

Assistant Professor of Ecology and Evolutionary Biology
Rutgers School of Arts and Sciences, Newark, NJ, USA
Department of Biological Sciences
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HIGHEST DEGREE EARNED

Ph.D.

AREA OF SPECIALIZATION

Population Genetics, Molecular Ecology, Bioinformatics, Phylogenetics, Taxonomy, Herpetology

EDUCATION

Ph.D. in Natural Science, Technical University of Braunschweig, Germany, 2013
M.S. in Zoology, Pontificia Universidade Católica do Rio Grande do Sul, PUC RS, Porto Alegre, Brazil, 2009
B.S. in Biological Sciences, Universidade Federal de Juiz de Fora, UFJF, Juiz De Fora, Brazil, 2005

PREVIOUS EXPERIENCE IN DOCTORAL EDUCATION

Postdoctoral Fellow, Universidade Federal do Rio Grande do Norte –UFRN, Brazil 2013-2015
Postdoctoral Fellow, American Museum of Natural History, New York, NY, USA 2015-2019
Gerstner Postdoctoral Fellow in Bioinformatics, American Museum of Natural History, New York, NY, USA 2019.

FACULTY APPOINTMENTS

Assistant Professor, Rutgers School of Arts and Sciences, Biology Department, Newark, NJ, USA, 2020-present
Adjunct Faculty, Graduate Course for Evolution and Systematics, Universidade Federal do Rio Grande do Norte, UFRN, Brazil, 2013-2015

IDIOMES

Portuguese: Understands, Reads, Speaks, Writes (native)
English: Understands, Reads, Speaks, Writes (fluent)
Spanish: Understands, Reads, Speaks (basic)
German: Understands, Reads (basic)

CITATION INDEXES FROM GOOGLE SCHOLAR

Citations: 548
H-index: 13
i10-index: 14

ARTICLE IN REFEREED JOURNALS

Google Scholar: <https://tinyurl.com/y6umgnrj>

Total number of articles: 28

1. FM Lanna, **M Gehara**, FP Werneck, EM Fonseca, GR Colli, JW Sites Jr, MT Rodrigues, AA Garda (2020) Dwarf geckos and giant rivers: the role of the São Francisco River in the evolution of *Lygodactylus klugei* (Squamata: Gekkonidae) in the semi-arid Caatinga of north-eastern Brazil.

- Biological Journal of the Linnean Society*, 129, 88-98
2. EA Myers, AT Xue, **M Gehara**, CL Cox, ARD Rabosky, J Lemos-Espinal, JE Martínez-Gómez, FT Burbrink (2019) Environmental heterogeneity and not vicariant biogeographic barriers generate community-wide population structure in desert-adapted snakes. *Molecular Ecology*, 28, 4535-4548
 3. EM Fonseca, FP Werneck, **M Gehara**, EF Oliveira, FM Magalhães, FM Lanna, GS Lima, R Marques, DO Mesquita, GC Costa, GR Colli, AA Garda (2019) The role of strict nature reserves in protecting genetic diversity in a semiarid vegetation in Brazil. *Biodiversity and Conservation*, 28, 2877-2890
 4. L Rancilhac, F Goudarzi, **M Gehara**, MR Hemami, KR Elmer, M Vences, S Steinfarz (2019) Phylogeny and species delimitation of near Eastern Neuregus newts (Salamandridae) based on genome-wide RADseq data analysis. *Molecular Phylogenetics and Evolution*, 133, 189-197
 5. BN Reid, E Naro-Maciel, AT Hahn, NN FitzSimmons, **M Gehara** (2019) Geography best explains global patterns of genetic diversity and postglacial co-expansion in marine turtles. *Molecular Ecology*, 28, 3358-3370
 6. EF Oliveira, **M Gehara**, VA São-Pedro, GC Costa, FT Burbrink, GR Colli, MT Rodrigues, AA Garda (2018) Phylogeography of Muller's termite frog suggests the vicariant role of the Central Brazilian Plateau. *Journal of Biogeography*, 45, 2508-2519, doi.org/10.1111/jbi.13427
 7. FM Lanna, FP Werneck, **M Gehara**, EM Fonseca, GR Colli, JW Sites, MT Rodrigues, AA Garda (2018) The evolutionary history of *Lygodactylus* lizards in the South American open diagonal. *Molecular Phylogenetics and Evolution*, 127, 638-645
 8. EM Fonseca, **M Gehara**, FP Werneck, FM Lanna, GR Colli, JW Sites Jr, MT Rodrigues, AA Garda (2018) Diversification with gene flow and niche divergence in a lizard species along the South American "diagonal of open formations". *Journal of Biogeography*, 45, 1688-1700
 9. FT Burbrink, **M Gehara** (2018) The biogeography of deep time phylogenetic reticulation. *Systematic Biology*, 67, 743-744
 10. EF Oliveira, PA Martinez, VA São-Pedro, **M Gehara**, FT Burbrink, DO Mesquita, AA Garda, GR Colli, GC Costa (2018) Climatic suitability, isolation by distance and river resistance explain genetic variation in a Brazilian whiptail lizard. *Heredity*, 120, 251-265
 11. **M Gehara**, AA Garda, FP Werneck, EF Oliveira, EM da Fonseca, F Camurugi, FM de Magalhães, FM Lanna, JW Sites, R Marques, R Silveira-Filho, VA São Pedro, GR Colli, GC Costa, FT Burbrink (2017) Estimating synchronous demographic changes across populations using hABC, and its application for a herpetological community from Northeastern Brazil. *Molecular Ecology*, 26, 4756-4771
 12. **M Gehara**, A Barth, EF de Oliveira, MA Costa, CFB Haddad, M Vences (2017) Model-based analyses reveal insular population diversification and cryptic frog species in the *Ischnocnema parva* complex in the Atlantic forest of Brazil. *Molecular Phylogenetics and Evolution*, 112, 68-78
 13. J Díaz-Rodríguez, **M Gehara**, R Márquez, M Vences, H Gonçalves, F Sequeira, I Martínez-Solano, M Tejedo (2017) Integration of molecular, bioacoustical and morphological data reveals two new cryptic species of *Pelodytes* (Anura, Pelodytidae) from the Iberian Peninsula. *Zootaxa* 4243, 001-041
 14. LR de Oliveira, **MCM Gehara**, LD Fraga, F Lopes, JI Túnez, MH Cassini, P Majluf, S Cárdenas-Alayza, HJ Pavés, EA Crespo, N García, RL de Castro, AR Hoelzel, M Sepúlveda, C Olavarria, VH Valiati, R Quiñones, MJ Pérez-Alvarez, PH Ott, SL Bonatto (2017) Ancient female philopatry, asymmetric male gene flow, and synchronous population expansion support the influence of climatic oscillations on the evolution of South American sea lion (*Otaria flavescens*). *PloS One*, 12, e0179442
 15. L Menezes, C Canedo, H Batalha-Filho, AA Garda, **M Gehara**, MF Napoli (2016) Multilocus Phylogeography of the Treefrog *Scinax eurydice* (Anura, Hylidae) Reveals a Plio-Pleistocene Diversification in the Atlantic Forest. *PloS One* 11, e0154626
 16. EF Oliveira, **M Gehara**, VA São-Pedro, X Chen, EA Myers, FT Burbrink, DO Mesquita, AA Garda, GR Colli, MT Rodrigues, FJ Arias, H Zaher, RML Santos, GC Costa (2015) Speciation with gene flow

- in whiptail lizards from a Neotropical xeric biome. *Molecular Ecology*, 24, 5957-5975
17. A Rodríguez, M Börner, M Pabijan, **M Gehara**, CFB Haddad, M Vences (2015) Genetic divergence in tropical anurans: deeper phylogeographic structure in forest specialists and in topographically complex regions. *Evolutionary Ecology*, 29, 765-785
 18. A Miralles, CA Hipsley, J Erens, **M Gehara**, A Rakotoarison, F Glaw, J Müller, M Vences (2015) Distinct patterns of desynchronized limb regression in Malagasy scincine lizards (Squamata, Scincidae). *PloS One*, 10, e0126074
 19. **M Gehara**, AJ Crawford, VGD Orrico, A Rodríguez, S Lötters, A Fouquet, LS Barrientos, F Brusquetti, I De La Riva, R Ernst, GG Urrutia, F Glaw, JM Guayasamin, M Hölting, M Jansen, PJR Kok, A Kwet, R Lingnau, M Lyra, J Moravec, J Pombal Jr., FJM Rojas-Runjaic, A Schulze, JC Señaris, M Solé, et al. (2014) High Levels of Diversity Uncovered in a Widespread Nominal Taxon: Continental Phylogeography of the Neotropical Tree Frog *Dendropsophus minutus*. *PloS One*, 9, e103958
 20. M Vences, E Sanchez, JS Hauswaldt, D Eikelmann, A Rodríguez, S Carranza, D Donaire, **M Gehara**, V Helfer, S Lötters, P Werner, S Schulz, S Steinfartz (2014) Nuclear and mitochondrial multilocus phylogeny and survey of alkaloid content in true salamanders of the genus *Salamandra* (Salamandridae). *Molecular Phylogenetics and Evolution*, 73, 208-216
 21. JS Hauswaldt, C Angelini, **M Gehara**, E Benavides, A Polok, S Steinfartz (2014) From species divergence to population structure: A multimarker approach on the most basal lineage of Salamandridae, the spectacled salamanders (genus *Salamandrina*) from Italy. *Molecular Phylogenetics and Evolution*, 70, 1-12
 22. **M Gehara**, CC Canedo, CFB Haddad, M Vences (2013) From widespread to microendemic: molecular and acoustic analyses show that *Ischnocnema guentheri* (Amphibia: Brachycephalidae) is endemic to Rio de Janeiro, Brazil. *Conservation Genetics*, 14, 973-982
 23. **M Gehara**, K Summers, JL Brown (2013) Population expansion, isolation and selection: novel insights on the evolution of color diversity in the strawberry poison frog. *Evolutionary Ecology*, 27, 797-824
 24. P-S Gehring, F Glaw, **M Gehara**, FM Ratsoavina, M Vences (2013) Northern origin and diversification in the central lowlands? - Complex phylogeography and taxonomy of widespread day geckos (*Phelsuma*) from Madagascar. *Organisms Diversity & Evolution*, 13, 605-620
 25. M Vences, JS Hauswaldt, S Steinfartz, O Rupp, A Goesmann, S Künzel, P Orozco-Terwengel, DR Vieites, S Nieto-Roman, S Haas, C Laugsch, **M Gehara**, S Bruchmann, M Pabijan, A Ludewig, D Rudert, C Angelini, JL Borkin, P Crochet, A Crottini, A Dubois, GF Ficetola, P Galan, P Geniez, M Hachtel, et al. (2013) Radically different phylogeographies and patterns of genetic variation in two European brown frogs, genus *Rana*. *Molecular Phylogenetics and Evolution*, 68, 657-670
 26. A Rodríguez, D Poth, S Schultz, **M Gehara**, M Vences (2013) Genetic diversity, phylogeny and evolution of alkaloid sequestering in Cuban miniaturized frogs of the *Eleutherodactylus limbatus* group. *Molecular Phylogenetics and Evolution* (Print), 68, 541-554
 27. M Vences, **M Gehara**, J Köhler, F Glaw (2012) Description of a new Malagasy treefrog (Boophis) occurring syntopically with its sister species, and a plea for studies on non-allopatric speciation in tropical amphibians. *Amphibia-Reptilia*, 33, 503-520
 28. M Fonseca, RMH Carvalho, F Lanna, **M Gehara** (2012) Predation on *Sibynomorphus newwiedi* (Serpentes: Dipsadidae) by *Leptodactylus labyrinthicus* (Anura: Leptodactylidae) in southeastern Brazil.

Herpetology Notes, 5, 167-168

29. MCM Gehara, GC Ribeiro, EL Bisaggio, A Andriolo (2009) Conhecimento popular de moradores do entorno do parque estadual do Ibitipoca (MG, Brazil) sobre o Gênero *Mazama* Rafinesque, 1817 (Cervidae). *Sitientibus. Série Ciências Biológicas*, 9, 122-128

SCIENTIFIC JOURNAL FEATURED COVERS

Systematic Biology Volume 67, Issue 5, September 2018

SCIENTIFIC SOFTWARE

PipeMaster: an R package to build and simulate coalescent models. www.github.com/gehara/PipeMaster

GRANTS

Species richness and genetic diversity of the herpetofauna from the region of the Paranapanema river, Sao Paulo, Brazil. Vinicius A. Sao Pedro (PI: UFSC), Eliana F. de Oliveira (Co-PI: UFMT); Celio F.B. Haddad (Co-PI: UNESP); Marcelo Gehara (Co-PI). São Paulo Research Foundation. **In Review**

História da Herpetofauna das Formações Abertas da América do Sul: Evidências de filogeografia comparada e sequenciamento de nova geração. Adrian A. Garda (PI); Guarino R. Colli (Co-PI); Fernanda P. Werneck (Co-PI); Frank T. Burbrink (Co-PI); Marcelo Gehara (Co-PI); Sarah M. Barros; (Co-PI); Ricardo Rodrigues (Co-PI); Felipe M. Magalhães (PhD student); Felipe Camurugi (PhD student); Emanuel M. da Fonseca (PhD student); Flávia M. Lanna (PhD student); Ricardo Marques (PhD student). CNPq/Universal 2016: 431433/2016-0. **Funded 2016-present**

Towards understanding diversification on the Seasonally Dry Tropical Forest. Marcelo Gehara (PI: UFRN); Adrian A. Garda (PI: UFRN); Gabriel C. Costa (Co-Pi: UFRN); Eliana F. Oliveira (Co-PI: UFRN); Fernanda P. Werneck (Co-PI: INPA); Vinisions A. Sao Pedro (Co-PI: UFRN); Frank T. Burbrink (Co-PI: CUNY). Young Talent Researcher Grant (BJT), Science Without Borders Program, CAPES. **Funded 2013-2015.**

AWARDS

Section award at XII Seminário de Iniciação científica da UFJF: (Oral presentation) Conhecimento popular no estudo de Cervídeos do Parque Estadual do Ibitipoca e no seu entorno, MG. 2006. In: XII Seminário de Iniciação científica da UFJF, Brazil.

FIELD RESEARCH

2010 Atlantic Forest, Brazil

2011 Atlantic Forest, Brazil

2012 Cerrado, Brazil

2013 Atlantic Forest, Brazil

2014 Caatinga, Brazil

2020 Caatinga, Espinhaço Range, Brazil

TEACHING EXPERIENCE

2002 – 2003 Teaching Science and Zoology, integrating schools and UFJF Zoology department

Lectures for the Graduate Program on Evolution and Systematics, UFRN

2013 – 2014 Molecular Phylogenetics

2013 – 2015 Population Genetics and Phylogeography

Lectures for the Richard Gilder Graduate School, American Museum of Natural History
2017, 2018 (2 lectures) Model-based inference and approximate Bayesian computation for evolution studies of non-model organisms.

WORKSHOPS TAUGHT

2018 Rethinking trees NYC (1 day, RGGS-AMNH) co-taught with Jose Padial.

2019 CompPhylo Oslo Edition (5 days; August 26-30, Tollboden, Drobak Marine Station): Sponsored by Forskerskole i biosystematikk (ForBio) & UiO:Life Science. co-taught with Isaac Overcast, Megan Ruffley, Alexander Xue, Champack Reddy and Mike Hickerson (<https://compphylo.github.io/Oslo2019/>).

2020 Population Genetics Modeling and Inference (5 days; January 13 - 17, RGGS - American Museum of Natural History) co-taught with Sean Harington, Ariadna Morales and Arianna Kuhn

FELLOW MENTORING

High School Students

JieJie Yuan 2018 – present, Urban Barcode Program, Cold Spring Harbor Laboratories
Mendaka Bineth Abeysekera 2018 – present, Urban Barcode Program, Cold Spring Harbor Laboratories
Emily Pelayo 2018 – present, Science Research Mentoring Program, AMNH
Tse Chang 2018 – present, Science Research Mentoring Program, AMNH

Undergraduate students

Department of Zoology, Universidade Federal do Rio Grande do Norte - UFRN, Brazil
Jessica Coelho 2013 – 2014 (Principal advisor)

Master Students

Graduate program in Ecology, Universidade Federal do Rio Grande do Norte - UFRN, Brazil
Emanuel Masieiro da Fonseca 2014 – 2016 (coadvisor)
Flavia Mol Lanna 2014 – 2015 (coadvisor)

Ph.D. Students

Graduate Program in Ecology, Universidade Estadual Santa Cruz - UESC, Bahia, Brazil
Francisco Fonseca Ribeiro de Oliveira 2014 – present (coadvisor)

Graduate Program in Zoology, Universidade Federal da Paraiba - UFPB, Brazil

Felipe Camurugi 2014 – Present (coadvisor)
Felipe M. de Magalhaes 2017 – Present (coadvisor)

COMMITTEES

Masters Defense

2015 Institution: *Universidade Federal do Pará - UFPA, Brasil.*
Graduate Program in Zoology
Dissertation: *Filogeografia Multi-Locus de Kentropyx calcarata Spix 1825 (Reptilia: Teiidae) na Amazônia Oriental.*
Candidate: Áurea Aguiar Cronemberger
Advisor: Dra. Teresa Cristina Sauer de Ávila Pires
Committee: Dr. Péricles Sena do Rêgo (UFPA), Dra. Lilian Giugliano (UNB), Dr. Fernando Mendonça d'Horta (INPA), Dr. Marcelo Gehara (UFRN)

2014 Institution: *Universidade Federal do Pará - UFPA, Brasil.*
Graduate Program in Zoology
Dissertation: *Filogeografia de Gonatodes humeralis (Reptilia: Sphaerodactylidae) no baixo curso dos rios Amazonas e Tocantins*
Candidate: Geraldo Rodrigues de Lima Filho
Advisor: Dra. Teresa Cristina Sauer de Ávila Pires
Committee: Dra. Maria Iracilda da Cunha Sampaio (UFPA), Dr. Péricles Sena do Rêgo (UFPA), Dra. Fernanda de Pinho Werneck (INPA), Dra. Ana Carolina Oliveira de Queiroz Carnaval (CUNY), Dr. Marcelo Gehara (UFRN).

Masters Qualifying Exam

2014 Institution: *Universidade Federal do Rio Grande do Norte – UFRN, Brasil*
Graduate Program on Evolution and Systematics
Dissertation: *Relação entre a divergência de nicho e as características fenotípicas de Canídeos da América do Sul.*
Candidate: Juan Pablo Zurano
Advisor: Dr. Gabriel C. Costa
Committee: Dr. Carlos R. Fonseca, Dr. Marcelo Gehara

2013 Institution: *Universidade Federal do Rio Grande do Norte – UFRN, Brasil*
Graduate Program on Evolution and Systematics
Title: *Sistemática integrativa de dois ciclídeos (Perciformes: Cichlidae) do Nordeste do Brasil*
Candidate: Waldir Miron Berbel Filho
Advisor: Dr. Sérgio Maia Queiroz Lima.
Committee: Dr. Gabriel C. Costa, Dr. Marcelo Gehara

PhD Qualifying Exam

2014 Institution: *Universidade Federal da Paraíba - UFP*
Thesis: *Sistemática e Biogeografia das Espécies de Proceratophrys do Complexo P. cristiceps (Amphibia, Anura, Odontophrynidae).*
Candidate: Sarah Mangia Barros
Advisor: Dr. Adrian Garda
Committee Members: Dr. Marcelo Gehara, Dr. Márcio Bernardino da Silva.

2014 Institution: *Universidade Federal da Paraíba – UFP*
Thesis: *Filogeografia de Philodryas nattereri Steindachner, 1870 (Squamata, Colubridae)*
Candidate: Ricardo Rodrigues da Silveira Filho
Advisor: Dr. Adrian Garda
Co-advisor: Dr. Gustavo Henrique Calazans Vieira
Committee Members: Dr. Marcelo Gehara, Dr. Márcio Bernardino da Silva.

AD HOC REFEREE

Systematic Biology, Molecular Ecology, Bioinformatics, Molecular Phylogenetics and Evolution, Zookeys, PlosOne, Journal of Herpetology, Journal of Biogeography, Annais da Academia Brasileira de Ciências, Scientific Reports, Biotropica, BMC Evolutionary Biology, Zootaxa, Herpetology Notes, Herpetologica

SCIENTIFIC EDITORIAL BOARD

Associated Editor of CheckList (<https://biotaxa.org/CL>)

Area: Herpetology