the North American Benthological Society, Vancouver, Canada, June 6-10, 2004.
  63. **Gulis V.**, Suberkropp K., Weyers H.S., Benstead J.P. & Rosemond A.D. (2003). Whole-stream nutrient enrichment increases decomposition rate of wood and associated microbial activity. 51st Annual Meeting of the North American Benthological Society, Athens, GA, May 26-June 1, 2003.
  64. Rosemond A.D., Suberkropp K., Cross W., Greenwood J., **Gulis V.**, Mulholland P.J., Wallace J.B., Weyers H.S., Benstead J.P. & Hilten R. (2003). Relative response of consumers, resources, and ecosystem function to nutrient enrichment in a detritus-based system. 88th Annual Meeting of the Ecological Society of America, Savannah, GA, Aug. 3-8, 2003.
  65. **Gulis V.** & Suberkropp K. (2002). Effects of nutrient enrichment on stream fungi and bacteria growing on leaf litter in laboratory microcosms. 50th Annual Meeting of the North American Benthological Society, Pittsburgh, PA, May 28-June 1, 2002.
  66. Suberkropp K., **Gulis V.**, Weyers H.S., Benstead J.P. & Rosemond A.D. (2002). Effects of nutrient addition on the annual production of leaf-associated microorganisms in a headwater Appalachian stream. 50th Annual Meeting of the North American Benthological Society, Pittsburgh, PA, May 28-June 1, 2002.

67. **Gulis V.** & Suberkropp K. (2001). Leaf litter decomposition and fungal activity in intact and nutrient-enriched reaches of a headwater stream. 49th Annual Meeting of the North American Benthological Society, La Crosse, WI, June 3-8, 2001.
68. Poliksenova V.D., **Gulis V.I.** & Girilovich A.I. (2000). Mycological collections of the Department of Botany, Belarusian State University. *In: Mycology and Cryptogamic Botany in Russia: traditions and novelties. Proceedings Int. Conf. V.L.Komarov Inst. Bot. Rus. Acad. Sci., St. Petersburg, Russia*, pp. 230-231. [In Russian].
69. **Gulis V.** (1999). Aquatic hyphomycete assemblages on decaying plant litter in Belarus watercourses. The 2nd International Meeting on Plant Litter Processing in Freshwaters. Biol. Station Lunz, Austrian Acad. Sci., Lunz am See, Austria, Sep. 21-25, 1999.
70. **Gulis V.I.** & Stephanovich A.I. (1998). Aquatic hyphomycetes of Minsk region *In: Modern problems of mycology, phycology and phytopathology. Moscow State Univ., Moscow, Russia*, pp. 181-182. [In Russian].
71. **Gulis V.I.** & Stephanovich A.I. (1996). Search for antibiotic substances producers among aquatic hyphomycetes. *In: Vimba E., Piterans A. & Avota I. (Eds.). Fungi and Lichens in the Baltic Region. 13th Int. Conf. on Mycol. and Lichenol. Univ. of Latvia, Riga, Latvia*, pp. 19-20.

## OTHER ACCOMPLISHMENTS

### ***Ad hoc reviewer for***

National Science Foundation, Swiss National Science Foundation, Austrian Science Fund (FWF), Univ. of Nottingham (U.K.) (~30 grant proposals or pre-proposals, participated in NSF review panels).

Scientific journals: *Applied and Environmental Microbiology, Aquatic Botany, Aquatic Ecology, Aquatic Microbial Ecology, Archives of Environmental Contamination and Toxicology, Biogeochemistry, Brazilian Journal of Botany, Canadian Journal of Microbiology, Ecological Applications, Ecological Indicators, Ecology, Environmental Pollution, FEMS Microbiology, Freshwater Biology, Freshwater Science, Frontiers in Fungal Biology, Fundamental and Applied Limnology, Fungal Ecology, Global Biogeochemical Cycles, Hydrobiologia, International Review of Hydrobiology, ISME Journal, Journal of Environmental Quality, Limnology, Marine and Freshwater Research, Microbial Ecology, Microorganisms, Mycological Progress, Mycology, PLoS One, STOTEN, Sydowia, Symbiosis, Wetlands, etc.*

*Aquatic Biology* (Editorial Board).

Textbooks (4 chapters): *Microbial Ecology* (Jones & Bartlett Publishers), *Ecology* (Sinauer Associates).

### ***Undergraduate and graduate student projects mentored***

Allison Engeseth (BS), Leah Biango (BS), Kimberly Jones (BS), Jeffrey Obelcz (BS), Matt Bray (BS), Ryan Calabria (BS), Desiree Leach (BS), Devin Howard (BS), Heather Vought (BS), Danielle Kirei (BS), Hannah Dolan (BS), Cathy Nguen (BS), Christian Barrett (BS), Chelsea Norman (BS), Kyra Harrington (BS), Sara Alemar (BS), Madison Redick (BS), Robert Tracey (BS), Nicholas Bautz (BS), Kacye Duthie (BS), Amber Wilson (BS), Michael Dear (BS), Kaitlin Beasley-Polko (BS), Caroline Hopkins (BS), Hailey Frick (BS), John King (BS), Morgan Marsh (MS), Louie Schoettle (MS), Timothy Burns (MS), Jennifer Fitzgerald (MS), Hunter Pates (MS), Kaity Ackerman (Natale) (MS), Regan Hodgson (MS), Patricia Fiuza (Ph.D., visiting), Bryana Bush (Ph.D., visiting), Nathan Tomczyk (Ph.D., visiting)

### ***Graduate Student Committees***

Christine Raczka (MS), Julia Stevens (MS), Patrick Hutchins (MS), Whitney Ruppel (MS), Bryana Libby (MS), Jon-Erik Taylor (MS)

### ***Visiting Appointments***

Visiting scientist at Czech Collection of Microorganisms, Masaryk University, Czech Republic.  
Nov. 1998. Advisor: Dr. L. Marvanová.

### ***Professional Societies***

Society for Freshwater Science  
Mycological Society of America

### ***Committees and Service while at Coastal Carolina University***

Faculty Senate, Faculty Development Committee, International Programs Committee, Coastal Marine and Wetland Studies Graduate Program Committee (thrice), Department of Biology Promotion and Tenure Committee (chair), Search Committees (two), Faculty advisor for Beta Beta Beta (National Biological Honor Society)

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