# Pedro Henrique Pereira Braga, Ph.D.

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## **Current Appointment**

2024 - Now Research Assistant

Concordia University, Montréal, QC, CAN

Laboratory of Community and Quantitative Ecology

Principal Investigator: Pedro Peres-Neto

## **Education**

2016 - 2024 **Ph.D. in Biology** 

Concordia University, Montréal, QC, CAN

Thesis: Climatic drivers of biodiversity: influence on ecophylogenetics and specialization across spatial scales

Doctoral Committee: Pedro Peres-Neto (supervisor), Steven Kembel (co-supervisor), Jean-Philippe Lessard & Dylan Fraser

2012 - 2014 M.Sc. in Ecology and Evolution

Federal University of Goiás, Goiânia, BRA

Thesis: Niche evolution and diversification patterns in Neotropical anurans

Supervisors: Natan Medeiros Maciel & Paulo De Marco Júnior

2008 - 2012 B.Sc. in Biological Sciences

Federal University of Goiás, Goiânia, BRA

Honour Thesis: Adaptive climatic niche evolution in bufonid frogs

Supervisors: Natan Medeiros Maciel & Paulo De Marco Júnior

### **Research Interests**

- Evolutionary Ecology & Biogeography: Integrate the natural and evolutionary history of species with ecological attributes and spatial data to uncover how processes and mechanisms generate biodiversity patterns across multiple scales.
- Climatic Drivers of Biodiversity: Investigate the influence of historical and contemporary climate, including its averages, variability, and frequency, on ecological community assembly and evolutionary trajectories.
- **Phylogenetic & Spatial Scale Dynamics**: Examine how shifting spatial scales and phylogenetic perspectives alter our understanding of ecological and evolutionary patterns.
- Open, Reproducible, & Inclusive Science: Foster collaborative workflows, transparent methods, and equity-focused practices in research and teaching, ensuring that scientific investigations is robust, transparent and accessible to all.

## **Teaching Interests**

- Biostatistics & Quantitative Ecology: Teach foundational and advanced statistical techniques (general and generalised linear mixed models, multivariate statistics, phylogenetic comparative methods, spatial analyses) while relating them directly to ecological and evolutionary case studies.
- Ecology, Evolution & Biogeography: Instruct courses that explore the principles of community ecology, biogeography, macroecology, and evolutionary ecology, emphasizing the integration of theory with empirical data and analytical tools.
- **Scientific Method & Study Design**: Instruct courses that focus on the scientific method, hypothesis testing, experimental design, and data collection, emphasizing the importance of reproducibility, transparency, and ethical considerations in research.
- Statistical & Computational Methods: Emphasize programming in R, hands-on exploratory data analysis, reproducible workflows (Quarto, R Markdown, GitHub), and rigorous statistical modelling.
- Active & Evidence-Based Learning: Employ student-centred teaching strategies—such as peer instruction, real-world data projects, continuous feedback, and simulations and analysis of data under theoretical assumptions—to foster critical thinking and practical problem-solving skills.

### **Publications**

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#### A. Peer-Reviewed Journal Articles

- Braga, P.H.P.°, Hébert, K.°°, Hudgins, E.J.°°, Scott, E.R.°°, Edwards, B.P.M.°°, Sánchez Reyes, L.L.°°, Grainger, M.J., Foroughirad, V., Hillemann, F., Binley, A.D., Brookson, C.B., Gaynor, K.M., Shafiei Sabet, S., Güncan, A., Weierbach, H., Gomes, D.G.E., Crystal, L.° (2023) "Not just for programmers: How GitHub can accelerate collaborative and reproducible research in ecology and evolution". Methods in Ecology and Evolution. 14(6), 1364–1380. DOI: 10.1111/2041-210X.14108
- 2. **Braga, P.H.P.**, Kembel, S., Peres-Neto, P. (2023) "Historical and contemporary processes drive global phylogenetic structure across geographical scales: Insights from bat communities". Global Ecology and Biogeography. 32(5), 747–765. DOI: 10.1111/geb.13650
- 3. Khattar, G., Vaz, S., **Braga, P.H.P.**, Macedo, M., Silveira, L.F.L.D. (2022) "Life history traits modulate the influence of environmental stressors on biodiversity: The case of fireflies, climate and artificial light at night". Diversity and Distributions. 28(9), 1820–18319. DOI: 10.1111/ddi.13584
- 4. Fournier, B., Vázquez-Rivera, H., Clappe, S., Donelle, L., **Braga, P.H.P.**, Peres-Neto, P.R. (2020) "The spatial frequency of climatic conditions affects niche composition and functional diversity of species assemblages: the case of Angiosperms". Ecology Letters. 23(2), 254–264. DOI: 10.1111/ele.13425
- 5. Peixoto, F.P., **Braga, P.H.P.**, Mendes, P. (2018) "A synthesis of ecological and evolutionary determinants of bat diversity across spatial scales". *BMC Ecology*. 18(1), 18. DOI: 10.1186/s12898-018-0174-z
- 6. Peixoto, F.P., **Braga, P.H.P.**, Cianciaruso, M.V., Diniz-Filho, J.A.F., Brito, D. (2014) "Global patterns of phylogenetic beta diversity components in bats". Journal of Biogeography. 41(4), 762–772. DOI: 10.1111/jbi.12241
- 7. Maciel, N.M., de Carvalho Kokubum, M.N., **Braga, P.H.P.**, de Queiróz-Júnior, A.T., Matsushita, R.H. (2013) "Distribution extension, new state record and geographic distribution map of Ceratophrys joazeirensis Mercadal, 1986 (Anura: Ceratophryidae)". Herpetology Notes. 6, 447–450.
- 8. Batista, V. G., Gambale, P., Oda, F. H., & **Braga, P.H.P.** (2013) "Dendropsophus rubicundulus (Lagoa Santa Treefrog). Predation.". Herpetological Review. 45(1), 111.

 $^{\circ}$  and  $^{\circ\circ}$  denote authors who contributed in equivalent ways to the published studies.

### **B. Preprints, Working Papers & Papers Under Review**

- 1. **Braga, P.H.P.**, Kembel, S., Peres-Neto, P. (2024) "Climatic commonness and rarity shape phylogenetic structure and suitability in tetrapod communities". Authorea Preprint, Under review. DOI: 10.22541/au.172839269.96142116/v1
- 2. **Braga, P.H.P.**, Peres-Neto, P. (2025) "Climatic frequency drives specialisation in biological communities: insights from simulations and tetrapods worldwide". Working paper.

#### C. Theses

- 1. **Braga, Pedro Henrique P.** (2025) "Climatic drivers of biodiversity: influence on ecophylogenetics and specialization across spatial scales". Ph.D. Thesis. Concordia University, Montréal, QC, Canada.
- 2. **Braga, Pedro Henrique P.** (2014) "Padrões de evolução do nicho climático e de diversificação em anuros neotropicais". M.Sc. Dissertation. Federal University of Goiás, Goiânia, GO, Brazil.

## **Presentations / Conferences**

### **A. Conference Presentations**

- "The commonness of climate across space drives specialisation and phylogenetic relatedness in ecological communities: evidence from simulations and tetrapods worldwide", Braga, P.H.P., Kembel, S., Peres-Neto, P.. 2024 Québec Centre for Biodiversity Science Symposium. Montréal, Canada. Feb 21, 2024.
- 2. "Climatic niche evolution is not constant across spatial scales: the case of bats around the globe", **Braga, P.H.P.**, Kembel, S., Peres-Neto, P., Joint Meeting for the Ecol. Soc. of America and Canadian Soc. for Ecol. and Evol.. Montréal, Canada. Aug 15, 2022.
- 3. "Detecting spatially-dependent trait evolution in biological communities", **Braga, P.H.P.**, Kembel, S., Peres-Neto, P. 10th Biennal Conf. for the Int. Biogeography Society. Vancouver, Canada. Jun 04, 2022.
- 4. "Promoting the use of Github in Ecology and Evolution", Crystal, L., Hudgins, E., Edwards, B., Braga, P.H.P., Hébert, K., Martinez, C., Sánchez-Reyes, L. L.. Soc. for Open, Reliable, and Transparent Ecol. and Evolution. Online. En ligne.. Jul 12, 2021.
- 5. "Historical contingencies, scale-dependence and contemporary- and past-climate determine the evolutionary global reassembly of bat communities", **Braga, P.H.P.**, Kembel, S., Peres-Neto, P. 2019 Québec Centre for Biodiversity Science Symposium. Montréal, Canada. Dec 09, 2019.
- 6. "Effects of Climate Change on Natural Systems", **Braga, P.H.P.**. Environmental Science Talk Sessions | Sessions de conférences en sciences de l'environnement, Dawson College. Westmount, Canada. Nov 21, 2019.
- 7. "Historical contingencies, scale-dependence and contemporary- and past-environmental variation determine the phylogenetic structure of bat assemblages across the globe", **Braga, P.H.P.**, Kembel, S., Peres-Neto, P.. 9th Biennal Conference for the International Biogeography Society. Málaga, Spain. Feb 11, 2019.
- 8. "The frequency of environmental conditions mediates the coexistence of generalist and specialist species a theoretical model and test on terrestrial vertebrates", Donelle, L., **Braga, P.H.P.**, Vázquez-Rivera, H., Mestre, A., Arranz, I., Peres-Neto, P., Fournier, B. 9th Biennal Conference for the International Biogeography Society. Málaga, Spain. Feb 11, 2019.

- 9. "The spatial frequency of global climatic conditions drives the functional composition of Angiosperm communities", Fournier, B., Vázquez-Rivera, H., Clappe, S., Donelle, L., **Braga, P.H.P.**, Peres-Neto, P. International Biogeography Society Meeting on Climate Change. Évora, Portugal. Jan 11, 2018.
- 10. "Predicting how climate driven species range shifts are affected by international borders: is it just another brick in the wall?", **Braga, P.H.P.** International Biogeography Society Meeting on Climate Change. Évora, Portugal. Jan 10, 2018.
- 11. "Niche evolution patterns across spatial scales in bats", **Braga, P.H.P.**, Kembel, S., Peres-Neto, P.. 8th Biennal Conference for the International Biogeography Society. Tucson, USA. Jan 12, 2017.
- 12. "Global patterns of phylogenetic turnover in bats", Peixoto, F.P., **Braga, P.H.P.**, Brito, D., Diniz-Filho, J.A.F.. 49th Meeting of the Assoc. for Tropical Biology and Conservation. Bonito, Brazil. Jun 19, 2012.
- 13. "Phylogenetic conservation of the ecological niche in Rhinella marina (Anura: Bufonidae)", **Braga, P.H.P.**, De Marco Junior, P., Maciel, N.M.. IX Latin-American Congress of Herpetology. Curitiba, Brazil. Jul 18, 2011.
- 14. "Bats susceptible to an invasive disease: a macroecological approach", Alves, D.M.C.C., Peixoto, F.P., **Braga, P.H.P.**, Brito, D.. I International Symposium of Ecology. São Carlos, Brazil. May 01, 2011.

#### B. Outreach

- 1. "Tête-à-tête: Researchers' Night", **Braga, P.H.P.**. Nuit des chercheuses et des chercheurs, Espace pour la vie.. Montréal, Canada. Nov 15, 2024.
- 2. "Scientist-artist pairing to develop and exhibit a project performed on the theme"Uncovering diversity patterns of bats across the globe" ", Winkler, R. and **Braga, P.H.P.**. 2019 Creative Reactions | Réactions Creatives. Montréal, Canada. May 25, 2019.
- 3. "Is it another brick in the wall?", **Braga, P.H.P.**. 2019 "3-Minute Thesis Competition" Finalist | Finaliste du concours "Ma Thèse en 180 secondes", Concordia University. Montréal, Canada. Mar 15, 2019.
- 4. "Uncovering diversity patterns of bats across the globe", **Braga, P.H.P.** 2018 Pint of Science. Montréal, Canada. May 26, 2018.

### C. Conference Panel Organizer

1. "Perspectives sur la recherche, les applications et les carrières en sciences de la biodiversité. Perspectives on Research, Applications, and Careers in Biodiversity Science", with Katherine Hébert and Gabriel Khattar. 2025 QCBS Symposium | Colloque du CSBQ... Université de Sherbrooke, Longueuil, Canada. Feb 26, 2025.

## **Teaching & Education**

## A. Assisted Teaching

Term	Course	Language	Location
W23	BIOL322: Biostatistics	English	Concordia University
W22	BIOL201: Introduction to Biology	English	Concordia University
W18	BIOL203: Fundamentals of Nutrition	English	Concordia University
S18	eBIOL203: Fundamentals of	English	Concordia University
	Nutrition		
F18	BIOL322: Biostatistics	English	Concordia University
F16	BIO3500: Séminaire en écologie et	French	Université du Québec à
	analyses des données		Montréal
SS13	Biostatistics	Brazilian Portuguese	Federal University of Goiás

F = Fall; S = Summer; W = Winter

## B. Workshops Instructed for the QCBS R Workshop Series

I instructed workshops for the QCBS R Workshop Series (see https://r.qcbs.ca). This series provides a foundation in statistics, programming and biodiversity data analysis for graduate students, postdoctoral fellows, and professionals in government and industry.

<sup>&</sup>lt;sup>†</sup> Concordia University students may submit assignments in both English and French.

Term	Workshop	Language	Location
F24	Loading and manipulating data in R	English	Virtual
F24	Introduction to data visualisation in R	French	Virtual
F24	Programming in R	French	Virtual
W22	Generalized Linear Mixed Models	English	Virtual
W22	Multivariate Analyses	English	Virtual
W22	Advanced Multivariate Analyses	English	Virtual
F22	Introduction to data visualisation in R	English	Virtual
F22	Programming in R	English	Virtual
W21	Generalized Linear Models in R	English	Virtual
F20	Introduction to Programming in R	English	Virtual
W19	Advanced Multivariate Analyses	English	Concordia University
W18	Linear mixed models	English	McGill University
W18	Advanced multivariate analyses	English	Concordia University
W18	Generalized Linear Mixed Models	English	Concordia University
W18	Multivariate Analyses	English	McGill University
F18	Programming in R	English	McGill University
W17	Linear Models in R	English	Concordia University
W17	Generalized Linear Mixed Models	English	McGill University
W17	Multivariate Analyses	English	Concordia University
F17	Introduction to ggplot2 & dplyr	English	Concordia University
W16	Linear mixed models	English	McGill University
W16	Advanced multivariate analyses	English	McGill University
F16	Introduction to R	English	McGill University
F16	Charger et manipuler des données en R	French	Université du Québec à Montréal
F16	Loading and manipulating data in R	English	McGill University
F16	Introduction to ggplot	English	McGill University
F16	Linear models	English	McGill University
F16	Programming in R	English	McGill University

F = Fall; S = Summer; W = Winter

## C. Other Workshops Instructed

- 1. "Introduction to GitHub and GitHub Actions", with Katherine Hébert. 2022 QCBS R Symposium. Montréal, QC. Oct 20, 2022.
- "Promoting the use of Github in Ecology and Evolution", with Lella Crystal, Emma Hudgins, Brandon Edwards, Ciera Martinez, Katherine Hébert, & Luna Sánchez-Reyes. 2021 Conference for the Society for Open, Reliable, and Transparent Ecology and Evolutionary Biology. Virtual. Aug 10, 2021.
- 3. "Linking community ecology and evolutionary biology to your programming skills", with Katherine Hébert. 2021 QCBS R Symposium. Gault Nature Reserve, McGill University, Mont-Saint-Hilaire, QC. Jun 14, 2021.
- 4. "A (very brief) introduction to (R)Markdown". Pedro Peres-Neto's lab & Steven Kembel's lab. Montréal, QC. Dec 05, 2019.
- 5. "Phylogenetic Comparative Methods using R". 2018 QCBS R Symposium. Station de biologie des Laurentides, Université de Montréal, Saint-Hippolyte, QC. Apr 12, 2018.
- 6. "Mini-workshop on Bayesian Analyses of Macroevolutionary Mixtures". Steven Kembel's lab. Montréal, QC. Dec 05, 2017.
- 7. "Predicting species geographical distributions using R", with Julia Nordlund. 2017 QCBS R Symposium. Gault Nature Reserve, McGill University, Mont-Saint-Hilaire, QC. Apr 24, 2017.

- 8. "Introduction to data visualisation in R", with Louis Donelle. Department of Biology, Concordia University. Montréal, QC. Mar 30, 2017.
- 9. "Introduction to R", with Louis Donelle. Department of Biology, Concordia University. Montréal, QC. Mar 23, 2017.

### C. Guest Lectures

1. "Effects of Climate Change on Natural Systems". Environmental Science Talk Sessions at Dawson College. Westmount, QC. Oct 01, 2019.

### D. Educational Contributions

### 1. Workshops Developed

- QCBS R Workshop Series: Contributed to the development of the presentation and written material of the workshops Introduction to R, Loading and manipulating data in R, Introduction to data visualisation with ggplot2, Linear models, Programming in R, Generalized linear models, Linear and generalized linear mixed models, Generalized additive models, Multivariate analyses, and Advanced multivariate analyses. These bilingual open-source lessons provide a theoretical foundation and applications in programming and statistical analyses using R. Detailed contributions can be accessed in the GitHub repository for the series.
- QCBS R Symposium Workshops: Developed open-source workshops on Predicting species geographical distributions using R, Phylogenetic Comparative Methods using R, Linking community ecology and evolutionary biology to your programming skills, and Introduction to GitHub and GitHub Actions. These workshops provide a hands-on introduction to advanced statistical and programming techniques in R, and are now part of the QCBS R Symposium repository.
- · See section "C. Other Workshops Instructed" for additional workshops developed.

#### 2. Resources Developed

- Website and repositories for the QCBS R Workshop Series: Developed bilingual website providing information on upcoming workshops, resources, and contact information, as well as a repository of open-source lessons on biodiversity data processing and statistical analysis in R.
- Automated Course Presentation and Book Templates for the QCBS R Workshop Series: Developed a suite of open-source templates for course presentations and books using RMarkdown and Quarto. These templates provide a consistent, professional appearance for course materials and books, including automated triggering deployment to the web using GitHub Actions.
- Automated Deployment System for the QCBS R Workshop Series: Developed an automated deployment system to streamline the process of updating and deploying workshop materials.
- Protocols for Instructors and Developers for the QCBS R Workshop Series: Developed protocols
  containing guidelines for instructors and developers, with information on how to prepare, present,
  and develop workshops.
- Code of Conduct for the QCBS R Workshop Series: Developed a code of conduct to ensure the maintenance of a welcoming and supportive environment for all people, regardless of background or identity.

# Scholarships, Awards & Grants

## A. Scholarships

1. "Science without Borders Ph.D. Scholarship". National Council of Research and Development

- (CNPq), Brazil. 2014 2018. CAD 155,614
- 2. "M.Sc. Scholarship". Coordination for the Improvement of Higher Education Personnel (CAPES), Brazil. 2012 2014. BRL 28,800
- 3. "Undergraduate Research Scholarship". National Council of Research and Development (CNPq), Brazil. 2011 2012. BRL 3,000

### **B.** Awards & Grants

- 1. "NSERC Discovery Grant provided as a bursary.". Natural Sciences and Engineering Research Council (NSERC), Canada. 2020. CAD 5,000
- 2. "NSERC Discovery Grant provided as a bursary.". Natural Sciences and Engineering Research Council (NSERC), Canada. 2020. CAD 5,000
- 3. "Excellence Award". Québec Centre for Biodiversity Science (CSBQ), Canada. 2019. CAD 1,279
- 4. "Learning and Development Award (LeaDA)". Québec Centre for Biodiversity Science (CSBQ), Canada. 2018. CAD 1,825
- 5. "Excellence Award". Québec Centre for Biodiversity Science (CSBQ), Canada. 2018. CAD 1,140
- 6. "Learning and Development Award (LeaDA)". Québec Centre for Biodiversity Science (CSBQ), Canada. 2017. CAD 250
- 7. "Learning and Development Award (LeaDA)". Québec Centre for Biodiversity Science (CSBQ), Canada. 2017. CAD 963
- 8. "Non-tuition fees funding for the Intensive Course in Biodiversity Science". Québec Centre for Biodiversity Science (CSBQ), Canada. 2015. CAD 1,380
- 9. "Travel grant for the 2015 iDiv Summer School on Biodiversity Synthesis". Deutscher Akademischer Austauschdienst (DAAD), Germany. 2015. EUR 1,450

### **Non-Financial Awards**

• 2009: Honorable Mention for a Poster Presentation during the VI Regional Meeting for the Federation of Experimental Biology Societies (FeSBE).

# **Co-Supervision & Mentoring**

#### **Undergraduate Students**

- 1. Larissa Pereira Lemes, "Co-supervision with Dr. Natan Medeiros Maciel on her honour thesis: *Effectiveness and priority areas for anuran conservation in Brazil*", Federal University of Goiás (2013 to 2013).
- 2. Wayne Toh, "Peer-mentoring under the Concordia Biology Graduate-Undergraduate Mentorship Program", Concordia University (2016 to 2017).

## Service, Leadership & Volunteering

## A. University & Departmental Level Service

- 1. *Graduate Student Representative*, Québec Centre of Biodiversity Science, Concordia University (2014 2016).
- 2. *Graduate Student Representative*, Graduate Program in Ecology and Evolution, Federal University of Goiás (2013 2014).
- 3. *Undergraduate Student Representative*, Student Association for Biological Sciences, Federal University of Goiás (2010 2011).

### B. Event & Conference Organisation & Volunteering

- 1. Conference Committee Member, Abstract Review, QCBS Symposium (2025).
- 2. Coordinator, QCBS R Workshop Series (2017-2022).
- 3. Conference Volunteer, United Nations COP15, Convention on Biological Diversity (2022).
- 4. Event Volunteer, Pilot Projects Design Collective, United Nations COP15 (2022).
- 5. Organizer, 3rd Québec Centre for Biodiversity Science R Symposium (2018).
- 6. Organizer, 2nd Québec Centre for Biodiversity Science R Symposium (2017).
- 7. Conference Committee Member, Ecoresponsible Certification, QCBS Symposium (2017).
- 8. Conference Committee Member, Ecoresponsible Certification, QCBS Symposium (2016).
- 9. Organizer, 1st QCBS Research Derby (2015).
- 10. Conference Committee Member, Abstract Review, QCBS Symposium (2015).
- 11. Conference Organization, XXII Conf. for the Institute of Biological Sci., Federal University of Goiás (2011 2012).

#### C. Peer Reviewer

Completed 8 journal reviews (2019 - present):

PCI Ecology Journal of Biogeography Journal of Animal Ecology Ecography Zoology (2) Marine Biology Diversity & Distributions

# Memberships in Professional Organizations

2016 - <i>Now</i>	International Biogeography Society
2014 - Now	Québec Centre for Biodiversity Science
2022-2023	Ecology Society of America
2022-2023	Canadian Society for Ecology and Evolution
2017-2017	Ecology Society of America
2011-2012	Brazilian Herpetology Society

# **Selected Professional Experience**

Oct. 2023 - Apr. 2024	Research Assistant	Concordia University, Montréal, Canada
May 2017 - Oct. 2022	Coordinator, R Workshop Series	Québec Centre for Biodiversity
	(i) Coordinated the delivery of bilingual work data analysis for graduate students, postdoor professionals in government and industry; (ii) Developed and maintained the workshop repositories, offering open-source lessons of and statistical analysis in R; (iii) Planned biannual main and annual satell Symposium and QCBS R Workshop Series);	series website and n biodiversity data processing
	(iv) Led a team of instructors and developers and instructor feedback to enhance workship effectively;	ops and allocate resources
	<ul><li>(v) Evaluated participant/instructor feedbac improve the workshop series;</li></ul>	k and allocated resources to
	(vi) Produced funding reports and managed approximately CAD 23,000;	an annual budget of
	(vii) Implemented innovative improvements advanced learning strategies, automated de	
	(viii) Implemented bilingual bilingual, gende communications;	r-neutral language
	(ix) Established protocols for instructors and coordinators for long-term sustainability; and	•
	(x) Created a code of conduct to ensure the and supportive environment for all people, r identity.	
2013 - 2014	Independent Statistical Consultant	Remote
	Statistical consulting on research projects radesigns to ecological research.	nging from clinical study
2012	Environmental and Statistical Consultant	Hydrocon, Goiânia, Brazil
	Biodiversity Monitoring and Environmental II Limited S.A. Sugar Cane Industries in Paraún	
2011 - 2012	Research Technician	Federal University of Goiás; Barro Alto and Niquelândia, Brazil
	Biodiversity Monitoring (Anura and Chiropter Anglo American's mining activities.	ra) in areas influenced by
2011	Environmental and Statistical Consultant	Hydrocon, Goiânia, Brazil
	B	

Limited S.A. Sugar Cane Industries in Montividiu, Brazil.

Biodiversity Monitoring and Environmental Impact Assessment for Cosan

## **Workshop Attendance & Certifications**

2020	Data Visualization Workshop (2 days)	BIOS2, Université de Sherbrooke
2020	Reprod. Research through Open Science (1.5h)	Canadian Inst. of Ecol. and Evol. / Inst. canadien d'écol. et d'évol.
2019	Science Writing Workshop	9th Bien. Conf. of the Int. Biogeo. Soc., Málaga, Spain
2019	Emergency Responder and Safety Training Certificate (16h)	Concordia University, Canada
2019	Supporting Active Learning and Technological Innovations in Studies of Education - (Systems, Supporting, Student Success): Evidence-Based Pedagogies (7-10 hours/week for 12 weeks)	Concordia University & Dawson College, Montréal, Canada
2017	The Empiricists' Guide to the Analysis of Biodiversity Data Across Scales	Ecol. Soc. of America Ann. Meet., Portland, OR, USA
2016	Workshop on Data Visualisation and Comm. (2 days)	Québec Centre for Biodiversity Science, Gault Nature Reserve, Canada
2016	Software Carpentry Workshop	Québec Centre for Biodiversity Science, Université de Montréal, Canada
2015	iDiv Summer School on Biodiv. Synthesis (90h)	German Centre for Integrative Biodiversity Research (iDiv), Germany
2011	Basic Statistics: Introduction to R (8h)	Brazilian Soc. for the Progress of Science, Brazil
2010	Photography Applied to Biology (12h)	Federal University of Goiás, Brazil
2010	Identification of Cerrado's Herpetofauna (12h)	Federal University of Goiás, Brazil
2010	Molecular Phylogeny Estimation Methods (3h)	Brazilian Soc. of Genetics, Brazil
2010	Molecular Markers in Ecology and Evolution (3h)	Brazilian Soc. of Genetics, Brazil
2009	How to Write a Scientific Article? (3h)	Federation of Experimental Biology Soc. (FeSBE), Brazil
2009	Wild Flora and Fauna Management (40h)	Inst. of Env. Research and Conserv. Actions (IPACC), Brazil
2009	Mammals: Monitoring and Data Analysis (4h)	Brazilian Soc. of Ecology, Brazil
2008	Dissection Techniques (12h)	Federal University of Goiás, Brazil
2008	Bioremediation (12h)	Federal University of Goiás, Brazil

## **Hard Skills**

#### Languages

- English (speaking: *fluent*, reading / writing: *fluent*);
- French (speaking: *fluent*, reading / writing: *fluent*);
- Brazilian Portuguese (speaking: *fluent*, reading / writing: *fluent*);
- Japanese (studied for 4.5 years) and German (studied for 2 years), but I have not practised for a long time, and may only babble.
- Modelling & Analysis: Univariate and Multivariate Statistics, Spatial Analysis, Ecological Niche Modelling, Phylogenetic Comparative Methods, Bayesian Inference, Monte Carlo Simulation, Op-

timization, Parallel Processing Framework, Data Visualization.

- **Fieldwork Data Collection**: Anuran Sampling, Chiropteran Sampling, Water Sampling, Trap Setting, Light Trapping, Insect Glue Trapping.
- Identification Experience: Neotropical Anura (Visual, Vocalizations, Dichotom. Keys), Neotropical Chiroptera (Visual, Dichotom. Keys).
- Statistical Software and Programming: R, Julia, Git, Shiny, Quarto, Statistica, GitHub Actions, Parallel Multiprocessing.
- · Operating Systems: Windows, Linux.
- · IDE: RStudio, Visual Basic Studio.
- Text Editing: Microsoft 365, Google Suite, Quarto, Markdown, LaTeX, Typst.
- · Data Management and Visualisation: SQL, tidyverse, ggplot2, Adobe Creative Suite.
- GIS: ArcGIS, QGIS, terra, sf, raster.
- · Web Development: HTML, CSS, Hugo Shortcodes.
- Version Control: Git, GitHub, Open Science Framework.

## **Personal**

I am very sociable and cheerful, and love spending time with my friends and family. I regularly organise activities—such as hiking, cooking, board game evenings, chalet getaways, workout classes—to spend quality time together.

I love maintaining an active lifestyle. I often engage in outdoor and indoor cycling, strength training, barre classes, running, and cross-country skiing.

I advocate for active transportation initiatives, and choose to cycle or run for my daily commute.

### References

Pedro R. Peres-Neto	Steven W. Kembel
Professor	Professor
Laboratory of Community and Quantitative Ecol-	Département des sciences biologiques
ogy, Department of Biology	
Concordia University	Université du Québec à Montréal
Loyola Campus	Complexe des sciences
7141, rue Sherbrooke O.,	141, avenue du Président-Kennedy,
Montréal (Québec) H4B 1R6	Montréal (Québec) H2X 1Y4
Canada	Canada
Email: pedro.peres-neto@concordia.ca	Email: kembel.steven_w@uqam.ca