

Melise C. Lecheta, Ph.D.

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Professional Experience

2018 – present Postdoctoral Scholar

University of Kentucky, Lexington, KY, USA
Department of Entomology
Supervisor: Dr. Nicholas M. Teets

2015 Short-term scholar

University of Kentucky, Lexington, KY, USA
Department of Entomology
Advisors: Mauricio O. Moura and Charles W. Fox

Education

2016 PhD in Entomology

Universidade Federal do Parana, Curitiba, PR, Brazil
Advisors: Mauricio O. Moura and Charles W. Fox
Thesis title: Temperature drives the geographic distribution and local adaptation on a blowfly species

2012 M.S. in Entomology

Universidade Federal do Parana, Curitiba, PR, Brazil
Advisors: Mauricio O. Moura and Patricia J. Thyssen
Thesis title: The effect of temperature on the development of *Sarconesia chlorogaster* (Diptera, Calliphoridae) and its possible use in forensic entomology

2011 Specialization in Medical Entomology and Acarology

Fundação Osvaldo Cruz - FIOCRUZ, Rio de Janeiro, RJ, Brazil
Advisor: Margareth M. C. Queiroz
Thesis title: Community structure of Fanniidae and Muscidae (Diptera) in a mangrove area

2009 B.S. in Biology

Universidade Federal do Parana, Curitiba, PR, Brazil
Thesis title: Pictorial key and abundance of Fanniidae (Diptera) associated with carcasses in Parana, Brazil

Publications

1. **Lecheta, M.C.**, Awde, D.N., O’Leary, T.S., Unfried, L.N., Jacobs, N.A., Whitlock, M.H., McCabe, E., Powers, B., Bora, K., Waters, J.S., Axen, H.J., Fietze, S., Lockwood, B.L., Teets, N.M., and Cahan, S.H. 2020. Integrating GWAS and Transcriptomics to Identify the

Molecular Underpinnings of Thermal Stress Responses in *Drosophila melanogaster*. *Frontiers in Genetics*, 11 (658). doi: 10.3389/fgene.2020.00658.

2. **Lecheta, M.C.** and Moura, M.O. 2019. Estimating the age of forensically useful blowfly, *Sarconesia chlorogaster* (Diptera: Calliphoridae), using larval length and weight. *Journal of Medical Entomology*, 56(4): 915-920.
3. **Lecheta, M.C.**, Corrêa, R.C. and Moura, M.O. 2017. Climate shapes the geographic distribution of the blowfly *Sarconesia chlorogaster* (Diptera: Calliphoridae): An environmental niche modeling approach. *Environmental Entomology*, 46(5): 1051-1059.
4. Grisales, D., **Lecheta, M.C.**, Aballay, F., and Carvalho, C.J.B. 2016. A key and checklist to the Neotropical forensically important “Little House Flies” (Fanniidae, Diptera). *Zoologia*, 33(6): e20160054.
5. **Lecheta, M.C.**, Thyssen, P.J. and Moura, M.O. 2015. The effect of temperature on development of *Sarconesia chlorogaster*, a blowfly of forensic importance, *Forensic Science Medicine and Pathology*, 11: 538-543.
6. **Lecheta, M.C.** and Luz, D.R. 2015. First record of *Tachinaephagus zealandicus* Ashmead, 1904 (Hymenoptera: Encyrtidae) parasitizing the blowfly *Sarconesia chlorogaster* (Wiedemann, 1830) (Diptera: Calliphoridae) in Brazil, *Brazilian Journal of Biology*, 75: 505-506.
7. Vairo, K.P., Correa, R.C., **Lecheta, M.C.**, Caneparo, M.F., Mise, K.M., Preti, D., Almeida, L.M., Carvalho, C.J.B. and Moura, M.O. 2014. Forensic use of a subtropical blowfly: The first case indicating minimum post-mortem interval (mPMI) in Southern Brazil and first record of *Sarconesia chlorogaster* from a human corpse, *Journal of Forensic Sciences*, 60: S257-S260.
8. Wells, J.D., **Lecheta, M.C.**, Moura, M.O. and LaMotte, L.R. 2014. An evaluation of sampling methods used to produce insect growth models for postmortem interval estimation, *International Journal of Legal Medicine*, 129: 405-410.

Awards, Grants and Scholarships

2019	National Science Foundation (NSF) Award - Travel support for early career investigators to attend the XXVI International Congress of Entomology in Helsinki, Finland	\$2,545
2012-2016	National Council for Scientific and Technological Development (CNPq) Doctoral Scholarship	R\$ 124,512 [~ \$31,200]
2015	Coordination for the Improvement of Higher Education Personnel (CAPES) Sandwich Doctorate Fellowship	\$8,500
2010-2012	National Council for Scientific and Technological Development (CAPES) Master's Degree Scholarship	R\$ 28,800 [~ \$7,200]
2009	National Council for Scientific and Technological Development (CNPq)	

2007	Undergraduate Research Fellowship Universidade Federal do Parana	R\$ 4,320 [~ \$1,100]
	Undergraduate Research Fellowship	R\$ 1,260 [~ \$315]

Presentations

Oral Presentations

- 2020 Awde, D., **Lecheta, M.C.**, et al. Genetic mechanisms of basal thermal tolerance in *Drosophila melanogaster*. SICB 2020, Austin, TX, USA.
- 2019 **Lecheta, M.C.** and Teets, N.M. Transcriptional Mechanisms of Diapause in the Corn Rootworm Complex. Entomology Society of America Annual Meeting, St. Louis, MO, USA.
- 2019 Teets, N.M., **Lecheta, M.C.** and Awde, D. Genetic architecture of thermal tolerance in *Drosophila melanogaster*. Entomology Society of America Annual Meeting, St. Louis, MO, USA.
- 2015 **Lecheta, M.C.** Phenotypic plasticity in life-history traits among populations of a South American blowfly. Center for Ecology, Evolution and Behavior Spring Research Symposium, University of Kentucky, Lexington, KY, USA.
- 2012 Moura, M.O. and **Lecheta, M.C.** *Sarconesia chlorogaster* (Diptera, Calliphoridae): A model species for forensic entomology research in South of Brazil. XXIV Congresso Brasileiro de Entomologia, Curitiba, PR, Brazil.
- 2011 **Lecheta, M.C.** Experimentation in Forensic Entomology: Methods and Applications. XXI Congresso Nacional de Criminalística, Gramado, RS, Brazil.
- 2008 **Lecheta, M.C.** and Carvalho, C.J.B. Pictorial key of Fanniidae (Diptera) associated with carcasses in Parana, Brazil. XXII Congresso Brasileiro de Entomologia, Uberlândia, MG, Brazil.
- 2008 **Lecheta, M.C.** and Carvalho, C.J.B. The importance of *Fannia pusio* (Diptera) for the post-mortem estimates (PMI). II Congresso Militar de Criminalística, Rio de Janeiro, RJ, Brazil.

Poster Presentations

- 2012 Vairo, K.P., Costa, M., **Lecheta, M.C.** and Moura, M.O. Post embryonic development of the carrion breeding flesh fly *Oxysarcodexia paulistanensis*. 9th Meeting of European Association for Forensic Entomology, Torun, Poland.
- 2012 Vairo, K.P., **Lecheta, M.C.**, Mise, K.M., Correa, R.C., Caneparo, M.F., Carvalho, C.J.B., Almeida, L.M., Preti, D., and Moura, M.O. First Case using entomological evidence to estimate post-mortem interval (PMI) in southern Brazil. 9th Meeting of the European Association for Forensic Entomology, Torun, Poland.
- 2012 **Lecheta, M.C.** and Moura, M.O. Effect of temperature on the length of *Sarconesia chlorogaster* (Diptera: Calliphoridae) larvae: a species of forensic importance in South America. XXIV Congresso Brasileiro de Entomologia, Curitiba, PR, Brazil.
- 2012 **Lecheta, M.C.** and Luz, D.R. First record of *Tachinaephagus zealandicus* Ashmead, 1904 (Hymenoptera: Encyrtidae) parasitizing the blowfly *Sarconesia chlorogaster* (Wiedemann, 1830) (Diptera: Calliphoridae). XXIV Congresso Brasileiro de Entomologia, Curitiba, PR, Brazil.

- 2012 Caneparo, M.F., Mise, K.M., Correa, R.C., Vairo, K.P., **Lecheta, M.C.**, Lara, A.G., Pimenta, C.J.C., Carvalho, C.J.B., Almeida, L.M. and Moura, M.O. Estimating the post-mortem interval of corpses using Coleoptera in Parana. XXIV Congresso Brasileiro de Entomologia, Curitiba, PR, Brazil.
- 2012 Correa, R.C., Caneparo, M.F., Mise, K.M., Vairo, K.P., **Lecheta, M.C.**, Machado, F.S., Carvalho, C.J.B., Almeida, L.M. and Moura, M.O. *Chrysomya albiceps* (Wiedemann) (Diptera: Calliphoridae) and *Dermestes peruvianus* Laporte (Coleoptera: Dermestidae) in a forensic entomology case. XXIV Congresso Brasileiro de Entomologia, Curitiba, PR, Brazil.
- 2010 Vairo, K.P., **Lecheta, M.C.**, Mise, K.M. and Correa, R.C. A new protocol for collecting entomologic evidence in a crime scene. III Congresso Militar de Criminalística, Rio de Janeiro, RJ, Brazil.
- 2009 **Lecheta, M.C.** and Carvalho, C.J.B. Pictorial key of males to forensically important species of Fanniidae (Diptera) in Parana, Brazil. 1º Simpósio Nacional de Taxonomia e Biodiversidade, Rio de Janeiro, RJ, Brazil.
- 2008 Kosmann, C., Silveira, B.E., **Lecheta, M.C.** and Vairo, K.P. Calypterae (Diptera) fauna in rabbit carcasses in Parana, Brazil. XXII Congresso Brasileiro de Entomologia, Uberlândia, MG, Brazil.

Teaching experience

Short Courses Taught

- 2015 Insect rearing and experimental design. Department of Entomology, Universidade Federal do Parana.
- 2014 Insect rearing and experimental design. Department of Entomology, Universidade Federal do Parana.
- 2011 Forensic Entomology. Department of Biology, Pontificia Universidade Catolica do Parana.

Student Mentorship

- 2018-2019 Miles Whitlock (High school student)
- 2019 Nicholas Jacobs (Agriculture and Biotechnology major)

Professional Service

Universidade Federal do Parana:

- 2015 Judge for the Undergraduate Research Event

Manuscripts Reviews for:

- 2019 Journal of Medical Entomology
- 2017 Acta Amazonica
- 2012 Revista Brasileira de Criminalística

Course coordinator

- 2008 Forensic Sciences. Department of Biology, Universidade Federal do Parana.

Technical report

2012-2013 Identification of insects sent by the Parana State Police, Brazil (crimes against persons unit)

Outreach/Extension

- 2016 Insect Safari at the UK-LFUGC Arboretum: Moonlit Edition: Present insect-themed games, activities, displays and night walk in the trails to observe the insects (Lexington, KY, USA).
- 2011 Partnership between the university and police: Working with the police department on how to use insects to obtain more information in crimes against person (Curitiba, Brazil).
- 2008 Biology in the street event: Coordinator. Event held in a public park. Present biology and entomology to the general public (Curitiba, Brazil).
- 2005 Guided tour in the Anatomy Museum of Universidade Federal do Parana: Guide children from different ages in the museum (Curitiba, Brazil).

Professional Memberships

Entomological Society of America

American Association for the Advancement of Science

Society of Integrative and Comparative Biology