

Curriculum Vitae

Dr. Cihelio Alves Amorim



Personal Details

Name	Cihelio Alves Amorim
Place of birth	Crato, Ceará, Brazil
Date of birth	December 05th, 1995
Address	Middle East Technical University – METU, Üniversiteler Mahallesi, Dumlupınar Bulvarı No:1, 06800 Çankaya, Ankara, Turkey.
E-mail	alvescihelio@gmail.com ;
Phone	+90 538 335 66 58
Languages	Portuguese (native), English, and Spanish (beginner)

Education

- 2017-2021 Ph.D. (Doctor of Philosophy) in Biodiversity, Graduate Program in Biodiversity, Federal Rural University of Pernambuco, Brazil
Thesis: Algal Blooms in Pernambuco State: Causes, Consequences, and Control
Supervisor: Professor Ariadne do Nascimento Moura
- 2016-2017 M.Sc. (Master of Science) in Botany, Graduate Program in Botany, Federal Rural University of Pernambuco, Brazil
Thesis: Mutual allelopathic effects between the aquatic macrophyte *Egeria densa* Planch. and the bloom-forming cyanobacterium *Microcystis*
Supervisor: Professor Ariadne do Nascimento Moura
- 2012-2016 B.Sc. (Bachelor) in Biological Sciences, Regional University of Cariri, Brazil
Final work: Temporal variation of phytoplanktonic community in a reservoir from Ceará state, Brazilian Northeast
Supervisor: Professor Sírleis Rodrigues Lacerda

Courses

- 2020 I International Course on Continental Algae Communities
- 2018 Real-Time PCR and Digital PCR: applications, analyses, and result interpretation
- 2015 Sampling and Herborization of Aquatic Macrophytes
- 2014 Systematics and Ecology of Ferns and Lycophytes
- 2013 Climatology Applied to Water Resources
- 2012 Herbarium as a Tool to Teach Botany

2012 Topography

Experience

Botany Laboratory, Regional University of Cariri – URCA, Ceará, Brazil (2012 – 2016)

Undergraduate Scholarships from the Regional University of Cariri (URCA), Fundação Cearense de Apoio ao Desenvolvimento Científico e Tecnológico do Ceará (FUNCAP), and Brazilian National Council for Scientific and Technological Development (CNPq)

Activities: Courses; scientific projects; limnological analyses; periphyton, phytoplankton, and zooplankton analyses.

Araripe UNESCO Global Geopark, Ceará, Brazil (2012 – 2014)

Volunteer trainee in the Environmental Education Sector

Activities: Courses; scientific projects; scientific outreach; environmental education; activities related to biodiversity, conservation, paleontology, geology, history, cultural manifestations, and tourism in the Araripe Plateau.

Soldadinho do Araripe Project, Ceará, Brazil (2014 – 2015)

Volunteer trainee in the Ecological Restoration Sector

Activities: Scientific projects, ecological restoration; reforestation; environmental education; conservation; and biodiversity inventories in the Araripe Plateau.

Phycology Laboratory – Taxonomy and Ecology of Microalgae, Federal Rural University of Pernambuco – UFRPE, Pernambuco, Brazil (2016 – 2021)

M.Sc. and Ph.D. Scholarships from the Coordination for the Improvement of Higher Education Personnel (CAPES) and Fundação de Amparo a Ciência e Tecnologia do Estado de Pernambuco (FACEPE)

Activities: Courses; scientific projects; limnological analyses; periphyton, phytoplankton, zooplankton, and aquatic macrophytes analyses; algal blooms monitoring; laboratory and field experiments (microcosms and mesocosms); and cyanotoxin analyses through ELISA and genetic methods (PCR and Real-Time PCR).

International Network on Limnology of Drylands – INLD (2018 – current)

Researcher and Young Scientists executive committee

Activities: Scientific projects, monitoring of several reservoirs and lakes in the semiarid region of Northeast Brazil; and scientific outreach.

Brazilian Association of Limnology – ABLimno, Brazil (2020 – current)

Limnology Popularization executive committee, Brazilian Northeast Working Group, Associate Editor of LimnoEcos – Journal of Scientific Outreach, and First Secretary (2021 – current)

Activities: Scientific outreach; associate editor; organization of events and lectures; social media management; and coordination of the Northeast working Group.

Middle East Technical University – METU, Ankara, Turkey (2021 – current)

Post-Doc Researcher

Activities: Courses; scientific projects; limnological and biological analyses; mesocosm experiments.

Major research interests

Aquatic ecology with special emphasis on the dynamics of algal blooms; biotic interactions in aquatic ecosystems; biomanipulation in shallow lakes; and salinization. During the master's degree, I worked with the mutual allelopathic effects of toxic and non-toxic cyanobacteria, and submerged macrophytes through laboratory experiments. During the Ph.D. degree, I worked in the monitoring of several reservoirs and lakes in the semiarid region of Northeast Brazil to develop a model to predict the main causes of cyanobacterial blooms in tropical region, mainly predicting the effects of eutrophication, trophic interactions, salinity, and climate. I also monitored the main ecological consequences of freshwater algal blooms (cyanobacteria, dinophytes, green algae, and diatoms) on plankton communities, water quality, and ecosystem functioning. I performed some experiments to control cyanobacterial blooms using allelopathically active submerged macrophytes and zooplankton.

Reviewer

Ecological Indicators (since 2016)

Marine and Freshwater Research (since 2017)

Energy, Ecology and Environment (since 2018)

Inland Waters (since 2019)

Science of the Total Environment (since 2019)

Journal of Cleaner Production (since 2019)

Acta Limnologica Brasiliensia (since 2020)

Aquatic Ecology (since 2020)

Journal of Arid Environments (since 2020)

Austral Ecology (since 2020)

Asian Fisheries Science (2020)

Environmental Science and Pollution Research (since 2021)

Oecologia Australis (since 2021)

All Life (since 2021)

Frontiers in Microbiology (since 2021)

Brazilian Journal of Microbiology (since 2021)

Publications

14 peer-reviewed papers; two book chapters; five papers and 44 abstracts in Brazilian and international scientific events. Google Scholar Citations = 104 (H-Index = 6).

Moura-Falcão, R. H., Moura, A. N., & **Amorim, C. A.** (2021). Growth of *Microcystis* strains isolated from environments with the presence and absence of submerged macrophytes in coexistence with *Ceratophyllum demersum*. *Acta Scientiarum: Biological Sciences*, *in press*.

Amorim, C. A., & Moura, A. N. (2021). Ecological impacts of freshwater algal blooms on water quality, plankton biodiversity, structure, and ecosystem functioning. *Science of the Total Environment*, 758, 143605.

Amorim, C. A., Dantas, Ê. W., & Moura, A. N. (2020). Modeling cyanobacterial blooms in tropical reservoirs: the role of physicochemical variables and trophic interactions. *Science of the Total Environment*, 744, 140659.

Amorim, C. A., & Moura, A. N. (2020). Effects of the manipulation of submerged macrophytes, large zooplankton, and nutrients on a cyanobacterial bloom: A mesocosm study in a tropical shallow reservoir. *Environmental pollution*, 265, 114997.

Barbosa, L. G., **Amorim, C. A.**, Parra, G., Portinho, J. L., Morais, M., Morales, E., & Menezes, R. F. (2020). Advances in limnological research in Earth's drylands. *Inland Waters*, 10(4), 429-437.

Amorim, C. A., Valença, C. R., de Moura-Falcão, R. H., & do Nascimento Moura, A. (2019). Seasonal variations of morpho-functional phytoplankton groups influence the top-down control of a cladoceran in a tropical hypereutrophic lake. *Aquatic Ecology*, 53(3), 453-464.

Amorim, C. A., Moura-Falcão, R. H. D., Valença, C. R., Souza, V. R. D., & Moura, A. D. N. (2019). Allelopathic effects of the aquatic macrophyte *Ceratophyllum demersum* L. on phytoplankton species: contrasting effects between cyanobacteria and chlorophytes. *Acta Limnologica Brasiliensia*, 31.

Amorim, C. A., Lima, R. G. V. N., Ferreira, A. C., & Melo, J. I. M. (2019). First record of *Wissadula hernandioides* (L'Hér.) Garcke (Malvoideae, Malvaceae) for the Caatinga domain in Brazil. *Check List*, 15, 339.

Moura, A. N., Aragão-Tavares, N. K., & **Amorim, C. A.** (2018). Cyanobacterial blooms in freshwater bodies from a semiarid region, Northeast Brazil: A review. *J. Limnol.*, 77(2), 179-188.

Amorim, C. A., Ulisses, C., & Moura, A. N. (2017). Biometric and physiological responses of *Egeria densa* Planch. cultivated with toxic and non-toxic strains of *Microcystis*. *Aquatic Toxicology*, 191, 201-208.

Lucas, F. H. R., Júnior, A. R., **Amorim, C. A.**, Costa, A. R. S., Cavalcante, F. C., & Lacerda, S. R. (2015). Variação temporal da comunidade fitoplanctônica no reservatório Rosário/CE. *Cadernos de Cultura e Ciência*, 14(2), 35-43.

Amorim, C. A., Lucas, F. H. R., Rangel, A. J., do Nascimento, K. J., Góes, M. I. L., & Lacerda, S. R. (2015). Microalgas perifíticas associadas à *Nymphoides indica* (L.) O. Kuntze em um reservatório do semiárido cearense. *Cadernos de Cultura e Ciência*, 14(1), 9-23.

Costa, A. R. S., **Amorim, C. A.**, do Nascimento, K. J., Dias, A. S., Ferreira, R. J., & Lacerda, S. R. (2015). Caracterização da comunidade de microalgas perifíticas em um reservatório do semiárido cearense. *Cadernos de Cultura e Ciência*, 14(1), 43-54.

Macêdo, M. J. F., Oliveira, M. A. S., **Amorim, C. A.**, & Silva, M. S. F. F. (2014). Uso de plantas medicinais na prevenção e no combate de doenças nos municípios de Crato e Nova Olinda-CE. *Revista E-Ciência*, 2, 28-32.

Amorim, C. A., Lucas, F. H. R., Rangel, A. J., & Lacerda, S. R. (2013). Variação Sazonal De Microalgas Perifíticas Associadas a Macrófitas Aquáticas Em Reservatório Na Região Do Cariri - Ceará. In: Giovanni Seabra. (Org.). Educação e Cooperação pela Água para a Conservação da Biodiversidade. First Edition, João Pessoa: Editora Universitária, v. 3, p. 412-419.

Lucas, F. H. R., **Amorim, C. A.**, Cavalcante, F. C., & Lacerda, S. R. Diversidade De Cianobactérias Em Um Reservatório De Abastecimento Público do Semiárido Cearense. In: Giovanni Seabra. (Org.). Educação e Cooperação pela Água para a Conservação da Biodiversidade. First Edition, João Pessoa: Editora Universitária, v. 3, p. 475-483.

Awards

- 2020 Awarded abstract in the I Virtual Symposium on Limnology of the Brazilian Semiarid, National Institute of the Brazilian Semiarid, Brazil
- 2019 Awarded abstract in the IV Meeting on Plant Biology, Federal University of Pernambuco, Brazil
- 2018 Dárdano de Andrade Lima Award for the best master dissertation, Federal Rural University of Pernambuco, Brazil
- 2018 Aylthon Brandão Joly Award for the abstract presented in the XVII Brazilian Congress of Phycology, Brazilian Society of Phycology, Brazil
- 2016 Aylthon Brandão Joly Award (First place) for the abstract presented in the XVI Brazilian Congress of Phycology, Brazilian Society of Phycology, Brazil
- 2016 Awarded paper (First place) in the I Symposium on Limnology of the Brazilian Semiarid, Federal University of Paraíba, Brazil
- 2015 Two awarded abstracts in the XII Biology Week, Regional University of Cariri, Brazil
- 2015 Awarded abstract in the III Workshop on Ethnobiology and Nature Conservation, Federal Rural University of Pernambuco, State University of Paraíba, and Regional University of Cariri, Brazil
- 2015 Awarded abstract in the I Brazilian Science and Technology Week, Regional University of Cariri, Brazil
- 2014 Highlighted Scientific Initiation Award, Regional University of Cariri, Brazil
- 2013 Highlighted Scientific Initiation Award, Regional University of Cariri, Brazil

Lectures and courses given in scientific events

- 2021 Manipulation of submerged macrophytes, zooplankton, and nutrients to control cyanobacterial blooms
- 2020 Cyanobacterial blooms: causes, consequences, and control
- 2020 Impacts of cyanobacterial blooms in water supply reservoirs
- 2020 Cyanobacterial blooms in the Brazilian Semiarid: from the causes to the solution of the problem
- 2020 Cyanobacteria and Toxic Algae
- 2020 Cyanobacterial blooms: two sides of the same coin
- 2020 Statistical Analyses in Limnology: theory and practices
- 2020 Monitoring and Control of Cyanobacterial Blooms in the Brazilian Semiarid
- 2018 Introduction to Limnology: water quality and biotic communities
- 2015 Sampling techniques and diversity of microalgae from the Thomaz Osterne de Alencar Dam, Ceará, Brazil
- 2013 Courses on Recycling, Biojewels, and Fossil Replicates

Scientific Events

1. 10th Shallow Lakes Conference. 2021.
2. III Ciclo de Palestras da Biologia - Agenda da Biodiversidade Neotropical: Desafios para o Século XXI. 2021.
3. II Workshop da Rede de Hidrologia do Semiárido - REHISA. 2021.
4. 1st International Meeting on Behavior, Ecology and Evolution (IMBEE). 2020.
5. 31ª Semana do Instituto de Ciências Biológicas (31ª SICB). 2020.
6. Café Ficológico IX - "Grupos funcionais: definições e aplicações ambientais. Café Ficológico XIV - Cianobactérias pelo mundo. 2020.
7. I Jornada De Botânica - Biodiversidade e Interdisciplinaridade na Botânica. 2020.
8. I Symposium on Aquatic Resources. 2020.
9. Seminário: Cianobactérias & Saúde. 2020.
10. Simpósio Virtual de Limnologia e Saneamento do Semiárido. 2020.
11. II Congresso Ibero-Americano de Limnologia, XVII Congresso Brasileiro de Limnologia. 2019
12. II Simpósio de Limnologia do Semiárido. 2018.
13. XVII Congresso Brasileiro de Ficologia. 2018.
14. I Simpósio de Limnologia do Semiárido. 2016.
15. XVI Congresso Brasileiro de Ficologia. 2016.
16. 67ª Reunião Anual da Sociedade Brasileira para o Progresso da Ciência. 2015.
17. III Workshop de Etnobiologia e Conservação da Natureza e I Simpósio de Bioprospecção Molecular do Cariri. 2015.
18. I Semana Nacional de Ciência e Tecnologia da Região do Cariri Cearense. 2015.
19. XII Semana de Biologia da URCA. 2015.
20. XXIV Congresso Brasileiro de Paleontologia. 2015.
21. Colóquio de Geografia Agrária do Cariri Cearense. 2014.
22. I Encontro Regional de Agroecologia Amazônico - I ERA Amazônico: Agroecologia como resposta aos desafios do campesinato. 2014.
23. Semana de Meio Ambiente da URCA: Preservação, Conservação e Sustentabilidade: Cuidar é preciso. 2014.
24. XI Congresso Latinoamericano de Botânica, LXV Congresso Nacional de Botânica e XXXIV ERBOT - MG BA ES. 2014.
25. XVII Semana de Iniciação Científica da Urca e III Encontro de Pesquisadores em Bioprospecção do Nordeste. 2014.
26. I Fórum De Aquicultura E Limnologia. 2013.
27. III Congresso Nacional De Educação Ambiental E V Encontro Nordeste De Biogeografia. 2013.
28. XVI semana de Iniciação Científica e II semana de Extensão da URCA: Pesquisa e Extensão: Perspectivas de Internacionalização. 2013.
29. II Encontro Universitário de Paleontologia e Arqueologia do Cariri. 2012.
30. II Encontro Universitário De Paleontologia E Arqueologia Do Cariri. 2012.
31. IV Semana Da Agronomia Da UFC. 2012.
32. XI Semana De Biologia Da URCA. 2012.
33. XV Semana de Iniciação Científica, I Encontro de Líderes de Grupos de Pesquisas do Ceará e II Encontro de Pesquisadores de Bioprospecção do Nordeste: Ciência e Sustentabilidade: A contribuição da pesquisa. 2012.
34. XXII Encontro Estadual De Estudantes De Geografia - EEEGE. 2012.