

Curriculum Vitae

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1 Academic links

Linktree

Orcid

Google Scholar

Scopus

Research Gate

2 Tertiary education

Doctor in Ecology and Biodiversity

2015-2019

Department of Ecology, São Paulo State University (UNESP), Brazil.

Title: *Eco-epidemiology and spatiotemporal dynamics of hantavirus disease with contributions to open data generation and use.*

Master of Science (Zoology)

2012-2014

Department of Ecology, São Paulo State University (UNESP), Brazil.

Title: *Multi-scale landscape influences and fragmentation threshold in bats in the Cerrado*

Bachelor of Biological Sciences

2007-2011

Center of Biological Sciences, Federal University of São Carlos (UFSCAR), Brazil.

Title: *Interindividual variations in fruit preferences of the yellow-shouldered bat *Sturnira lilium* (Chiroptera: Phyllostomidae) in a cafeteria experiment*

3 Productivity indicators

Google scholar metrics for September 19, 2023:

citations = 1186.

h-index = 19.

i10-index = 30.

4 Proficiency in languages

Portuguese: First language.

English: Fluent (Academic IELTS).

Spanish: Basic.

5 Academic expertise

- Quantitative Ecology.
- Disease ecology.
- Biodiversity and Conservation.
- Spatial modelling.
- Statistics.
- Science communication.

- Geographic information system (GIS).
- Climate change.
- Animal ecology.
- Zoology.
- Zoonotic diseases.
- Network science.
- Risk assessment.
- R.
- Open Science.
- Data Science.

6 Professional experience - Research

Postdoctoral fellow in Disease Ecology

2020-2023

Molecular Epidemiology and Public Health Lab (mEpilab), 2.5-year contract. Institution: School of Veterinary Sciences, Massey University, New Zealand.

Project: *Linking Habitat Fragmentation and Biodiversity Loss to the Risk of Infectious Disease Emergence.*

Postdoctoral fellow in Disease Ecology

2020

Molecular Epidemiology and Public Health Lab (mEpilab), 9-month contract. Institution: School of Veterinary Sciences, Massey University, New Zealand.

Project: *Unpacking infection spillover dynamics.*

Visitor researcher (sandwich PhD)

2018-2019

Molecular Epidemiology and Public Health Lab (mEpilab), 11-month sandwich period. Institution: Massey University, New Zealand.

Project: *Unpacking infection spillover dynamics.*

Visitor researcher (sandwich MSc)

2013-2014

Prof. Richard Stevens' Lab, 3-month sandwich research stay. Institutions: Louisiana State University and Texas Tech University, USA.

Project: *Influence of local and landscape filters in neotropical bat diversity within Brazilian savanna.*

Intern

2007-2010

Tutorial education program. Institution: Federal University of São Carlos (UFSCar), Brazil.

Other research-related field work

Viral shedding by flying foxes in Gold Coast

2018

Devin Jone's PhD project on flying foxes and virology (6h).

Cave soil sampling in Terra Ronca State

2017

Cave soil sampling - Caio C. P. Paula's PhD project in one of the largest Cerrado karstic areas in Brazil (36h).

Edge effects in São Carlos

2015

Pavel Dodonov's PhD project on edge effects in a Cerrado area in Brazil (12h).

Bats and hantavirus in SP

2013-2014

Gilberto Sabino-Santos Jr's PhD project on virology (100h).

Serra do Mar National Park (2012), Latin american course on frugivory and seed dispersal by mammals and birds field course (15 days). Institution: São Paulo State University (UNESP), Brazil. Prof. Mauro Galetti.

Plant sampling in Wetlands	2010
Fernanda Tiberio's project on functional diversity of plants in an estuary in southeastern Brazil (80h).	
Field Biologist	2011
Fauna monitoring (Chiroptera) in Jirau, Brazil (360h). Company: Arcadis Tetraplan.	
Field Biologist	2011
Fauna monitoring (Chiroptera) in Tunas do Paraná, Brazil (360 h). Company: CIA Ambiental.	
Intern	2009-2010
Bat telemetry (480 h). Institution: Federal University of São Carlos (UFSCar), Brazil.	
Intern	2008
Wild animal care intern (144 h): mammals, birds and, reptiles. Institution: Ecological Park PESC, São Carlos, Brazil.	
<i>Bauhinia holophylla</i> population ecology	2007
Julia R. Estevao's project on population ecology of a bat-pollinated plant in a Cerrado area in Brazil (30 h).	

7 Professional experience - Teaching

Undergraduate courses coordinated

Course Coordinator	2019
Statistical Models in Ecology (30 h), undergraduate course (Ecology). Institution: São Paulo State University (UNESP), Brazil.	
Course Coordinator	2016
Community Ecology (60 h), undergraduate course (Biology). Institution: São Paulo State University (UNESP), Brazil.	
Course Coordinator	2015
Ecosystems (60 h), undergraduate course (Biology). Institution: São Paulo State University (UNESP), Brazil.	

Short courses coordinated

- Threshold analysis in Ecology (2017). Brazilian Mammal Congress, Pirenópolis, Goiás, Brazil.
- Introduction to Network Ecology (2017). São Paulo State University (UNESP), Rio Claro, São Paulo, Brazil.
- Bat Ecology and Conservation (2016). São Paulo State University (UNESP), Rio Claro, São Paulo, Brazil.
- Bat Ecology (2014). São Paulo State University (UNESP), Rio Claro, São Paulo, Brazil.

Guest lecturing

Embracing the bots (2023). Institution: Hopkirk Research Institute, Massey University, New Zealand.

UN SDGs and your research (2022). Institution: Hopkirk Research Institute, Massey University, New Zealand.

Science communication: your voice in English (2022). Institution: São Paulo State University (UNESP), Brazil.

Strategies for improving reproducibility in Science (2021). Hopkirk Research Institute, Massey University, New Zealand.

Unhealthy landscapes and rodentization in Brazil (2018). Hopkirk Research Institute, Massey University, New Zealand.

The future of Zoonotic risk prediction (2021). Institution: USP São Paulo University. YouTube link. Course coordinator: Prof. Paulo Guimarães.

Disease Ecology (2019). Institution: São Paulo State University (UNESP). Course coordinator: Prof. Milton C. Ribeiro.

Ecological Networks (2012-2017) at Federal University of Minas Gerais (UFMG), Brazil. Course coordinator: Prof. Marco Mello.

Landscape Ecology (2019). Institution: Prof. São Paulo State University (UNESP), Brazil.

Seed dispersal by bats (2014), Latin american course on frugivory and seed dispersal by mammals and birds field course. Institution: São Paulo State University (UNESP), Brazil. Course coordinator: Prof. Mauro Galetti.

Undergraduate courses

Landscape Ecology (2014, 2015). Institution: São Paulo State University (UNESP), Brazil. Course coordinator: Prof. Milton C. Ribeiro.

Fruit bats (2014). Institution: Federal University of São Carlos (UFSCAR), Brazil. Cerrado, theory and practice.

Field course teaching assistantship

- **Serra da Canastra National Park (2015)**, Landscape ecology undergraduate field course (3 days). Institution: São Paulo State University (UNESP), Brazil. Course coordinator: Prof. Milton C. Ribeiro.
- **Ecology and Natural Resources (2015)**, PERD Vale do Rio Doce State Park, Brazil (20 days). Institution: Federal University of Minas Gerais. Course coordinator: Prof. Marco A. R. Mello.
- **Ecology of Coastal Ecosystems (2011)**, PEIC Ilha do Cardoso State Park, Brazil (10 days). Institution: Federal University of São Carlos. Course coordinator: Prof. Dalva M. S. Matos.
- **Serra da Canastra National Park (2008)**, São Carlos, Brazil (3 days). Institution: Federal University of São Carlos. Course coordinator: Prof. Marcelo Adorna Fernandes.

8 Professional experience - Student supervision

PhD co-supervision

- Wantida Horpiencharoen (2020): Modeling the risk of infectious diseases transmission between domestic animals and wildlife.

BSc co-supervision

- Juliana A. Rogrigues (2017): Course Conclusion Paper - Universidade Estadual Paulista Júlio de Mesquita Filho. Ecosystem services in Rio Claro.
- Leonardo G. Rizatti (2012): Course Conclusion Paper - Universidade Estadual Paulista Júlio de Mesquita Filho. Road Ecology in the Neotropics.

Scientific Initiation co-supervision

- Rodolfo de Mattos Reis, BSc, São Paulo State University. Database of rodents in the diet of wild cats (2016).

9 Grants and Awards (Total: NZ\$369,803.92)

- **Award** - 2023 Environmental Research and Public Health journal Waiver award for the article processing charges of "Malaria risk drivers in the Brazilian Amazon: land use - land cover interactions and biological diversity": (CHF 2500, NZ\$4749.92).
- **Funding** - 2023 College of Sciences REaDI funding to attend the International Conference of Women Engineers and Scientists, Auckland, New Zealand. Fully funded registration, travel, and accommodation costs (NZ\$1125+).

- **Funding** - 2023 College of Sciences REaDI funding to attend He Pito Mata (Emerging Career Researcher Conference) . travel, and accommodation costs Approximated costs NZ\$214 .
- **Award** - Tāwharau Ora - School of Veterinary 2022 Publication Lottery Award (2023) - NZ\$50.
- **Award** - New Zealand Geospatial Research conference - Best paper Award (2022): Present and future distribution of bat hosts of sarbecoviruses: implications for conservation and public health.
- **Award** - The 23rd Khon Kaen Veterinary Annual International Conference (KVAC) - Best presentation Award (2022): Identifying remaining habitats suitable for wild bovids in Thailand.
- **Award** - Tāwharau Ora - School of Veterinary Science Early Career Researcher Award (2021) - NZ\$100.
- **Grant** - College of Sciences Massey University Research Fund Publication Round (2021, NZ\$2,170) for publishing the article: 'Community health and human-animal contacts on the edges of Bwindi Impenetrable National Park, Uganda'.
- **Grant** - Bryce Carmine and Anne Carmine (née Percival), through the Massey University Foundation. Project: Linking Habitat Fragmentation and Biodiversity Loss to the Risk of Infectious Disease Emergence (2020-2022, NZ\$250,000). Named Postdoctoral Fellow; PI: David Hayman.
- **Award** - São Paulo Research Foundation (FAPESP) PhD scholarship (2016-2019, NZ\$80,000). Advisor: Milton C. Ribeiro. Co-advisor: David T. S. Hayman.
- **Award** - São Paulo Research Foundation (FAPESP) Masters scholarship (2012-2014, NZ\$25,000, calc). Advisor: Milton C. Ribeiro. Co-advisor: Richard D. Stevens.
- **Award** - Top downloaded articles 2018-2019 in Diversity and Distributions, Diversity and Distributions - Wiley.
- **Award** - Top downloaded articles 2017-2018 in Ecology, Ecology - Ecological Society of America - Wiley.
- **Grant** - Microsoft Matak training for animal movement research, 2013, Microsoft, Cambridge, UK.
- **Grant** - Idea Wild (2012) supported my Masters project with 12 mist nets and 3 headlamps, Rio Claro, Brazil (NZ\$2350).
- **Travel award** - Bat Conservation International (2012), Symposium on Ecosystem function, ecology and evolution of bats: a Tribute to Elisabeth V. Kalko. Meeting of the Association for Tropical Biology and Conservation (ATBC 2012), Bonito, Brazil.
- **Award** - Best oral presentation in the Brazilian Bat Research Meeting, 2011 (Interindividual variations in fruit preferences of the yellow-shouldered bat *Sturnira lilium* (Chiroptera: Phyllostomidae) in a cafeteria experiment).
- **Award** - National Council for Scientific and Technological Development (CNPQ) Scientific Initiation scholarship (2010-2011, NZ\$1555).
- **Award** - Tutorial Education Program (PET) scholarship (2008-2010, NZ\$4660).

10 Three most relevant publications as first author

1. R. L. **Muylaert**, Tigga Kingston, Jinhong Luo, Maurício H. Vancine, Nikolas Galli, Colin J. Carlson, Reju Sam John, Maria Cristina Rulli, David T. S. Hayman. 2022. "Present and future distribution of bat hosts of sarbecoviruses: implications for conservation and public health". *Proceedings of the Royal Society B*, 289(1975): 1-10.
2. R. L. **Muylaert**, G. Sabino-Santos, P. R. Prist, J. E. Oshima, B. B. Niebuhr, T. Sobral-Souza, S. V. Oliveira, R. S. Bovendorp, J. C. Marshall, D. T. Hayman. 2019. "Spatiotemporal dynamics of Hantavirus Cardiopulmonary Syndrome transmission risk in Brazil," *Viruses*, 11(11): 1008.
3. R. L. Muylaert, B. Davidson, A. Ngabirano, G. Kalema-Zikusoka, H. MacGregor, J. O. Lloyd-Smith, A. Fayaz, M. A. Knox, and D. T. S. Hayman, "Community health and human-animal contacts on the edges of Bwindi Impenetrable National Park, Uganda," *PLOS ONE*, vol. 16, p. e0254467, 2021.

11 Three most relevant publications as co-author

1. C. J. Carlson, R. J. Gibb, G. F. Albery, L. Brierley, R. Connor, T. Dallas, E. A. Eskew, A. C. Fagre, M. J. Farrell, H. K. Frank, R. L. **Muylert**, et al., "The Global Virome in One Network (VIRION): an atlas of vertebrate-virus associations," *mBio*, 2022.
2. M. A. R. Mello, G. M. Felix, R. B. Pinheiro, R. L. **Muylert**, C. Geiselman, S. E. Santana, M. Tschapka, N. Lotfi, F. A. Rodrigues, and R. D. Stevens. 2019. "Insights into the assembly rules of a continent-wide multilayer network" *Nature Ecology & Evolution* 3: 1525–1532.
3. C. J. Carlson, M. J. Farrell, Z. Grange, B. A. Han, N. Mollentze, A. L. Phelan, A. L. Rasmussen, G. F. Albery, B. Bett, D. M. Brett-Major, L. E. Cohen, T. Dallas, E. A. Eskew, A. C. Fagre, K. M. Forbes, R. Gibb, S. Halabi, C. C. Hammer, R. Katz, J. Kindrachuk, R. L. **Muylert**, F. B. Nutter, J. Ogola, K. J. Olival, M. Rourke, S. J. Ryan, N. Ross, S. N. Seifert, T. Sironen, C. J. Standley, K. Taylor, M. Venter, and P. W. Webala, "The future of zoonotic risk prediction," *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 376, p. 20200358, 2021.

12 Preprints

1. **Muylert**, R. L., Wilkinson, D. A., Kingston, T., D'Odorico, P., Rulli, M. C., Galli, N., John R. S., Alviola, P., and Hayman, D. T. S., "Using drivers and transmission pathways to identify SARS-like coronavirus spillover risk hotspots," *bioRxiv*, 2023. <https://doi.org/10.1101/2022.12.08.518776>
2. [https://ecoevorxiv.org/repository/view/3716/Norma Forero, Renata L. **Muylert**, Stephanie N. Seifert, Gregory Albery, Daniel Becker, Colin J. Carlson, Timothée Poisot..](https://ecoevorxiv.org/repository/view/3716/Norma%20Forero,%20Renata%20L.%20Muylert,%20Stephanie%20N.%20Seifert,%20Gregory%20Albery,%20Daniel%20Becker,%20Colin%20J.%20Carlson,%20Timoth%C3%A9e%20Poisot..) Under review in *Virus Evolution*.
3. Gonzalez-Daza, W., Vivero-Gomez, R. J., Altamiranda-Saavedra, M., **Muylert**, R. L., and Landeiro, V. L., "Time- lagged response of malaria transmission to climate and land use change in a colombian amazonian municipality: Implications for early warning systems and control strategies," May 2023. <https://doi.org/10.21203/rs.3.rs-2890687/v1>
4. R. S. John, J. C. Miller, R. L. **Muylert**, D. T. S. Hayman. High connectivity and human movement limits the impact of travel time on infectious disease transmission *medRxiv* 2023.07.26.23293210; doi: <https://doi.org/10.1101/2023.07.26.23293210>
5. M. H. Vancine, R. L. **Muylert**, B. B. Niebuhr, J. Oshima, V. Tonetti, R. Bernardo, C. Angelo, M. Rosa, C. Grohmann, M. C. Ribeiro. The Atlantic Forest of South America: spatiotemporal dynamics of remaining vegetation and implications for conservation *bioRxv* 2023.07.26.23293210; doi: <https://www.biorxiv.org/content/10.1101/2023.09.16.558076v1> Data: <https://osf.io/rfwbz/>

13 Peer-reviewed publications up to September 19, 2023

- [1] W. Gonzalez Daza, R. L. **Muylert**, T. Sobral-Souza, and V. Lemes Landeiro, "Malaria risk drivers in the brazilian amazon: Land use and land cover interactions and biological diversity," *International Journal of Environmental Research and Public Health*, vol. 20, no. 15, 2023.
- [2] C. A. Kita, G. Florez-Montero, S. Montoya-Bustamante, R. L. **Muylert**, N. Zapata-Mesa, and M. A. Mello, "Ten simple rules for reporting information on species interactions," *PLOS Computational Biology*, vol. 18, no. 8, p. e1010362, 2022.
- [3] H. F. M. Oliveira, G. Fandos, P. L. Zangrandi, H. do Nascimento Bendini, D. C. Silva, R. L. **Muylert**, J. S. Marinho-Filho, L. M. G. Fonseca, P. Rufin, M. Schwieder, et al., "Crops, caves, and bats: deforestation and mining threaten an endemic and endangered bat species (Lonchophylla: Phyllostomidae) in the Neotropical savannas," *Hystrix, the Italian Journal of Mammalogy*, 2022.

- [4] M. Galetti, A. P. Carmignotto, A. R. Percequillo, M. C. d. O. Santos, K. M. P. Ferraz, F. Lima, M. H. Vancine, R. L. **Muylaert**, F. C. G. Bonfim, M. Magioli, *et al.*, "Mammals in São Paulo State: diversity, distribution, ecology, and conservation," *Biota Neotropica*, vol. 22, 2022.
- [5] R. L. **Muylaert**, T. Kingston, J. Luo, M. H. Vancine, N. Galli, C. J. Carlson, R. S. John, M. C. Rulli, and D. T. S. Hayman, "Present and future distribution of bat hosts of sarbecoviruses: implications for conservation and public health," *Proceedings of the Royal Society B*, vol. 289, Apr. 2022.
- [6] K. C. Tanalgo, J. A. G. Tabora, H. F. M. de Oliveira, D. Haelewaters, C. T. Beranek, A. Otálora-Ardila, E. Bernard, F. Gonçalves, A. Eriksson, M. Donnelly, J. M. González, H. F. Ramos, A. C. Rivas, P. W. Webala, S. Deleva, R. Dalhoumi, J. Maula, D. Lizarro, L. F. Aguirre, N. Bouillard, M. N. R. M. Quibod, J. Barros, M. A. Turcios-Casco, M. Martínez, D. I. Ordoñez-Mazier, J. A. S. Orellana, E. J. Ordoñez-Trejo, D. Ordoñez, A. Chornelia, J. M. Lu, C. Xing, S. Baniya, R. L. **Muylaert**, L. H. Dias-Silva, N. Ruadreo, and A. C. Hughes, "DarkCideS 1.0, a global database for bats in karsts and caves," *Scientific Data*, vol. 9, Apr. 2022.
- [7] C. J. Carlson, R. J. Gibb, G. F. Albery, L. Brierley, R. Connor, T. Dallas, E. A. Eskew, A. C. Fagre, M. J. Farrell, H. K. Frank, R. L. **Muylaert**, *et al.*, "The Global Virome in One Network (VIRION): an atlas of vertebrate-virus associations," *mBio*, 2022.
- [8] G. L. Florez-Montero, R. L. **Muylaert**, M. R. Nogueira, C. Geiselman, S. E. Santana, R. D. Stevens, M. Tschapka, F. A. Rodrigues, and M. A. R. Mello, "NeoBat Interactions: A data set of bat-plant interactions in the Neotropics," *Ecology*, p. e3640, jan 2022.
- [9] R. L. **Muylaert**, B. Davidson, A. Ngabirano, G. Kalema-Zikusoka, H. MacGregor, J. O. Lloyd-Smith, A. Fayaz, M. A. Knox, and D. T. S. Hayman, "Community health and human-animal contacts on the edges of Bwindi Impenetrable National Park, Uganda," *PLOS ONE*, vol. 16, p. e0254467, nov 2021.
- [10] C. J. Carlson, M. J. Farrell, Z. Grange, B. A. Han, N. Mollentze, A. L. Phelan, A. L. Rasmussen, G. F. Albery, B. Bett, D. M. Brett-Major, L. E. Cohen, T. Dallas, E. A. Eskew, A. C. Fagre, K. M. Forbes, R. Gibb, S. Halabi, C. C. Hammer, R. Katz, J. Kindrachuk, R. L. **Muylaert**, F. B. Nutter, J. Ogola, K. J. Olival, M. Rourke, S. J. Ryan, N. Ross, S. N. Seifert, T. Sironen, C. J. Standley, K. Taylor, M. Venter, and P. W. Webala, "The future of zoonotic risk prediction," *Philosophical Transactions of the Royal Society B: Biological Sciences*, vol. 376, p. 20200358, nov 2021.
- [11] L. R. Cruz, R. L. **Muylaert**, M. Galetti, and M. M. Pires, "The geography of diet variation in Neotropical Carnivora," *Mammal Review*, vol. 52, pp. 112–128, jan 2021.
- [12] P. Ribeiro Prist, L. Reverberi Tambosi, L. Filipe Mucci, A. Pinter, R. Pereira de Souza, R. Lara Muylaert, J. Roger Rhodes, C. Henrique Comin, L. Fontoura Costa, T. Lang D'Agostini, J. Telles de Deus, M. Pavão, M. Port-Carvalho, L. Del Castillo Saad, M. A. Mureb Sallum, R. M. Fernandes Spinola, and J. P. Metzger, "Roads and forest edges facilitate yellow fever virus dispersion," *Journal of Applied Ecology*, vol. 59, pp. 4–17, jan 2021.
- [13] P. Kerches-Rogeri, B. B. Niebuhr, R. L. **Muylaert**, and M. A. R. Mello, "Individual specialization in the use of space by frugivorous bats," *Journal of Animal Ecology*, vol. 89, no. 11, pp. 2584–2595, 2020.
- [14] M. Nagy-Reis, J. E. d. F. Oshima, C. Z. Kanda, F. B. L. Palmeira, F. R. de Melo, R. G. Morato, L. Bonjorne, M. Magioli, C. Leuchtenberger, F. Rohe, *et al.*, "NEOTROPICAL CARNIVORES: a data set on carnivore distribution in the neotropics," *Ecology*, 2020.
- [15] A. L. Regolin, R. L. **Muylaert**, A. C. Crestani, W. Dáttilo, and M. C. Ribeiro, "Seed dispersal by Neotropical bats in human-disturbed landscapes," *Wildlife Research*, 2020.
- [16] M. A. R. Mello, G. M. Felix, R. B. Pinheiro, R. L. **Muylaert**, C. Geiselman, S. E. Santana, M. Tschapka, N. Lotfi, F. A. Rodrigues, and R. D. Stevens, "Insights into the assembly rules of a continent-wide multilayer network," *Nature Ecology & Evolution*, 2019.
- [17] E.-L. Marjakangas, N. Abrego, V. Grøtan, R. A. de Lima, C. Bello, R. S. Bovendorp, L. Culot, É. Hasui, F. Lima, R. L. **Muylaert**, *et al.*, "Fragmented tropical forests lose mutualistic plant-animal interactions," *Diversity and Distributions*, vol. 26, no. 2, pp. 154–168, 2020.
- [18] R. L. **Muylaert**, G. Sabino-Santos, P. R. Prist, J. E. Oshima, B. B. Niebuhr, T. Sobral-Souza, S. V. d. Oliveira, R. S. Bovendorp, J. C. Marshall, D. T. Hayman, *et al.*, "Spatiotemporal dynamics of hantavirus cardiopulmonary syndrome transmission risk in Brazil," *Viruses*, vol. 11, no. 11, p. 1008, 2019.

- [19] R. L. **Muylaert**, R. S. Bovendorp, G. Sabino-Santos Jr, P. R. Prist, G. L. Melo, C. d. F. Priante, D. A. Wilkinson, M. C. Ribeiro, and D. T. Hayman, "Hantavirus host assemblages and human disease in the Atlantic Forest," *PLoS neglected tropical diseases*, vol. 13, no. 8, p. e0007655, 2019.
- [20] R. L. **Muylaert**, M. H. Vancine, R. Bernardo, J. E. F. Oshima, T. Sobral-Souza, V. R. Tonetti, B. B. Niebuhr, and M. C. Ribeiro, "Uma nota sobre os limites territoriais da Mata atlântica," *Oecologia Australis*, vol. 22, no. 3, pp. 302–311, 2018.
- [21] H. Oliveira, N. Camargo, Y. Gager, R. **Muylaert**, E. Ramon, and R. Martins, "Protecting the Cerrado: where should we direct efforts for the conservation of bat-plant interactions?," *Biodiversity and Conservation*, vol. 28, no. 11, pp. 2765–2779, 2019.
- [22] T. M. Francisco, D. R. Couto, M. L. Garbin, R. L. **Muylaert**, and C. R. Ruiz-Miranda, "Low modularity and specialization in a commensalistic epiphyte–phorophyte network in a tropical cloud forest," *Biotropica*, vol. 51, no. 4, pp. 509–518, 2019.
- [23] R. C. Rodrigues, É. Hasui, J. C. Assis, J. C. C. Pena, R. L. **Muylaert**, V. R. Tonetti, F. Martello, A. L. Regolin, T. V. V. d. Costa, M. Pichorim, *et al.*, "ATLANTIC BIRD TRAITS: a data set of bird morphological traits from the Atlantic forests of south america," *Ecology*, 2019.
- [24] A. M. F. e Silva, T. Sobral-Souza, M. H. Vancine, R. L. **Muylaert**, A. P. de Abreu, S. M. Pelloso, M. D. de Barros Carvalho, L. de Andrade, M. C. Ribeiro, and M. J. de Ornelas Toledo, "Spatial prediction of risk areas for vector transmission of Trypanosoma cruzi in the state of paran , southern Brazil," *PLoS neglected tropical diseases*, vol. 12, no. 10, p. e0006907, 2018.
- [25] G. Sabino-Santos Jr, F. G. M. Maia, R. B. Martins, T. B. Gagliardi, W. M. de Souza, R. L. **Muylaert**, L. K. de Souza Luna, D. M. Melo, R. de Souza Cardoso, N. da Silva Barbosa, *et al.*, "Natural infection of Neotropical bats with hantavirus in Brazil," *Scientific reports*, vol. 8, no. 1, pp. 1–8, 2018.
- [26] A. M. Moraes, C. R. Ruiz-Miranda, P. M. Galetti Jr, B. B. Niebuhr, B. R. Alexandre, R. L. **Muylaert**, A. D. Grativol, J. W. Ribeiro, A. N. Ferreira, and M. C. Ribeiro, "Landscape resistance influences effective dispersal of endangered golden lion tamarins within the Atlantic Forest," *Biological Conservation*, vol. 224, pp. 178–187, 2018.
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14 Book chapters

1. Mello, M. A. R. and **Muylaert, R. L.** "21. Network Science as a Framework for Bat Studies". *Phyllostomid Bats*, edited by Theodore H Fleming, L. M. Dávalos and M. A. R. Mello, Chicago: University of Chicago Press, 2020, pp. 373–390. <https://doi.org/10.7208/9780226696263-021>
2. Tonetti, V. R., **Muylaert, R. L.**, Ribeiro, M. C. "2. Habitat Fragmentation" in *Management of degraded forest fragments*. 2019. Edited by Laís S. Assis, Marina Campos, and Vanessa Jó Girão. The Nature Conservancy, Campinas, Brazil.
3. Ribeiro, M. C., **Muylaert, R. L.**, Dodonov, P., Ciocheti, G., Magioli, M., Martello, F., Rocha, A., Defane Borges, B., Carvalho, C., Kanda, C. Z. and Rodriguez-Castro, K. G. "4. Dealing with Fragmentation and Road Effects in Highly Degraded and Heterogeneous Landscapes". *Biodiversity in Agricultural Landscapes of Southeastern Brazil*, edited by Carla Gheler-Costa, Maria Carolina Lyra-Jorge and Luciano Martins Verdade, Warsaw, Poland: De Gruyter Open Poland, 2016, pp. 43–64. <https://doi.org/10.1515/9783110480849-006>

15 Books

1. Mello, M., **Muylaert, R. L.**, Pinheiro, R., and Ferreira, G. (2016). *Guia para análise de redes ecológicas*. Available at: <https://www.researchgate.net>. Access in, Oct 2022.

16 Open data

- **VIRION**: The Global Virome, in One Network.
- **DarkCideS 1.0**: global collaborative database of bat caves and bat species. Accepted in Scientific Data.
- **Neotropical Series**: Neotropical vertebrate diversity.
- **NeoBat Interactions**: A data set of bat–plant interactions in the Neotropics.
- **Neotropical Carnivora diet**: Database on trophic interactions of Neotropical mammalian carnivores.
- **Atlantic Forest**: Atlantic Forest territorial limits.
- **Atlantic Collection**: Data papers.

17 Software and code

- **SpatIS**: Spatially-based individual specialization analysis (R).
- **Generalized zonal statistics**: zonal statistics for a large spatial data (GRASS-GIS).

- **Landscape Metrics (LSMetrics):** a software designed to calculate ecologically based landscape metrics and landscape statistics, as well as generate maps of landscape connectivity. GitHub Website.
- **Network analysis resources:** Visualization and network comparison (R).

18 Memberships

Royal Society Te Apārangī (2022-)

Society for Open, Reliable, and Transparent Ecology and Evolutionary Biology. (2022-2023).

Co-chair of the International Union for Conservation of Nature (IUCN) Commission on Ecosystem Management on Health (2022-).

New Zealand Ecological Society (2018-2019).

American Society of Mammalogists (2012-2019).

Brazilian Bat Research Society (2011-2020).

19 Meetings and Presentations

Latest conferences

- **2023 One Health Summer Conference for Future Global Health.** Hybrid conference hosted by UC Davis and Western Institute for Food Safety and Security, (WIFSS), China Agricultural University (CAU), the honorable Chinese Consortium for One Health (CCOH), the Global One Health Research Partnership (GOHRP). Talk: Habitat Fragmentation, Biodiversity Loss and Infectious Disease Emergence Risk.
- **Te Pūnaha Matatini Complexity Workshop 2023**, Hamilton, June 2023.
- **Te Pūnaha Matatini Annual Hui 2023**, Hamilton, June 2023.
- **Te Pūnaha Matatini Whanau Retreat 2023**, Raglan, June 2023.
- **He Pito Mata 2023**, Wellington, New Zealand. Early career researcher conference, Royal Society of New Zealand.
- **Te Pūnaha Matatini Capital Complex Systems** (2023), Remote, New Zealand.
- **2023 Global One Health Research Symposium.** Talk: Modelling emerging infection risk.
- **Te Pūnaha Matatini Mahia Te Mahi Writing retreat** (2022), In-person, Otaki, New Zealand.
- **One Health Aotearoa Symposium** (2021), Remote, New Zealand. Poster: Present and future distribution of bat hosts of sarbecoviruses: implications for conservation and public health.
- **Te Pūnaha Matatini He Puna Whakaaro Writing retreat** (2021), In-person, Ōtautahi Christchurch, New Zealand.
- **Te Pūnaha Matatini Mahia Te Mahi Writing retreat** (2021), In-person, Otaki, New Zealand.
- **One Health Aotearoa Symposium** (2020), Massey University Hub, New Zealand.
- **Brazilian Mammal Congress** (2019), Brazil. I chaired a symposium on Science Communication and Scientific Impact.
- **New Zealand Ecological Society Meeting** (2018), Victoria University of Wellington, Wellington, New Zealand. Oral presentations: 1. Open data in South America: Atlantic Bats and the Atlantic collection; 2. Seasonality and city structure affect the risk of leptospirosis in humans within Southeastern Brazil.
- **One Health Aotearoa Symposium** (2018), University of Otago, Wellington, New Zealand. Poster: Unhealthy landscapes and hantavirus hosts in Atlantic Forests of South America.

- **International Mammal Congress** (2017), Perth, Australia. Oral presentation: Ecological correlates of changes in the abundance of the main hantavirus hosts in Brazil. Poster: Double trouble: physical debilitation and allometry associated to hantavirus infection in rats.

Scientific event organiser

- **Big Bat Brainstorm (GBatNet), discussion moderator (2022)**, Remote (1 day).
- **Brazilian Bat Research Meeting, Scientific Committee (2015)**, Ouro Preto, Brazil (5 days).
- **BRAZIL-FINLAND brainstorming workshop (2015)** - FAPESP funded project 'New sampling methods and statistical tools for biodiversity research: integrating animal movement ecology with population and community ecology', Brazil (2 days). Project PIs: O. Ovaskainen (Un. Helsinki), J. P. Metzger (São Paulo University), M. C. Ribeiro (São Paulo State University), and M. Galetti (University of Miami).
- **Cerrado Day (2009)**: Activities for increasing the awareness regarding the Cerrado area in São Carlos, Brazil (1 day).
- **Bio in the Square (2008, 2009)**, São Carlos, Brazil (1 day).

20 Service

External PhD examination committee member

- Natalya Z. Mesa (São Paulo University, USP).
- Pedro Henrique Miguel (São Paulo State University, UNESP).

Committee member

- Postdoc representative 2022-2023, mEpiLab Management committee (Massey University, New Zealand).

External BSc examiner

- Isabella Cassimiro (São Paulo State University UNESP).
- Rodrigo Bernardo (São Paulo State University UNESP).
- Fernanda Horikawa (São Paulo State University UNESP).

Journal referee

1. Animals.
2. Biodiversity and Conservation.
3. Biological Conservation.
4. Conservation Science and Practice.
5. Ecography.
6. eLife.
7. Forest Ecology and Management.
8. Global Change Biology.
9. Global Ecology and Conservation.
10. International Journal of Environmental Research and Public Health.
11. Journal of Wildlife Diseases.
12. Landscape Ecology.
13. Mammal review.
14. Nature Communications.
15. Oecologia Australis.

16. Oikos.
17. Proceedings B.
18. PLoS Neglected Tropical Diseases.
19. PLoS One.
20. Proceedings of the Royal Society B: Biological Sciences.
21. Science Advances.
22. Scientific Reports.
23. The Lancet Planetary Health.
24. Theria.
25. Zoologia.

Expert participation in surveys

1. 2023: Global Epidemiological Parameters Database Survey. The epidemiological parameters community consist of a global collaborative working group coordinated by WHO, which aims to develop a global repository of epidemiological parameters. This repository will be publicly accessible by modellers, epidemiologists, subject matter experts and decision makers to inform mathematical models and public health response. World Health Organization.
2. 2023: CliZod first questionnaire (pre-modelers' series of workshops) on climate sensitive diseases. Massey University.

Journal clubs

- Coordinator: Disease ecology journal club (2020-2022).
- Coordinator: LEEC meeting - landscape ecology journal club (2012-2014).

• Blog

Surviving in Science (2019-present). Translation available for most languages.

• YouTube

- Biodiversity and pandemics
- O que deu certo no combate ao COVID-19? — Corona-Vídeos 3.
- Qual a Origem do Novo Coronavírus? — Corona-Vídeos 2.
- Live: Sobrevivendo na Ciência e no ensino remoto (2020).
- Live: Sobrevivendo na Ciência e na quebrada.
- Live: Sobrevivendo na Ciência, um dia de cada vez.
- Live: Sobrevivendo na Ciência e na quarentena.
- Narrator of Animal Fables (2020).
- PhD Defense (2019).

• Newsletter report

NZ Ecological Society Newsletter (2018).

• Science communication

- Preprint: The global biogeography of bat-origin betacoronaviruses.
- Article: Climate change will affect bats hosting future coronaviruses, scientists predict.
- Article: New research focuses on connection between humans, gorillas and diseases in Uganda.
- Article: Mathematical model predicts risk areas for hantavirus in Brazil (Infographics).
- Article: The Metamorphoses of the Atlantic Forest.
- Video: ATLANTIC CAMTRAPS.
- Video: ATLANTIC BATS.

- The mystery of the orange bat. Fapesp Research Magazine (2014).

- **Podcasts and interviews:**

- The New Zealand AM Morning show (Warner Bros. Discovery), Collagen's links to the deforestation of the Amazon (2023): coment on recent investigations.
- The catchup: Manawatu People's Radio (2022).
- Podcast episode: Alô Ciência no89 Bats and COVID-19 (2020).
- Podcast episode: Unesp researcher publishes study on geographical limits of the Atlantic Forest (2019).
- Science communication and Impact Symposium (2019). - The symposium was also available as a Podcast episode. Brazilian mammal meeting (2019).
- Podcast episode: PhD student at Unesp collaborates in unprecedented research on hantavirus in bats in America (2015).

- **Software support**

- GRASS GIS 8 translation to Portuguese (2022).

- **Educational material**

- Guardians of the Amazon. Support developing game content and strategic development for school outreach. Specific support in systems ecology, connection between threats to the Amazon and human health, and language (2023, beta version printed).
- Kapo the kākāpō. A story book about big endangered parrots. Book in production (2023).
- There is no health without biodiversity. Short videos and publication under development. CEM Health, IUCN.

21 Relevant Complementary Education

Kia tū ngaio: He tukanga whakaako. Introduction to Teaching at Massey (2023, ongoing), Massey University.

Writing Children's Picture Books (2023, ongoing), Julia Donaldson BBC course.

Integrated Spatial Planning. Learning for Nature (2022), Global Programme on Nature for Development, UNDP. 4-week course.

ACCELERATE programme: main supervisor training at Massey University (2022), Massey University, New Zealand (March to September - weekly course). Modules covered: 1) Mentoring, 2) Pedagogy and Practice, 3) Responsibilities and Expectations, 4) Managing self and relating to others.

Wrangling Data in the Tidyverse (2021), Coursera/Jonhs Hopkins University (14h).

Te Tiriti o Waitangi Workshop (2022), Massey University, New Zealand (16h).

Working under the Rainbow (2020), Massey Evolve and Rainbow Tick, New Zealand (1h).

Unconscious Bias (2020), Massey Evolve, New Zealand (3h).

COVID online Masterclass (Monday 22 June to Friday 3 July 2020), New Zealand (3h).

118.706 Spatial and Temporal Analysis of Epidemiological Data (2020): Week 1- Introduction and mapping health data, Chris Compton, Art Subharat, EpiCentre, School of Veterinary Sciences, Massey University, New Zealand (3h).

Online Genomics Data Carpentry, New Zealand, 6h, Genomics Aotearoa, Otago University. 12th-14th May 2020.

OpenWHO online course (2020): Emerging respiratory viruses, including nCoV: methods for detection, prevention, response and control (1h). World Health Organization.

Geostatistics (2019). São Paulo State University (UNESP), Brazil (16h).

Introduction to Python Part 1 (36h). São Paulo University (USP), Brazil.

OpenWHO online course (2018): Leptospirosis: Introduction (1h). World Health Organization.

Geoprocessing in GRASS GIS (2017). São Paulo State University (UNESP), UNESP, Brazil (12h).

Introduction to Bayesian statistics (2016). São Paulo State University (UNESP), Brazil (8h).

Writing in the Sciences (2015). Stanford University, Lagunita platform (60h).

Mataki Training Workshop (2013). Microsoft Research, Cambridge, England (16h).

Introduction to Quantum GIS (2013). São Paulo State University, UNESP, Brazil (24h).

II Summer course on Ecology and Biodiversity (2010). Federal University of São Carlos, Brazil (100h).

Environmental Education in Parks (2007). Ecological Park, São Carlos, Brazil (16h).

22 References

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Prof. Marco A. R. Mello (mentor) - Associate Professor, Biosciences Institute, São Paulo University (USP), Brazil.
Email: marmello@usp.br

Prof. Milton C. Ribeiro (PhD supervisor) - Associate Professor, Department of Ecology, São Paulo State University (UNESP), Brazil.
Email: miltinho.astronauta@gmail.com.