

PÁVEL MATOS-MARAVÍ

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PERSONAL INFORMATION

Born in Lima, Peru (1986)
Peruvian citizenship, Czech permanent residency

EDUCATION

- Oct. 2016 Ph.D. in Biology, major Entomology
University of South Bohemia, Czech Republic
Thesis: "Biogeography and evolution of Melanesian and South Pacific ants"
Qualification awarded: *Summa cum laude*
- Nov. 2015 R.N.Dr. in Biology, major Experimental Biology
University of South Bohemia, Czech Republic
Thesis: "Biogeography and diversification of the Caribbean *Calisto* butterflies"
Qualification awarded: *Excellent* (five out of five points)
- Dec. 2010 M.Sc. in Biology, major Evolutionary Biology
University of Turku, Finland
Thesis: "Molecular systematics and evolutionary history of butterflies"
Qualification awarded: *Eximia cum laude approbatur* (with excellent praise)
- Aug. 2009 B.Sc. in Genetics and Biotechnology
National University of San Marcos, Lima, Peru
Graduated with Honours, top 5 of my class

PROFESSIONAL EXPERIENCE

- 2017–now Marie Skłodowska-Curie post-doctoral fellow at the Antonelli Lab
University of Gothenburg, Sweden
Department of Biology and Environmental Sciences
Supervisor: Alexandre Antonelli (alexandre.antonelli@bioenv.gu.se)
- 2012–2016 Researcher at the Laboratory of Ecology and Evolution of Social Insects
Biology Centre CAS, Czech Republic
Institute of Entomology
Supervisor: Milan Janda (jandamil@gmail.com)
- 2010–2012 Research Assistant at the Laboratory of Genetics
University of Turku, Finland
Department of Biology
Supervisor: Niklas Wahlberg (niklas.wahlberg@biol.lu.se)

- 2009–2010 Trainee at the Laboratory of Genetics
University of Turku, Finland
Department of Biology
Supervisor: Craig Primmer (craig.primmer@utu.fi)
- 2005–2008 Trainee at the Museum of Natural History in Lima
National University of San Marcos, Peru
Department of Malacology and Carcinology
Supervisor: Rina Ramírez (upg.biologia@unmsm.edu.pe)

HONORS AND AWARDS

- 2013 Ant Course in Manu Biosphere Reserve, Peru. Travel support US \$975
- 2013 University of South Bohemia's grant. 3-months research stay at LANGEBIO, Mexico
- 2012 Programming for Evolutionary Biology in Leipzig, Germany. Scholarship EUR €300
- 2010 Research trip support. Turku University Foundation. Finland. EUR €800
- 2010 EDIT's Summer School in Taxonomy. Madeira, Portugal. Scholarship *ca.* EUR €300
- 2008 North-South-South Programme Fellowship, Finnish Ministry for Foreign Affairs, 9-month studies at the University of Turku, Finland. Awarded amount EUR €5,400

RESEARCH GRANTS

- 2016 Marie Skłodowska-Curie Fellowship, European Commission (Project 704035)
The aim of the project is to unveil the molecular systematics and biogeography of butterflies from the American tropics. The project length is for 2 years (EUR €185,857) and is based at the Antonelli Lab, University of Gothenburg, Sweden.
- 2014 Grant Agency of the University of South Bohemia, Czech Republic
The aim of the project was to study the biogeography and diversification of ants in the Indo-Pacific region. The project length was for 1 year (EUR €7,500) and was based at the Novotny Lab, Institute of Entomology, Biology Centre, Czech Republic.
- 2012 Oskar Öflund Foundation's Research Grant. Finland
The aim of the project was to infer the molecular systematics of the *Taygetis* butterflies in tropical America. The duration of the grant was for 6 months (EUR €3,000) and was based at the Niklas Wahlberg Group, University of Turku, Finland.
- 2012 Turku University Foundation Young Scientist Fellowship, Finland
The aim of the project was to study the diversification of Caribbean butterflies in the genus *Calisto*. The length of the grant was for 1 year (EUR €9,522) and was based at the Niklas Wahlberg Group, University of Turku, Finland.
- 2010 The Finnish Cultural Foundation Undergraduate Grant, Finland
The financial support was given for laboratory-related expenses during the development of my Master thesis research project. The grant was for EUR €1,500 and the study was based at the Niklas Wahlberg Group, University of Turku, Finland.

TEACHING AND MENTORING

Undergraduate courses

- 2007 *Molecular Biology*
Faculty of Biological Sciences, National University of San Marcos, Lima, Peru
Reference: Dr Armando Yarlequé Chocas
- 2007 *Animal Diversity*
Faculty of Biological Sciences, National University of San Marcos, Lima, Peru
Reference: Dr Rina Ramírez Mesías

Thesis co-supervision

- 2016 Yuliza Tafoya Alvarado (M.Sc.)
"Genetic patterns in ecological specialization of ants"
Main supervisors: Milan Janda and Rafael Montiel (Cinvestav, Mexico)
- 2015 Jana Marešová (M.Sc.)
"Phylogeography of *Boloria eunomia* (Lepidoptera: Nymphalidae)"
Main supervisor: Zdeněk F. Fric (University of South Bohemia, Czech Republic)

Teaching/supervising students in molecular laboratory

- 2015 Nichola Plowman, grad student at the University of South Bohemia, Czech Republic
- 2010 Irena Klečková, visiting grad student at the University of Turku, Finland
- 2010–2012 Several undergraduate students at the University of Turku, Finland

PUBLICATIONS IN PEER-REVIEWED JOURNALS

All article's citation statistics *excluding self-citations* and updated to **July 2017**

Google Scholar: 99 citations, h-index 6, i10-index 4

ISI Web of Science: 72 citations, h-index 5

- 2016 Larabee FJ, Fisher BL, Schmidt CA, **Matos-Maraví P**, Janda M, Suarez AV.
Molecular phylogenetics and diversification of trap-jaw ants in the genera *Anochetus* and *Odontomachus* (Hymenoptera: Formicidae).
Molecular Phylogenetics and Evolution 103: 143–154.
- 2016 **Matos-Maraví P**.
Investigating the timing of origin and evolutionary processes shaping regional species diversity: insights from simulated data and Neotropical butterfly diversification rates.
Evolution 70(7): 1638–1650. (**2 citations**)
- 2016 Janda M, **Matos-Maraví P**, Borovanska M, Zima J, Youngerman E, Pierce N.
Phylogeny and population genetic structure of the ant genus *Acropyga* (Hymenoptera: Formicidae) in New Guinea.
Invertebrate Systematics 30: 28–40. (**2 citations**)
- 2014 **Matos-Maraví P**, Núñez Aguila R, Peña C, Miller JY, Sourakov A, Wahlberg N.
Causes of endemic radiation in the Caribbean: evidence from the historical biogeography and diversification of the butterfly genus *Calisto* (Nymphalidae: Satyrinae: Satyrini).
BMC Evolutionary Biology 14(1): 199. (**12 citations**)
- 2013 Li S, Vasemägi A, **Matos-Maraví PF**, Ramula S.
Development and testing of microsatellite loci for the invasive herb *Lupinus polyphyllus* through 454 pyrosequencing.
Molecular Ecology Resources 13(4): 760–762. (**7 citations**)
- 2013 **Matos-Maraví PF**, Peña C, Willmott K, Freitas AVL, Wahlberg N.
Systematics and evolutionary history of butterflies in the “*Taygetis* clade” (Nymphalidae: Satyrinae: Euptychiina): towards a better understanding of Neotropical biogeography.
Molecular Phylogenetics and Evolution 66(1): 54–68. (**32 citations**)
- 2013 Müller CJ, **Matos-Maraví PF**, Beheregaray LB.
Delving into *Delias* Hübner (Lepidoptera: Pieridae): fine-scale biogeography, phylogenetics and systematics of the world’s largest butterfly genus.
Journal of Biogeography 40(5): 881–893. (**20 citations**)

- 2013 Núñez Aguila R, **Matos-Maraví PF**, Wahlberg N.
New *Calisto* species from Cuba (Lepidoptera: Nymphalide: Satyrinae).
Zootaxa 3669(4): 503–521. (3 citations)
- 2012 Freitas AVL, Wahlberg N, **Matos Maraví PF**, Marin MA.
Euptychia bouletti (Le Cerf) n. comb. (Lepidoptera: Nymphalidae: Satyrinae), a rare
and endangered butterfly from southeastern Brazil.
Neotropical Entomology 41(6): 461–467. (14 citations)
- 2012 Núñez Aguila R, Oliva Plasencia E, **Matos-Maraví PF**, Wahlberg N.
Cuban *Calisto* (Lepidoptera: Nymphalide: Satyrinae), a review based on
morphological and DNA data.
Zookeys 165: 57–105. (7 citations)

PUBLICATIONS IN REVIEW

- Matos-Maraví P**, Clouse RM, Sarnat EM, Economo EP, LaPolla JS, Borovanska M,
Rabeling C, Czekanski-Moir J, Latumahina F, Wilson EO, Janda M.
An ant genus-group (*Prenolepis*) illuminates the drivers of insect diversification in the
Indo-Pacific.
Molecular Phylogenetics and Evolution.
- Matos-Maraví P**, Matzke NJ, Larabee FJ, Clouse RM, Wheeler WC, Sorger DM,
Suarez AV, Janda M.
Trans-Pacific long-distance dispersal and the interplay between abiotic factors and
ecology shaped the diversity of Indo-Pacific trap-jaw ants.
Molecular Ecology.
- Antonelli A, Albert J, Andermann T, Azevedo JAR, Ariza M, Bacon CD, Ritter CD,
Faurby S, Guedes TB, Hoorn C, Lohmann LG, **Matos-Maraví P**, Sanmartín I,
Silvestro D, Tejedor M, ter Steege H, Tuomisto H, Werneck FP, Zizka A, Edwards S.
Conceptual and empirical advances in Neotropical biodiversity research.
PeerJ Preprints 5: e3074v1 (<https://doi.org/10.7287/peerj.preprints.3074v1>)

CONFERENCE ABSTRACTS

- 2015 7th Biennial Conference of the International Biogeography Society (IBS).
Matos-Maraví et al. Endemic butterfly radiation on the Caribbean: insights from
historical biogeography and phylogenetic diversification.
Frontiers of Biogeography 6(5): Suppl. 1.

REVIEWER ASSIGNMENTS

Systematic Biology
Evolution
Biological Journal of the Linnean Society
ZooKeys
The Raffles Bulletin of Zoology
Pacific Science
Neotropical Entomology
Peerage of Science

CONFERENCES AND OTHERS

Invited seminars and lectures

- 2017 GoCas workshop: Biodiversity and macroevolution, with an emphasis on the tropics. Gothenburg, Sweden.
Title: "Systematics and biogeography of Neotropical butterflies"
- 2017 Insect's sampling and NGS analysis workshop. University of Gothenburg, Sweden.
Title: "Systematics and biogeography of Neotropical skipper butterflies"
- 2016 BIG4 field workshop. Podyjí National Park, Czech Republic.
Title: "Molecular species delimitation"
- 2016 Ant mini-symposium. České Budějovice, Czech Republic.
Title: "Diversification and biogeography of Melanesian ants"
- 2015 Department of Zoology, Charles University. Prague, Czech Republic.
Title: "Macroevolutionary processes of insects on tropical islands, examples from the Caribbean and Melanesian regions"
- 2013 LANGEBIO, National Laboratory of Biodiversity Genomics. Irapuato, Mexico.
Title: "Biodiversity dynamics of ants in Melanesia and the South Pacific"
- 2012 Faculty of Biological Sciences, National University of San Marcos. Lima, Peru.
Title: "Evolutionary history and historical biogeography of tropical insects"
- 2011 SEBDEM Symposium. Turku, Finland.
Title: "What can a group of brownish butterflies tell us about the Neotropical Biogeography?"
- 2010 II BIOINT graduate school Annual Meeting. Jokioinen, Finland.
Title: "Elucidating the phylogenetic relationships in the group of "*Taygetis*" butterflies (Nymphalidae: Satyrinae: Euptychiina) and dating its phylogeny"
- 2009 XVIII ICBAR National Scientific Meeting. Lima, Peru.
Title: "Preliminary results of DNA barcoding in the butterfly genus *Hipparchia* (Nymphalidae: Satyrinae)"
- 2009 V Congreso Nacional de Estudiantes de Genética y Biotecnología. Lima, Peru.
Title: "Linkage mapping and *common garden* experiments in Atlantic salmon"

International scientific meetings

- 2017 ForBio Annual Meeting. Bergen, Norway.
Matos-Maraví et al. "The roles of abiotic factors and biotic interactions in the diversification of *Odontomachus* trap-jaw" (Talk)
- 2016 Ant Symposium. Munich, Germany.
Matos-Maraví et al. "A phylogenetic framework to Wilson's taxon cycle: evolutionary history of Melanesian trap-jaw ants (Ponerinae: *Odontomachus* Latreille 1804)" (Poster)
- 2015 XIX European Congress of Lepidopterology. Rabadul, Germany.
Rindoš et al. "The historical biogeography of the hawkmoth genus *Ambulyx* (Lepidoptera: Sphingidae) in Indonesia based on mitochondrial DNA genes" (Poster)
- 2015 7th Biennial Conference of the Int. Biogeography Society (IBS). Bayreuth, Germany.
Matos-Maraví et al. "Endemic butterfly radiation on the Caribbean: insights from historical biogeography and phylogenetic diversification" (Talk)

Curriculum Vitae: Pável Matos-Maraví

- 2014 17th Congress of the Int. Union for the Study of Social Insects (IUSI). Cairns, Australia.
Janda et al. "Diversification and dispersal of Australasian ants, from populations to species" (Talk)
- 2013 Zoologicke dny. Brno. Czech Republic.
Zima et al. "All roads lead to South Pacific - a comparative phylogeography of the Asian weaver ant *Oecophylla smaragdina* and the trap-jaw ant *Odontomachus simillinus*" (Poster)
- 2013 XXXII Meeting of the Willi Hennig Society. Rostock, Germany.
Janda et al. "Next-Gen phylogeography of the Asian weaver ant *Oecophylla smaragdina* - combining de novo SNP discovery and genotyping with ddRADseq with mt. DNA" (Talk)
- 2011 13th Congress of the European Society for Evolutionary Biology (ESEB). Tübingen, Germany.
Matos-Maraví et al. "Origin and diversification of the Neotropical *Taygetis* butterflies (Nymphalidae: Satyrinae)" (Poster)
- 2008 XVII ICBAR National Scientific Meeting. Lima, Peru.
Matos-Maraví et al. "Preliminary cytogenetics studies in the edible land snail *Megalobulimus capillaceus* (Mollusca, Gastropoda) from the peruvian Amazonia" (Poster)
- 2008 13th Latin American Cong. of Genetics/VI Peruvian Cong. of Genetics. Lima, Peru.
Ramírez et al. "Advances in the mitochondrial genomics knowledge of the edible land snails genus *Megalobulimus* (Mollusca, Gastropoda) from the peruvian Amazonia". (Talk)
- 2007 XVI ICBAR National Scientific Meeting. Lima, Peru.
Romero et al. "Populational variation in the shell morphology of *Bostryx scalariformis* (Mollusca, gastropoda)". (Poster)
- 2006 XV ICBAR National Scientific Meeting. Lima, Peru.
Ramírez et al. "Biogeographic characteristics of the coastal desert zone Lachay-Casma based on the analysis of mollusc biodiversity". (Talk)

Organizational Committee

- 2017 Workshop: "Insect's sampling and NGS analysis". Gothenburg, Sweden.
- 2011 Symposium: "Ecol., Biodiv., Genet., Environ. and Marine Biology". Turku, Finland.
- 2007 Course: "Plant Biology, Genetics and Biotechnology.: The importance for Peru". Lima, Peru.
- 2007 Course: "Biología y Genética Forense". Lima, Peru.

OUTREACH ACTIVITIES

Invited seminars and lectures

- 2017 "PhD Career Day: Developing a career in academic research".
University of Gothenburg, Sweden.
- 2017 ForBio's Marie Skłodowska-Curie Actions Training Program.
Natural History Museum, Oslo, Norway.

Others

Contributor to Wikipedia in English and Spanish in subjects such as Biodiversity, Entomology, and Systematics. Username Pavelm14

Interview by the academic news portal "Corresponsales.pe" on developing a career in scientific research. Link <http://goo.gl/7veidR> (In Spanish)

RESEARCH SKILLS

Laboratory work

Genomic DNA isolation, PCR, DNA sequencing. DNA fragment analysis of polymorphic molecular markers

Experience in cytogenetics and karyotype construction. Pre-professional work at several National Health Institutions in Peru

Software and analytical methods

Programming languages: R, basic Perl and Python.

Phylogenetic inference. Molecular species delimitation. Ancestral state estimation in model-based environment and diversification rate estimations using software BAMM, DDD, TreePar (R packages)

Population genetics: summary statistics, population structure, demographic reconstructions

Field and taxonomic work

Field sampling of ants and butterflies in Czech Republic, Peru, Portugal, and Mexico. Samples prepared for molecular work in the field

Courses in taxonomic identification of insects (Madeira, Portugal) and ants (Manu, Peru). Able to identify at least at the genus-level several groups of tropical ant and butterfly species

REFERENCES

Alexandre Antonelli. Professor at the University of Gothenburg. Carl Skottsbergs gata 22B, Gothenburg, Sweden. Tel. +46 (0) 703 989570

Niklas Wahlberg. Professor at Lund University. Sölvegatan 37, Lund, Sweden. Tel. +46 46 2223102

Vojtech Novotny. Professor at Institute of Entomology, Biology Centre CAS. Branišovská 31, Ceske Budejovice, Czech Republic. Tel. +420 38 7775362