DANIEL YUDI MIYAHARA NAKAMURA

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Google Scholar — Research Gate

EDUCATION

University of São Paulo 2022–2028
Ph.D. in Bioinformatics
Internship at the American Museum of Natural History 2024–2025

- Thesis: Museomics of amphibians: Methodological advances and applications of historical DNA to the systematics of rare and extinct frogs
- Advisor: Taran Grant

University of São Paulo 2017–2021
B.S. and Licentiate's degree in Biology

- Thesis: Body size, habitat, and sexual selection affect call evolution in Cophomantini (Anura: Hylidae: Hylinae)
- Advisor: Paulo Durães Pereira Pinheiro

PUBLICATIONS

Peer-reviewed

9. **Nakamura DYM** et al. (2025) Historical DNA places an apparently extinct gladiator frog in the phylogeny of the *Boana pulchella* group (Anura: Hylidae). *Herpetologica* **81**:117–133. https://doi.org/10.1655/Herpetologica-D-24-00036.
8. **Nakamura DYM** et al. (2025) Museomics reduces taxonomic inflation in the *Dendropsophus araguaya* complex (Hylinae: Dendropsophini) from the Cerrado. *Journal of Vertebrate Biology* **74(24112)**:1–18. https://doi.org/10.25225/jvb.24112.
7. Whitcher C et al. (2025) Phylogenetics, biogeography, and life history evolution in the continentally-distributed treefrog genus *Dendropsophus* (Anura: Hylidae: Hylinae). *Molecular Phylogenetics and Evolution* **204**:108275. doi.org/10.1016/j.ympev.2024.108275.
6. **Nakamura DYM** et al. (2025) Body size, habitat, and sexual selection affect call evolution in Cophomantini treefrogs (Anura: Hylidae: Hylinae). *Biological Journal of the Linnean Society* **144(2)**:1–18. doi.org/10.1093/biolinnean/blae036.
5. Pinheiro PDP et al. (2024) Two new species of the *Boana semiguttata* clade (Anura: Hylidae) from the Atlantic Forest of southern Brazil. *South American Journal of Herpetology* **33**:48–68. doi.org/10.2994/SAJH-D-24-00002.1.
4. **Nakamura DYM** et al. (2024) Procedures for obtaining tissue samples from amphibian and reptile specimens for museomics. *Herpetologia Brasileira* **13(2)**: 134–144. doi.org/10.5281/zenodo.14291534
3. Escalona M et al. (2024) Allometric constraint predominates over the acoustic adaptation hypothesis in a radiation of Neotropical treefrogs. *Integrative Zoology*:1–11. doi.org/10.1111/1749-4877.12920
2. **Nakamura DYM** et al. (2024) Resin foraging interactions in stingless bees: an ecological synthesis using multilayer networks. *Apidologie* **55**:34. doi.org/10.1007/s13592-024-01082-8

1. Albuquerque-Pinna J et al. (2024) Defensive alkaloid variation and palatability in sympatric poison frogs. *Chemoecology* **34**:83–94. doi.org/10.1007/s00049-024-00402-9

Books

1. Koffler S et al. (2021) Projeto *cidadãoasf* - Protocolo de monitoramento de atividade de voo em abelhas sem ferrão utilizando ciência cidadã. Brazil, Santo André, UFABC. 72p. ISBN: 978-6-55-719028-9

In prep

12. **Nakamura DYM**, Wheeler WC, Grant T (In prep.) Dynamic homology at phylogenomic scale: Comparison of heuristic strategies for the tree alignment problem. To be submitted to *Cladistics*
11. **Nakamura DYM**, Wheeler WC, Grant T (In prep.) Identifying analytical hallucinations of ancient DNA in phylogenetics. To be submitted to *Cladistics*
10. **Nakamura DYM**, Grant T (In prep.) The impact of missing data from ancient DNA sequences on genetic distances and species delimitation models. To be submitted to *Systematic Biology*
9. **Nakamura DYM**, Lyra ML, Grant T (In prep.) Reducing reference bias in ancient DNA assembly: Strategies using multiple seeds, polymorphism, and phylogenetic information. To be submitted to *Cladistics*
8. **Nakamura DYM**, Wheeler WC, Grant T (In prep.) Preprocessing missing data and partitions in dynamic homology: Applications to Sanger sequences, phylogenomics, and museomics. To be submitted to *Cladistics*.
7. **Nakamura DYM**, Grant T (In prep.) Evolution of equal-length DNA sequences: Insertion-deletion events are widespread in apparently gapless fragments. To be submitted to *Cladistics*.
6. **Nakamura DYM**, Lyra ML, Grant T (In prep.) Phylogenetic read mapping improves the assembly of ancient DNA. To be submitted to *Systematic Biology*.
5. **Nakamura DYM**, Grant T (In prep.) Iterative read mapping of pangenome graphs. To be submitted to *Nature Methods*.
4. **Nakamura DYM**, Grant T (In prep.) Building pangenome graphs using implied alignments from dynamic homology. To be submitted to *Cladistics*.
3. **Nakamura DYM**, Grant T (In prep.) Resampling and optimality-based support in parsimony analyses across dataset sizes: Avoiding spurious maximum support values in phylogenomics. To be submitted to *Biology Letters*.
2. **Nakamura DYM**, Wheeler WC, Grant T (In prep.) The impact of phenomic evidence on phylogenetic analyses dominated by DNA sequences. To be submitted to *Cladistics*.
1. **Nakamura DYM**, Wheeler WC, Grant T (In prep.) *RNODE*: User-friendly tool for comparisons of support and topology between phylogenetic trees. To be submitted to *Cladistics*.

AWARDS

- Best undergraduate presentation 2021
  II Ciclo de webinars WDA-LA: Estudiantes, Wildlife Disease Association
- Best undergraduate presentation 2019
  XXVI Semana Científica Benjamin Eurico Malucelli, University of São Paulo

RESEARCH FUNDING

- Ph.D. scholarship, R$202,528.80 — August 2022–July 2028
  FAPESP (grant 22/02789-0)
- Undergraduate scholarship, R$9,000.00 — January 2021–July 2022
  PUB-USP
- Undergraduate scholarship, R$8,348.40 — August 2019–July 2020
  FAPESP (grant 19/11096-5)
- Technical support to research, R$4,800.00 — August 2017–July 2018
  CNPq (grant 372343/2017-1)

CONGRESS PRESENTATIONS

7. **Nakamura DYM**, Wheeler WC, Grant T (2025) Is morphology still relevant to phylogenetic analyses? MorphoBank Connects.
6. **Nakamura DYM**, Wheeler WC, Grant T (2025) The impact of phenomics on total evidence analyses dominated by DNA sequences. Evolution Meeting, Athens, GA, USA.
5. **Nakamura DYM**, Grant T (2023) Support in phylogenetics: Do resampling metrics predict optimality-based support in parsimony analyses? XXII Workshop of the Graduate Program in Bioinformatics, University of São Paulo, SP, Brazil.
4. Pereira JM, **Nakamura DYM**, Homma MHM, Grant T (2023) The advertisement calls of three species of *Brachycephalus* (Anura: Brachycephalidae) from southeastern Brazil. X Brazilian Congress of Herpetology, Federal University of Southern Bahia, BA, Brazil.
3. **Nakamura DYM**, Pinheiro PDP, Lyra ML, Faivovich J, Grant T (2023) Historical DNA places a extinct gladiator frog in the phylogeny of the *Boana pulchella* Group (Anura: Hylidae). X Brazilian Congress of Herpetology, Federal University of Southern Bahia, BA, Brazil.
2. **Nakamura DYM** (2021) Fibropapillomatosis in sea turtles and the spirorchiid parasites. II Ciclo de webminars, Latin America, Wildlife Disease Association.
1. **Nakamura DYM**, Zamana RR, Gattamorta MA, Matushima ER (2019) Fibropapillomatosis in sea turtles: are the parasites Spirorchiidae (Trematoda: Digenea) possible vectors of *Chelonid alphaherpesvirus 5*? XXVI Semana Científica Benjamin Eurico Malucelli, University of São Paulo, SP, Brazil.

SKILLS

- Bash/Linux (intermediate)
- R (intermediate)
- Python (intermediate)
- Git and GitHub (basic)
- LaTeX (basic)
- Microsoft Office
- Adobe Illustrator, Photoshop, and Premiere

TEACHING

Undergraduate teaching assistant

- BIZ0448 - Animal architecture: Evolution of metazoan body plans — 2024
  University of São Paulo
- BIZ0212 - Vertebrates — 2020, 2023
  University of São Paulo
- BIZ0213 - Invertebrates — 2021
  University of São Paulo
- 0410117 - Philosophy for Biological Sciences — 2019
  University of São Paulo

Invited lessons

- BIZ5749 - Systematics and evolution of amphibians and reptiles — 2022
  University of São Paulo
- BIZ0440 - Herpetology — 2022
  University of São Paulo

OUTREACH

Editorial work

- Reviewer of Anais da Academia Brasileira de Ciências (1x) and Herpetologia Brasileira (2x) — 2024–2025

Organization of public events

- É o Bicho na Remo! — 2024
  University of São Paulo, São Paulo, Brazil
- Meliponicultura e ciência cidadã — 2022
  University of São Paulo (EACH-USP), São Paulo, Brazil

Environmental educator

- Internship in the Tamar Environmental Monitoring Program — 2020
  Project TAMAR, Ubatuba, Brazil
- Monitor in the BioBlitz Program, Natural Geographic Education — 2018
  Instituto Butantan, São Paulo, Brazil

College prep teacher

- Prefeitura de Jandira, São Paulo, Brazil — 2021–2022
- Universidade Cidade de São Paulo (UNICID), São Paulo, Brazil — 2017