

DAVID OUTOMURO PRIEDE, PH.D.
CURRICULUM VITAE
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Researchgate: [researchgate.net/profile/David_Outomuro](https://www.researchgate.net/profile/David_Outomuro)

ORCID: orcid.org/0000-0002-1296-7273

EDUCATION

Ph.D. 2011 University of Oviedo, Spain (Biology). *Summa cum laude*. (Dr. Francisco J. Ocharan)
B.S. 2005 University of Oviedo, Spain (Biology). Valedictorian.

PROFESSIONAL EXPERIENCE

Aug 2017- Aug 2021 **Postdoctoral researcher**, Dept. Biological Sciences, University of Cincinnati, USA (Dr. Nathan Morehouse)
Jul 2015-Jun 2017 **Postdoctoral researcher**, Evolutionary Biology Centre, Uppsala University, Sweden (Drs. Frank Johansson, Anders Ödeen, & Karin Nordström)
Jul 2014-Jul 2015 **Visiting Professor**, Dept. Ciencias Biológicas, Universidad de los Andes, Colombia
Nov 2011-Dec 2013 **Postdoctoral researcher**, Evolutionary Biology Centre, Uppsala University, Sweden (Dr. Frank Johansson)
Jun 2006-May 2010 **Graduate researcher and Teaching assistant**, Dept. Biología de Organismos y Sistemas, University of Oviedo, Spain (Dr. Francisco J. Ocharan)
Jul 2005-Aug 2005 **Intern**, Servicio Regional de Investigación y Desarrollo Agroalimentario de Asturias (SERIDA), Spain (Dr. Isabel Feito Díaz)
Sep 2004-Jun 2005 **Undergraduate research fellow**, Dept. Biología de Organismos y Sistemas, University of Oviedo, Spain (Dr. Francisco J. Ocharan)

RESEARCH INTERESTS

I am a behavioral ecologist, interested in the micro- and macroevolutionary processes that promote diversity. My research has explored questions on the evolution of color signals, color vision, and flight morphology. I am particularly interested in understanding the evolution of color signals, how they are perceived by intended and unintended receivers and the role of these audiences in driving population and species divergence. I also study the evolution of flight morphology because wings are large conspicuous body surfaces that can be also used as motion signal vehicles for intra- and interspecific communication. I use an integrative, multidisciplinary approach, combining physiological, ecological and behavioral studies in the field and in the lab, with modeling and state-of-the-art statistical analyses. My main study animals are dragonflies, damselflies, butterflies and spiders.

PUBLICATIONS (62 TOTAL) *indicates undergraduate author

Citations (as of June 16, 2021):

Google Scholar: 498 citations, h-index=13;

ResearchGate: 12,249 reads, RG Score=27.01 (higher than 85% of all members);

Web of Science: 253 (excluding self-citations), average citation per item: 10.81

JOURNAL PAPERS (23)

1. Corral-Lopez A, Varg JE, Cano-Cobos YP*, Losada R*, Realpe E, **Outomuro D**. 2021. Field evidence for colour mimicry overshadowing morphological mimicry. *Journal of Animal Ecology* 90: 698-709.
2. **Outomuro D**, Urhan U, Brodin A, Johansson F. 2020. Preference for supernormal stimuli tends to override initially learned associations for conspicuous prey traits: implications from a laboratory study. *Journal of Ethology* 38: 365-371.

3. **Outomuro D**, Johansson F. 2019. Wing morphology and migration status, but not body size, habitat or Rapoport's rule predict range size in North-American dragonflies (Odonata: Libellulidae). *Ecography* 42: 309-320.
4. Rivas-Torres A, **Outomuro D**, Lorenzo-Carballa MO, Cordero-Rivera A. 2019. The evolution and diversity of intra-male sperm translocation in Odonata: a unique behaviour in animals. *Behavioral Ecology and Sociobiology* 73: 54.
5. **Outomuro D**, Johansson F. 2017. A potential pitfall in studies of biological shape: does size matter? *Journal of Animal Ecology* 86: 1447-1457.
6. Sniegula S, Prus MA, Golab MJ, **Outomuro D**. 2017. Do males with higher mating success invest more in armaments? An across-populations study in damselflies. *Ecological Entomology* 42: 526-530.
7. **Outomuro D**, Söderquist L*, Johansson F, Ödeen A, Nordström K. 2017. The price of looking sexy: visual ecology of a three level predator-prey system. *Functional Ecology* 31: 707-718.
8. **Outomuro D**, Ángel-Giraldo P*, Corral-Lopez A, Realpe E. 2016. Multi-trait aposematic signal in Batesian mimicry. *Evolution* 70: 1596-1608.
9. **Outomuro D**, Söderquist L*, Nilsson-Örtman V, Cortázar-Chinarro M*, Lundgren C*, Johansson F. 2016. Antagonistic natural and sexual selection on wing shape in a scrambling damselfly. *Evolution* 70: 1582-1595.
10. **Outomuro D**, Johansson F. 2015. Bird predation selects for wing shape and coloration in a damselfly. *Journal of Evolutionary Biology* 28: 791-799.
11. **Outomuro D**, Söderquist L*, Rodríguez-Martínez S*, Johansson F. 2014. A preliminary study on female-limited colour polymorphism in *Lestes sponsa*. *International Journal of Odonatology* 17: 89-93.
12. **Outomuro D**, Cordero Rivera A, Nava-Bolaños A, Córdoba-Aguilar A. 2014. Does allometry of a sexually-selected ornamental trait vary with sexual selection intensity? A multispecies test in damselflies. *Ecological Entomology* 39: 399-403.
13. **Outomuro D**, Rodríguez-Martínez S*, Karlsson A*, Johansson F. 2014. Male wing shape differs between condition-dependent alternative reproductive tactics in territorial damselflies. *Animal Behaviour* 91: 1-7.
14. **Outomuro D**, Dijkstra K-DB, Johansson F. 2013. Habitat variation and wing coloration affect wing shape evolution in dragonflies. *Journal of Evolutionary Biology* 26: 1866-1874.
15. **Outomuro D**, Adams DC, Johansson F. 2013. Wing shape allometry and aerodynamics in calopterygid damselflies: a comparative approach. *BMC Evolutionary Biology* 13: 118.
16. **Outomuro D**, Adams DC, Johansson F. 2013. The evolution of wing shape in ornamented-winged damselflies (Calopterygidae, Odonata). *Evolutionary Biology* 40: 300-309.
17. **Outomuro D**, Cordero-Rivera A. 2012. Allometry of secondary, primary and non-sexual traits in the beautiful demoiselle (*Calopteryx virgo*). *Canadian Journal of Zoology* 90: 1094-1101.
18. **Outomuro D**, Bokma F, Johansson F. 2012. Hind wing shape evolves faster than front wing shape in *Calopteryx* damselflies. *Evolutionary Biology* 39: 116-125.
19. **Outomuro D**, Ocharan FJ. 2011. The larval life history of *Calopteryx virgo meridionalis* Sélys, 1873 (Odonata: Calopterygidae) in northern Spain and the voltinism of the south-western European *Calopteryx* Leach, 1815. *Entomologia Generalis* 33: 125-135.
20. **Outomuro D**, Ocharan FJ. 2011. Wing pigmentation in *Calopteryx* damselflies: a role in thermoregulation? *Biological Journal of the Linnean Society* 103: 36-44.
21. **Outomuro D**, Johansson F. 2011. The effects of latitude, body size, and sexual selection on wing shape in a damselfly. *Biological Journal of the Linnean Society* 102: 263-274.
22. **Outomuro D**, Torralba-Burrial A, Ocharan FJ. 2010. Distribution of the Iberian *Calopteryx* damselflies and its relation with bioclimatic belts: Evolutionary and biogeographic implications. *Journal of Insect Science* 10: 61.
23. Eroukhmanoff F, **Outomuro D**, Ocharan FJ, Svensson EI. 2009. Patterns of phenotypic divergence in wing covariance structure of calopterygid damselflies. *Evolutionary Biology* 36: 214-224.

POPULAR SCIENCE (16)

24. **Outomuro D**, Ocharan FJ, Torralba-Burrial A. 2013. Teratologías en adultos de *Calopteryx* Leach, 1815 (Odonata: Calopterygidae). *Boletín de la Sociedad Entomológica Aragonesa* 52: 265-268.
25. Brotóns Padilla M, Ocharan FJ, **Outomuro D**, Torralba-Burrial A. 2012. Odonatos del Parque Nacional de Cabañeros (Ciudad Real, España Central) (Insecta: Odonata). *Boletín de la Sociedad Entomológica Aragonesa* 50: 341-344.
26. Torralba-Burrial A, Ocharan FJ, **Outomuro D**. 2011. Primera cita de *Proserpinus proserpina* (Pallas, 1772) (Lepidoptera: Sphingidae) para la provincia de Palencia (norte de España). *Boletín de la Sociedad Entomológica Aragonesa* 49: 344.
27. Torralba-Burrial A, **Outomuro D**. 2011. Primeras citas de *Hemaris fuciformis* (Linnaeus, 1758) para Asturias y de *Hemaris tityus* (Linnaeus, 1758) para León (Lepidoptera: Sphingidae) (Norte de España). *Boletín de la Sociedad Entomológica Aragonesa* 49: 298.
28. Rodríguez-Martínez S, **Outomuro D**, Ocharan FJ. 2011. Odonata de la cuenca baja del Porcía y alrededores (Asturias, norte de España). *Boletín de la Sociedad Entomológica Aragonesa* 48: 484-486.
29. **Outomuro D**, Ocharan FJ. 2010. *Gomphus simillimus* Sélys, 1840 (Odonata, Gomphidae) en la cuenca del Segura y el sur de la cuenca del Duero (SE y Centro de España). *Boletín de la Asociación española de Entomología* 34: 245-248.
30. **Outomuro D**, Ocharan FJ, Herrero F, Pérez-Andueza G. 2010. Primera cita de *Oxygastra curtisii* (Dale, 1834) para la provincia de Ávila (Odonata: Corduliidae). *Boletín de la Sociedad Entomológica Aragonesa* 46: 615-616.
31. Torralba-Burrial A, **Outomuro D**, Alonso-Naveiro M. 2010. Teratología alar en *Sympetrum flaveolum* (Linnaeus, 1758) (Odonata: Libellulidae). *Boletín de la Sociedad Entomológica Aragonesa* 46:583-584.
32. **Outomuro D**. 2009. Patrones morfológicos latitudinales en poblaciones ibéricas de *Calopteryx* Leach, 1815 (Odonata, Calopterygidae): posibles causas ambientales y evolutivas. *Boletín de la Asociación española de Entomología* 33: 299-319. **Invited paper**.
33. Brotóns Padilla M, Ocharan FJ, **Outomuro D**, Torralba Burrial A. 2009. *Anaciaeschna isoceles* (Müller, 1767) en el ámbito iberobaleár (Odonata: Aeshnidae). *Boletín de la Sociedad Entomológica Aragonesa* 44: 365-374.
34. Torralba-Burrial A, **Outomuro D**, Ocharan FJ. 2008. Dos ejemplares teratológicos de *Coenagrion puella* (Linnaeus, 1758) (Odonata: Coenagrionidae). *Boletín de la Sociedad Entomológica Aragonesa* 42: 352.
35. Ocharan FJ, Torralba Burrial A, **Outomuro D**. 2007. *Brachytron pratense* (Müller, 1764) en la Península Ibérica (Odonata, Aeshnidae). *Boletín de la Sociedad Entomológica Aragonesa* 41: 307-312.
36. Torralba Burrial A, **Outomuro D**. 2007. Primera cita de *Polyxenus lagurus* (Linnaeus, 1758) (Diplopoda: Polyxenida) en Asturias (norte de España). *Boletín de la Sociedad Entomológica Aragonesa* 40: 384.
37. Ocharan FJ, Torralba-Burrial A, **Outomuro D**. 2006. Confirmación de la presencia de *Anaciaeschna isoceles* (Müller, 1767) en Asturias y primera cita para Cantabria (N España) (Odonata: Aeshnidae). *Boletín de la Sociedad Entomológica Aragonesa* 39: 396.
38. **Outomuro D**, Ocharan FJ. 2006. Mordeduras y daños en las alas como resultado del combate territorial en *Calopteryx* (Odonata: Calopterygidae). *Boletín de la Sociedad Entomológica Aragonesa* 39:421-422.
39. **Outomuro D**, Ocharan FJ. 2006. Despigmentación alar en *Calopteryx xanthostoma* (Charpentier, 1825) (Odonata: Calopterygidae). *Boletín de la Sociedad Entomológica Aragonesa* 39: 360.

Note: The journals *Boletín de la Sociedad Entomológica Aragonesa (Boln SEA)* and *Boletín de la Asociación española de Entomología (Boln Asco esp Ent)* are the most important peer-reviewed journals on entomology in Spain. The *Boln SEA* has an international editorial board and publishes papers mainly in Spanish but also in English, French, Italian, and Portuguese. It is indexed in Zoological Records, CAB Abstracts, Latindex, CINDOC, as well as DIALNET. The *Boln Asoc esp Ent* also has an international editorial board, publishing papers in Spanish, English, French, or Portuguese, and it is indexed in Biological Abstracts, CAB Abstracts, ICYT, Zoological Records, and Revicien.

BOOK CHAPTERS (23)

40. Morehouse N, **Outomuro D**. 2019. Visual signals using incident light. In: *Encyclopedia of Animal Behavior, 2nd edition*. pp. 500-507. Academic Press. ISBN 978-0-12-813251-7
41. Torralba-Burrial A, Ocharan FJ, **Outomuro D**, Azpilicueta-Amorín M, Cordero-Rivera A. 2012. *Coenagrion mercuriale*. In: *Bases ecológicas preliminares para la conservación de las especies de interés comunitario en España: Invertebrados*. 98 pp. Dirección General de Calidad y Evaluación Ambiental y Medio Natural, Madrid.
42. Torralba-Burrial A, Ocharan FJ, **Outomuro D**, Azpilicueta-Amorín M, Cordero-Rivera A. 2012. *Gomphus graslinii*. In: *Bases ecológicas preliminares para la conservación de las especies de interés comunitario en España: Invertebrados*. 81 pp. Dirección General de Calidad y Evaluación Ambiental y Medio Natural, Madrid.
43. Torralba-Burrial A, Ocharan FJ, **Outomuro D**, Azpilicueta-Amorín M, Cordero-Rivera A. *Ophiogomphus cecilia*. 2012. In: *Bases ecológicas preliminares para la conservación de las especies de interés comunitario en España: Invertebrados*. 50 pp. Dirección General de Calidad y Evaluación Ambiental y Medio Natural, Madrid.
44. Torralba-Burrial A, Ocharan FJ, **Outomuro D**, Azpilicueta-Amorín M, Cordero-Rivera A. *Oxygastra curtisii*. 2012. In: *Bases ecológicas preliminares para la conservación de las especies de interés comunitario en España: Invertebrados*. 97 pp. Dirección General de Calidad y Evaluación Ambiental y Medio Natural, Madrid.
45. Ocharan FJ, Torralba-Burrial A, **Outomuro D**, Azpilicueta-Amorín M, Cordero-Rivera A. *Leucorrhinia pectoralis*. 2012. In: *Bases ecológicas preliminares para la conservación de las especies de interés comunitario en España: Invertebrados*. 50 pp. Dirección General de Calidad y Evaluación Ambiental y Medio Natural, Madrid.
46. Ocharan FJ, Torralba-Burrial A, **Outomuro D**, Azpilicueta-Amorín M, Cordero-Rivera A. *Lindenia tetraphylla*. 2012. In: *Bases ecológicas preliminares para la conservación de las especies de interés comunitario en España: Invertebrados*. 49 pp. Dirección General de Calidad y Evaluación Ambiental y Medio Natural, Madrid.
47. Cordero-Rivera A, Torralba-Burrial A, Ocharan FJ, Cano FJ, **Outomuro D**, Azpilicueta-Amorín M. *Macromia splendens*. 2012. In: *Bases ecológicas preliminares para la conservación de las especies de interés comunitario en España: Invertebrados*. 67 pp. Dirección General de Calidad y Evaluación Ambiental y Medio Natural, Madrid.
48. Ocharan Larrondo FJ, Torralba Burrial A, **Outomuro Priede A**, Cordero Rivera A, Azpilicueta Amorín M. *Aeshna juncea* (Linnaeus, 1758). 2011. In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables). I*. pp. 494-500. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
49. Torralba-Burrial T, Azpilicueta Amorín M, Cordero Rivera A, Ocharan Larrondo FJ, **Outomuro Priede D**, Cano-Villegas FJ. 2011. *Coenagrion caerulescens* (Fonscolombe, 1838). In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables). I*. pp. 501-516. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
50. Torralba-Burrial A, Azpilicueta Amorín M, Cordero Rivera A, Ocharan Larrondo FJ, **Outomuro Priede D**. *Coenagrion mercuriale* (Charpentier, 1840). 2011. In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables). I*. pp. 517-539. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
51. Torralba-Burrial A, Ocharan Larrondo FJ, Cordero Rivera A, **Outomuro Priede D**, Azpilicueta Amorín M. *Coenagrion scitulum* (rambur, 1842). 2011. In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables). I*. pp. 540-550. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
52. Torralba Burrial A, Ocharan Larrondo FJ, **Outomuro Priede D**, Azpilicueta Amorín M, Cordero Rivera A. *Cordulegaster bidentata* Sélys, 1843. 2011. In: *Atlas y Lista Roja de los Invertebrados Amenazados*

- de España (*Especies Vulnerables*). I. pp. 551-556. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
53. **Outomuro Priede D**, Ocharan Larrondo FJ, Torralba Burrial A, Cano Villegas FJ, Azpilicueta Amorín M, Cordero Rivera A. 2011. *Gomphus simillimus simillimus* (Sélys, 1840). In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables)*. I. pp. 557-568. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
 54. Ocharan Larrondo FJ, Torralba Burrial A, **Outomuro Priede D**, Ocharan Ibarra R, Cordero Rivera A, Azpilicueta Amorín M. 2011. *Gomphus vulgatissimus* (Linnaeus, 1758). In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables)*. I. pp. 569-573. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
 55. Ocharan FJ, Torralba Burrial A, Cano Villegas FJ, **Outomuro Priede D**, Azpilicueta Amorín M, Cordero Rivera A. 2011. *Onychogomphus costae* sélys, 1885. In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables)*. I. pp. 574-581. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
 56. Torralba-Burrial A, Ocharan Larrondo FJ, Cano-Villegas FJ, **Outomuro Priede D**, Azpilicueta Amorín M, Cordero Rivera A. 2011. *Lestes macrostigma* (Eversmann, 1836). In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables)*. I. pp. 582-587. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
 57. Torralba-Burrial A, Ocharan Larrondo FJ, Cano-Villegas FJ, **Outomuro Priede D**, Azpilicueta Amorín M, Cordero Rivera A. 2011. *Orthetrum nitidinerve* (Sélys, 1841). In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables)*. I. pp. 588-594. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
 58. Torralba-Burrial A, Ocharan Larrondo FJ, **Outomuro Priede D**, Azpilicueta Amorín M, Cordero Rivera A. 2011. *Sympetrum flaveolum* (Linnaeus, 1758). In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables)*. I. pp. 595-603. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
 59. **Outomuro Priede D**, Ocharan Larrondo FJ, Torralba Burrial A, Cano Villegas FJ, Azpilicueta Amorín M, Cordero Rivera A. 2011. *Zygonyx torridus* (Kirby, 1889). In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables)*. I. pp. 604-610. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
 60. Ocharan Larrondo FJ, Torralba-Burrial A, **Outomuro Priede D**, Azpilicueta Amorín M, Cordero Rivera A. 2011. *Onychogomphus uncatius* (Charpentier, 1840). In: *Atlas y Lista Roja de los Invertebrados Amenazados de España (Especies Vulnerables)*. II. pp. 1282-1304. Ministerio de Medio Ambiente, Medio Rural y Marino, Madrid. ISBN 978-84-8014-794-1
 61. Ocharan FJ, **Outomuro D**, Torralba Burrial A. 2011. Aeshnidae, Gomphidae, Cordulegastridae, Corduliidae, Libellulidae, Calopterygidae, Lestidae, Platycnemididae, Coenagrionidae. In: *Identification guide of freshwater macroinvertebrates of Spain*. pp: 87-93. Springer, Berlin. ISBN 978-94-007-1554-7
 62. Ocharan FJ, Torralba Burrial A, **Outomuro D**, Cordero Rivera A. 2009. *Brachytron pratense* (Müller, 1764). In: *Atlas de los Invertebrados Amenazados de España (Especies En Peligro Crítico y En Peligro)*. pp: 198-202. Ministerio de Medio Ambiente, Madrid. ISBN 978-84-8014-753-8

Note: Both Atlases are key books with regard to invertebrate conservation in Spain, including information on distributions, conservation status of populations, and potential conservation management. The work “Bases ecológicas...” is a digital book that deals with the conservation status of the invertebrates included in the European Habitat Directive.

FUNDED GRANTS

- 2018 The Royal Swedish Academy of Sciences, “Colour vision and colour signals: new insights from transcriptomics and microscopy”, co-applicant, \$6,500
- 2017 Helge Ax:son Johnsons Stiftelse, “Colour vision and colour signals: new insights from transcriptomics and microscopy”, principal applicant, \$5,600
- 2017 Liljewalch travel scholarship, “The role of male wing coloration in female choice”, principal applicant, \$1,200
- 2017 Wenner-Gren Stiftelserna, conference travel grant, principal applicant, \$900
- 2016 The Royal Swedish Academy of Sciences, “Complex aposematic signals in across-Order Batesian mimics”, principal applicant, \$5,600
- 2016 Stiftelsen Lars Hiertas Minne, “Complex aposematic signals in across-Order Batesian mimics”, principal applicant, \$2,250
- 2016 Stiftelsen för Zoologisk forskning, “Can learned preferences in predators drive natural selection on sexually selected traits of prey?”, principal applicant, \$2,250
- 2015 Stiftelsen för Zoologisk forskning, “The costs of sexy colours”, principal applicant, \$3,100
- 2014 Stiftelsen Olle Engkvist Byggmästare, two-year postdoctoral fellowship, co-applicant, \$50,000
- 2013 Stiftelsen för Zoologisk forskning, “Is wing shape adaptive for dispersal? a comparative approach”, principal applicant, \$2,000
- 2012 Stiftelsen för Zoologisk forskning, “Water permanence and temperature effects on dispersal in aquatic insects: response to climate change”, principal applicant, \$5,700
- 2011 Spanish Ministry of Education, two-year postdoctoral fellowship, principal applicant, \$45,000
- 2010 Reserva Científica de Doñana-ICTS-RBD, “Integrity of Iberian subspecies of *Calopteryx haemorrhoidalis* (Vander Linden, 1825) on the basis of their secondary sexual traits and its recognition. The role of the parasitic load in their variation”, principal applicant, \$2400
- 2010 Spanish Ministry of Science, research travel grant, principal applicant, \$1,100
- 2010 Fundación para el Fomento en Asturias de la Investigación Científica Aplicada y la Tecnología (FICYT), research travel grant, principal applicant, \$2,000
- 2006 Fundación para el Fomento en Asturias de la Investigación Científica Aplicada y la Tecnología (FICYT), four-year PhD fellowship, principal applicant, \$50,000
- 2004 Spanish Ministry of Education and Science, undergraduate research fellow, principal applicant, \$1,100

Grants as senior personnel

- 2018 NSF IOS Behavioral Systems, IOS-1831767, “Repeated Evolution of Color Vision in Jumping Spiders: An Integrated Approach to Understanding Diversification of Visual Systems and Signals”. Critical role in production of preliminary data and writing the proposal. Total award: \$1,979,834. Funding period: 2018-2023.

UNIVERSITY TEACHING

Graduate teaching

- 2020 Graduate course “Analysis of Biological Shape”, University of Cincinnati. Coordinator and lecturer, 2 contact hours.
- 2015 Graduate course “Geometric morphometric techniques in evolutionary ecology”, Universidad de Los Andes, Colombia. Coordinator and lecturer, 4 contact hours.

Undergraduate teaching

- 2015 Undergraduate course “Ecology: principles and applications”, Universidad de Los Andes, Colombia. Coordinator and lecturer, 3 contact hours.
- 2014 Undergraduate course “Ecology: principles and applications”, Universidad de Los Andes, Colombia. Coordinator and lecturer, 3 contact hours.

- 2010 Teaching practical classes as a short-term associate professor (3 months) in the undergraduate courses: “Evolutionary Biology”, “Zoology” and “Biological Resources”, 2010, University of Oviedo, Spain.
- 2010 Undergraduate course “Bioindicators and conservation of continental aquatic ecosystems”, University of Oviedo, Spain. Co-coordinator and lecturer, 45 hours, teaching 13 hours.
- 2009 Undergraduate course “Bioindicators and conservation of continental aquatic ecosystems”, University of Oviedo, Spain. Co-coordinator and lecturer, 45 hours, teaching 12 hours.
- 2009 Undergraduate course "Protected natural areas and endangered species: assessment, management and monitoring", University of Oviedo, Spain. Co-coordinator and lecturer, 45 hours, teaching 6 hours.
- 2006-2010 Assistant in laboratory and field classes during my PhD in the undergraduate courses: “Diversity and Animal Evolution”, “Entomology” and “Zoology”, 2006-2010, University of Oviedo, Spain. Total teaching 148 hours.

Other teaching experience

- 2011 Course “Protected forest fauna”, 2011, Instituto Asturiano de Administración Pública Adolfo Posada, Spain. Coordinator and lecturer, 15 hours, teaching 6 hours.

SUPERVISION OF M.S. STUDENTS

- 2017 Hanna Larsson, M.S., “The role of flashing cues in species discrimination and sex recognition in *Calopteryx* damselflies”, Uppsala University.
- 2016 Linus Söderquist, M.S., “The price of looking sexy”, Uppsala University.

MASTERS’ COMMITTEES

- 2017 Erik Karlsson, Uppsala University, Sweden. “Temperature acclimation in dragonfly larvae: which species are more vulnerable to global warming?”
- 2016 Adrián Ardila Camacho, Universidad de los Andes, Colombia. “Visual organization, morphological and optical properties of the stemmata of the larva of the dobsonfly *Corydalus armatus* (Megaloptera: Corydalidae)”.
- 2016 Leonardo Rache Rodríguez, Universidad Nacional de Colombia, Colombia. “Caracterización de hábitat y morfología de algunas especies del género *Perithemis* (Odotana: Anisoptera) presentes en la Cordillera Oriental”.
- 2015 Linda Carolina Hernández Durán, Universidad de los Andes, Colombia. M.S. Project “Comportamiento sexual y sus implicaciones sobre la formación de tapón copulatorio en *Leucauge acuminata* (Araneae, Tetragnathidae)”.
- 2015 David Ocampo Rincón, Universidad de los Andes, Colombia. “Evolution of avian eggshell structure: evidence for adaptation across elevational gradients?”
- 2014 Fausto Rodríguez Zapata, Universidad de los Andes, Colombia. M.S. Project “Genome size and descriptors of leaf morphology as indicators of hybridization in Colombian cultigens of coca *Erythroxylum* spp.”
- 2014 Simón Quintero Corzo, Universidad de los Andes, Colombia. “Disentangling the direct and indirect effects of latitude on geographic range size among New World heliothermic lizards”.

SUPERVISION OF UNDERGRADUATE STUDENTS

- 2021 (ongoing) Halli Lindamood, capstone, “Female Attention on Male Display Across Species of Jumping Spiders”, University of Cincinnati.
- 2021 Haylie Kinman, capstone, “Flight Mimicry in an Across-Genus Neotropical Mimicry Ring”, University of Cincinnati.
- 2020 Andrew Costa, capstone, poster “Female Gaze and the Evolution of Male Courtship Displays in Jumping Spiders”, University of Cincinnati.

- 2018 Isabella Geeding, R.E.U., poster “Nature’s hide and seek; Crypsis and conspicuousness in jumping spider coloration”, University of Cincinnati.
- 2018 Ana Wiatr, R.E.U., poster “Undercover Spiders; How predator perception shapes myrmecomorph morphology”, University of Cincinnati.
- 2015 Pedro Ángel Giraldo, Bachelor thesis, “Convergence in wing shape and wing UV between butterflies and damselflies of a mimicry ring”, Universidad de los Andes, Colombia.
- 2013 Linus Söderquist, Bachelor thesis, “The adaptive significance of wing shape in the dispersal ability of an insect”, Uppsala University.
- 2013 Cecilia Lundgren, Research training, “Does dispersal ability affect wing shape variation in insects?”, Uppsala University.
- 2013 Petra Éva Szalay, visiting PhD student from University of Debrecen, Hungary. Uppsala University. Aim: training in geometric morphometrics.

OUTREACH ACTIVITIES

- 2019 Spider Behavior Workshop, partnering with the Cincinnati Museum Center
- 2019 Annual Biology Day with Hughes STEM High School at University of Cincinnati
- 2018 Annual Biology Day with Hughes STEM High School at University of Cincinnati

INVITED SEMINARS

- 2020 Señales de coloración en sistemas de mimetismo. Universidad de los Andes, Bogotá, Colombia.
- 2020 La evolución de visión en color en Salticidae. WebinArth, Artrópodos en la Ciencia. Universidad Nacional de Colombia, Bogotá, Colombia.
- 2019 Evolution of color vision and color signals of insects and spiders. Indiana State University, Indiana, USA.
- 2018 ¿Cómo ven las arañas los colores? La evolución de la coloración y la visión en color en arañas saltadoras (Salticidae). Universidad Nacional de Colombia, Bogotá, Colombia.
- 2017 Visual ecology of predator-prey systems. University of Cincinnati, OH, USA.
- 2016 The price of looking sexy, visual ecology of a three level predator-prey system. Stockholm University, Sweden.
- 2016 Ecología evolutiva de la forma y color de las alas de odonatos. Universidad Nacional de Colombia, Bogotá, Colombia.
- 2015 Ecología evolutiva de la forma y color de las alas de odonatos. Universidad de los Andes, Bogotá, Colombia.

INVITED SYMPOSIUM PRESENTATIONS

- 2018 Mimetismo Batesiano multicomponente entre mariposas y libélulas neotropicales. V Congreso Colombiano de Zoología, Bogotá, Colombia.

PROFESSIONAL DEVELOPMENT

- Jun 2017 **Course** *Supervising PhD students*, Uppsala University, Sweden.
- Jan 2014 **Course** *Integration and modularity with geometric morphometrics*. Transmitting Science, Spain.
- Apr 2013 **Course** *Research animal ethics*. Uppsala University, Sweden.
- Nov 2009 **Post-graduate course** *Biological Control of Insect Pests*, University of Valencia, Spain.
- Mar 2007 **Teacher Training Course** “Certificado de Aptitud Pedagógica, CAP”, Instituto de Ciencias de la Educación, University of Oviedo, Spain.

CONFERENCE CONTRIBUTIONS

Talks (17)

1. Outomuro D, Kinman H, Corral-López A, Morehouse NI. 2021. Does mimicry extend to flight in a mimetic damselfly? *Evolution 2021*, virtual.
2. **Outomuro D**, Zurek DB, Taylor LA, Cronin TW, Dharmaraaj B, Kunte K, Morehouse NI. 2019. The evolution of color vision across jumping spiders. *IU Animal Behavior Conference 2019*, Bloomington, Indiana, USA.
3. **Outomuro D**, Zurek DB, Taylor LA, Cronin TW, Dharmaraaj B, Kunte K, Morehouse NI. 2019. The evolution of color vision across jumping spiders. *SICB Annual Meeting 2019*, Tampa, Florida, USA.
4. **Outomuro D**, Zurek DB, Taylor LA, Cronin TW, Dharmaraaj B, Kunte K, Morehouse NI. 2018. The evolution of color vision across jumping spiders. *2nd Three Rivers Evolution Event*, Pittsburg, USA
5. **Outomuro D**, Zurek DB, Taylor LA, Cronin TW, Dharmaraaj B, Kunte K, Morehouse NI. 2018. The evolution of true colour vision across jumping spiders. *International Congress of Neuroethology*, Brisbane, Australia.
6. **Outomuro D**, Urhan U, Brodin A, Svensson EI, Johansson F. Why do birds predate more often on large-spotted *Calopteryx* damselflies? *International Congress of Odonatology 2017*, Cambridge, UK.
7. Corral-Lopez A, Varg JE, Cano YP, Losada R, Realpe E, **Outomuro D**. Polythoridae damselflies avoid predation by mimicking the UV-reflective wing band of unpalatable glasswing butterflies. *International Congress of Odonatology 2017*, Cambridge, UK.
8. **Outomuro D**, Johansson F. 2017. Widespread disregard of allometric effects in studies of biological shape. *33rd National Oikos Meeting*, Lund, Sweden.
9. **Outomuro D**, Söderquist L, Johansson F, Ödeen A, Nordström K. 2016. Visual ecology of a three level predator-prey system. *Evolution 2016*, Austin, USA.
10. **Outomuro D**, Ángel-Giraldo P, Corral-Lopez A, Realpe E. 2016. Polythoridae damselflies mimicking unpalatable glasswing butterflies? *4th European Congress on Odonatology*, Tyninge, Sweden.
11. **Outomuro D**, Johansson F. 2014. Condition-dependent alternative reproductive tactics in territorial damselflies: the role of wing shape in territory-holding potential. *Evolution 2014*, Raleigh, USA.
12. **Outomuro D**, Rodriguez-Martinez R, Ocharan FJ. 2010. Fluctuating asymmetry in wings of *Calopteryx* damselflies at species, population and latitudinal levels. *1st European Congress on Odonatology*, Vairao-Vila do Conde, Portugal.
13. Torralba-Burrial A, Ocharan FJ, **Outomuro D**, Azpilicueta-Amorin M, Cordero-Rivera A. 2010. VOPHI: an index to assess threatened dragonfly populations and habitats. *1st European Congress on Odonatology*, Vairao-Vila do Conde, Portugal.
14. Torralba-Burrial A, Ocharan FJ, Cordero-Rivera A, **Outomuro-Priede D**, Azpilicueta-Amorin M, Cano FJ. 2010. Evaluación de la situación en España de los odonatos recogidos en la Directiva Hábitats. *XIV Congreso Ibérico de Entomología*, Lugo, Spain.
15. **Outomuro D**, Ocharan FJ. 2009. Dinámica poblacional larvaria de *Calopteryx virgo meridionalis* Selys, 1873 (Odonata, Calopterygidae) en el N de España. *XXVI Jornadas de la Asociación española de Entomología*, Granada, Spain.
16. **Outomuro D**. 2009. Selectives forces driving latitudinal clines in Iberian *Calopteryx* damselflies. *Workshop Evolution 150*, Cuenca, Spain.
17. **Outomuro D**, Ocharan FJ. 2008. El papel del ambiente y la selección sexual en la aparición de clinas latitudinales entre poblaciones ibéricas de *Calopteryx* Leach, 1815. *XIII Congreso Ibérico de Entomología*, Seia, Portugal.

Posters (11)

18. **Outomuro D**, Zurek DB, Taylor LA, Cronin TW, Dharmaraaj B, Kunte K, Morehouse NI. 2018. The evolution of color vision across jumping spiders. *Sensorium 2018 Annual Symposium of Sensory Biology*, Purdue University, West Lafayette, USA.
19. **Outomuro D**, Morehouse NI. 2018. The evolution of true color vision across jumping spiders. *14th Annual University of Michigan Early Career Scientists Symposium*, Ann Arbor, USA.
20. **Outomuro D**, Larsson H, Nordström K, Johansson F. 2017. Wing structural colors allow species- and sex-specific flickering visual cues during sexual flights. *XVI Congress of the European Society for Evolutionary Biology*, Groningen, The Netherlands.
21. **Outomuro D**, Johansson F. 2013. Wing pigmentation and the evolution of wing shape. *XIV Congress of the European Society for Evolutionary Biology*, Lisbon, Portugal.
22. **Outomuro D**, Johansson F. 2012. Correlated evolution of wing shape and wing pigmentation in male *Calopteryx* damselflies. *14th International Behavioral Ecology Congress*, Lund, Sweden.
23. Torralba-Burrial A, Ocharan FJ, Cordero-Rivera A, **Outomuro-Priede D**, Azpilicueta-Amorin M, Cano FJ. 2010. Actualización de la Lista Roja de los odonatos de España. *XIV Congreso Ibérico de Entomología*, Lugo, Spain.
24. Ocharan FJ, **Outomuro Priede D**, Torralba-Burrial A, Cordero Rivera A, Azpilicueta-Amorin M. 2009. Elaboración del Atlas de los Odonatos Vulnerables (VU) de España. *XXVI Jornadas de la Asociación española de Entomología*, Granada, Spain.
25. **Outomuro D**, Torralba-Burrial A, Ocharan FJ. 2008. Relación entre la distribución ibérica del género *Calopteryx* Leach, 1815 (Odonata: Calopterygidae) y los pisos bioclimáticos: implicaciones evolutivas. *XIII Congreso Ibérico de Entomología*, Seia, Portugal.
26. **Outomuro D**, Ocharan FJ. 2008. Interacciones interespecíficas en *Calopteryx* Leach, 1815 (Odonata: Calopterygidae) como posible causa de un polimorfismo. *XIII Congreso Ibérico de Entomología*, Seia, Portugal.
27. **Outomuro D**, Ocharan FJ. 2008. Selective forces driving latitudinal clines in Iberian *Calopteryx* damselflies. *XXth International Congress of Zoology*, Paris, France. **Awarded poster.**
28. **Outomuro D**, Ocharan FJ. 2006. Desplazamiento de caracteres sexuales secundarios en poblaciones ibéricas del género *Calopteryx* Leach, 1815 (Odonata: Calopterygidae). *XII Congreso Ibérico de Entomología*, Alicante, Spain.

REVIEWER SERVICE

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- 2021 Evol Ecol (1), J Insect Conserv (1)
- 2020 Front Ecol Evol (1), Behav Ecol (1), Biol J Linn Soc (1), J Evol Biol (1), Funct Ecol (1), Curr Zool (1), TREE (1), Zoomorphology (1), Int J Odonatol (1)
- 2019 J Anim Ecol (1), Front Ecol Evol (1), Int J Odonatol (1), JoVE (1)
- 2018 Am Nat (1), Biol Rev (1), Ecol Entomol (1), Int J Odonatol (2), Odonatologica (2), Munibe (1), Ann Zool Fenn (1).
- 2017 Am Nat (1), Evolution (1), Funct Ecol (1), Evol Appl (1), J Anim Ecol (1), Ecol Evol (1), Biol J Linn Soc (1), Ethol Ecol Evol (1), grant proposal for National Geographic Society (1), PeerJ (1).
- 2016 Evolution (1), Oecologia (1), PLOS ONE (1), Biol J Linn Soc (1), Zoomorphology (1), Ethol Ecol Evol (1), Zool Syst (1).
- 2015 Evolution (1), Funct Ecol (1), J Evol Biol (1), Evol Ecol (1), Biol J Linn Soc (1), Behav Ecol Sociobiol (1), Physiol Entomol (1), Ent Exp Appl (1), J Insect Behav (1), Int J Odonatol (1), Zoomorphology (2), Anim Biodiv Conserv (1).
- 2014 J Anim Ecol (1), J Evol Biol (1), Biol J Linn Soc (1), J Insect Behav (1), Int J Odonatol (1).
- 2008-2013 Evolution (1), Global Change Biol (2), Behav Ecol (1), Evol Biol (1), Biol J Linn Soc (4), PLOS ONE (1), Acta Ethol (1), Ethol Ecol Evol (1), Can J Zool (1), J Insect Sci (2).

OTHER INFORMATION

AWARDS

Third prize “IV Edition of National Awards of Entomology for Young Researchers”, Spanish Association of Entomology, Spain, 2008.

LANGUAGES

Spanish (native), English (fluent), French (intermediate), Swedish (basic).