

Leonardo Campagna

www.leonardocampagna.weebly.com

159 Sapsucker Woods Rd.
Cornell Lab of Ornithology
Ithaca NY, 14850

email: lc736@cornell.edu
phone: (607)-339-1892

CURRENT APPOINTMENTS

Fuller Postdoctoral Fellow in Evolutionary Biology
Cornell Lab of Ornithology

July 2013-present

Center for Vertebrate Genomics Scholar
Cornell University

January 2014-present

Argentine Museum of Natural History
Research Associate

March 2012-present

Postdoctoral advisor: Dr. Irby J Lovette

RESEARCH INTERESTS

Speciation; Drivers of population genetic differentiation; Genome evolution; Neotropical Ornithology.

EDUCATION

Ph.D in Biology

June 2007-February 2012

University of Buenos Aires, Buenos Aires, Argentina.

Thesis: *Speciation in Neotropical passerines from open habitats*.
Supervised by Dr. Pablo L Tubaro and Dr. Stephen C Loughheed.

Licenciatura en Ciencias Biológicas

2001-2006

University of Buenos Aires, Buenos Aires, Argentina.

Specialization in Molecular and Cellular Biology (cumulative average 9.83).

Thesis: *Differential expression of Galectins - 1 and 3 in Th1 and Th2 lymphocytes*.
Supervised by Dr. Gabriel A Rabinovich and Dr. Marta A Toscano.

PUBLICATIONS

1. Toews DPL*, **Campagna L***, Taylor SA*, Balakrishnan CN, Baldassarre DT, Deane-Coe PE, Harvey MG, Hooper DM, Irwin DE, Judy CD, Mason NA, McCormack JE, McCracken KG, Oliveros CH, Safran RJ, Scordato ESC, Faust Stryjewski K, Tigano A, Uy JAC, Winger BM. 2015. Genomic approaches to understanding population divergence and speciation in birds. *The Auk: Ornithological Advances*. In press. ***Equal contribution.**
2. **Campagna L**, Gronau I, Silveira LF, Siepel A, Lovette IJ. 2015. Distinguishing Noise from Signal in Patterns of Genomic Divergence in a Highly Polymorphic Avian Radiation. *Molecular Ecology* 24: 4238–4251. doi: 10.1111/mec.13314.

3. Benites P, **Campagna L**, Tubaro PL. 2014. Song-based species discrimination in a rapid Neotropical radiation of grassland seedeaters. *Journal of Avian Biology* 46: 55-62. doi: 10.1111/jav.00447.
4. **Campagna L**, Kopuchian C, Tubaro PL, Loughheed SC. 2014. Pleistocene divergence, range expansion, and secondary contact followed by gene flow between mitochondrial lineages of a widespread Neotropical songbird (*Zonotrichia capensis*). *Biological Journal of the Linnean Society* 111: 863-868. doi: 10.1111/bij.12272.
5. **Campagna L**, Silveira LF, Tubaro PL, Loughheed SC. 2013. Identifying the sister species to the rapid capuchino seedeater radiation (*Sporophila*, Passeriformes). *The Auk* 130: 645-655. doi: 10.1525/auk.2013.13064.
6. **Campagna L**, Van Coeverden de Groot PJ, Saunders BL, Atkinson SN, Weber DS, Dyck MG, Boag PT, Loughheed SC. 2013. Extensive sampling of polar bears (*Ursus maritimus*) in the Northwest Passage (Canadian Arctic Archipelago) reveals population differentiation across multiple spatial and temporal scales. *Ecology and Evolution* 3: 3152-3165. doi: 10.1002/ece3.662.
7. Loughheed SC, **Campagna L**, Dávila J, Tubaro PL, Lijtmaer DA, Handford P. 2013. Continental phylogeography of an ecologically and morphologically diverse Neotropical songbird, *Zonotrichia capensis*. *BMC Evolutionary Biology* 13: 58. doi: 10.1186/1471-2148-13-58.
8. Campagna C, **Campagna L**. 2012. Museums in the Anthropocene: Defining good practices in face of the biodiversity crisis. *Revista del Museo Argentino de Ciencias Naturales* 14: 199-207.
9. **Campagna L**, St Clair JJH, Loughheed SC, Woods R, Imberti S, Tubaro PL. 2012. Divergence between passerine populations from the Malvinas - Falkland Islands and their continental counterparts: a comparative phylogeographical study. *Biological Journal of the Linnean Society* 106: 865-879. doi: 10.1111/j.1095-8312.2012.01898.x
10. **Campagna L**, Benites P, Loughheed SC, Lijtmaer DA, Di Giacomo AS, Eaton MD, Tubaro PL. 2012. Rapid phenotypic evolution during incipient speciation in a continental avian radiation. *Proceedings of the Royal Society B: Biological Sciences* 279: 1847-1856. doi:10.1098/rspb.2011.2170.
11. **Campagna L**, Geale K, Handford P, Lijtmaer DA, Tubaro PL, Loughheed SC. 2011. A molecular phylogeny of the Sierra-Finches (*Phrygilus*, Passeriformes): extreme polyphyly in a group of Andean specialists. *Molecular Phylogenetics and Evolution* 61: 521-533. doi:10.1016/j.ympev.2011.07.011.
12. Toscano MA*, **Campagna L***, Molinero LL, Cerliani JP, Croci DO, Ilarregui JM, Fuertes MB, Nojek IM, Fededa JP, Zwirner NW, Costas MA, Rabinovich GA. 2011. Nuclear Factor (NF)-κB controls expression of the immunoregulatory glycan-binding protein galectin-1. *Molecular Immunology* 48: 1940 - 1949. doi:10.1016/j.molimm.2011.05.021. ***Equal contribution.**
13. **Campagna L**, Lijtmaer DA, Kerr KCR, Barreira AS, Hebert PDN, Loughheed SC, Tubaro PL. 2010. DNA barcodes provide new evidence of a recent radiation in the genus *Sporophila* (Aves: Passeriformes). *Molecular Ecology Resources* 10(3): 449-458. doi:10.1111/j.1755-0998.2009.02799.x.
14. Toscano MA, Ilarregui JM, Bianco GA, **Campagna L**, Croci DO, Salatino M, Rabinovich GA. 2007. Dissecting the pathophysiologic role of endogenous lectins: Glycan-binding proteins with cytokine-like activity? *Cytokine and Growth Factor Reviews* 18(1-2): 57-71. doi:10.1016/j.cytogfr.2007.01.006.

RESEARCH EXPERIENCE

Phylogenetics, phylogeography, population genetics, landscape genetics, and genomics. Bioacoustics and field ornithology.

1. Cornell Lab of Ornithology, Ithaca, New York, USA. July 2013 – present.
2. Department of Biology, Queen's University, Ontario, Canada. September 2008 - February 2009, January 2010 – July 2010, February 2011 – August 2011, May 2012 – July 2013.
3. Ornithology Division, Argentine Museum of Natural History (MACN), Buenos Aires, Argentina. June 2007 – April 2012.

Immunology, molecular biology and protein biochemistry.

1. Immunogenetics Laboratory, Hospital de Clínicas, Universidad de Buenos Aires. July 2005 - March 2007.
2. Molecular Biology of Chagas disease laboratory, Instituto de Investigaciones en Ingeniería Genética y Biología Molecular (INGEBI). December 2004 - April 2005.

CONFERENCE PRESENTATIONS

XVI Reunión Argentina de Ornitología. La Plata, Argentina, 9-12 September, 2015.

1. Kopuchian C, **Campagna L**, DiGiacomo AS, Robert WE, Petracchi P, Bulgarella M, Mazar Barnett J, Mattus R, Blank O, McCracken KG. Antes de que sea demasiado tarde: Evaluación taxonómica del Cauquén Colorado (*Chloephaga rubidiceps*) utilizando técnicas genómicas. Talk.

American Ornithologists' Union and Cooper Ornithological Society joint conference. Norman, Oklahoma, July 28 - August 2, 2015.

2. **Campagna L**, Gronau I, Silveira LF, Siepel A, Lovette I. Distinguishing noise from signal in patterns of genomic divergence in a highly polymorphic avian radiation. Talk.

X Neotropical Ornithological Congress and XXII Congresso Brasileiro de Ornitologia. Manaus, Brazil, 19-24 July 2015.

3. Berv J, **Campagna L**, Feo T, Lovette I, Prum R. Genomic phylogeography of the White Crowned Manakin. Talk.

I Reunion Argentina de Biología Evolutiva. Córdoba, Argentina, 6-8 July 2015.

4. Calderón L, **Campagna L**, Wilke T, Lormee H, Eraud C, Dunn J, Rocha G, Zehtindjiej P, Bakaloudis D, Metzger B, Cesere J, Marx M, Quillfeldt P. Population genomics of the European turtle dove (*Streptopelia turtur*). Talk.

Evolution 2015. Guarujá, Brazil, 26-30 June 2015.

5. **Campagna L**, Gronau I, Silveira LF, Siepel A, Lovette I. Distinguishing noise from signal in patterns of genomic divergence in a highly polymorphic avian radiation. Talk.
6. Cabanne GS, **Campagna L**, Trujillo-Arias N, Claramunt S, Santos F, Miyaki C, Aleixo A, Lovette I, Tubaro P. Reconstructing the evolution of Neotropical rainforests: multilocus phylogeography and niche simulations of a forest bird. Talk.

September 2015

AOU, COS, SCO Joint Meeting. 2014. Estes Park, Colorado, 23-28 September 2014.

7. **Campagna L**, Silveira LF and Lovette I. Divergent phenotypes despite (mostly) homogeneous genomes: insights from a continental avian radiation. Talk.
8. Taylor S and **Campagna L**. Genomic approaches to understanding avian speciation. Talk.
9. **Campagna L** and Taylor S. Introduction to various genomic methods. Talk.

Evolution 2014. Raleigh, North Carolina, 20-24 June 2014.

10. **Campagna L**, Silveira LF, Lovette IJ. Divergent phenotypes despite (mostly) homogeneous genomes: insights from a continental avian radiation. Talk.

11th Argentine Cladistics and Biogeography Meeting, Santa Fe, Argentina, 26-28 March 2014.

11. **Campagna L**, Kopuchian C, Tubaro PL, Loughheed SC. Biogeografía histórica de una de las especies de aves passeriformes más abundantes del Neotrópico: El Chingolo (*Zonotrichia capensis*). Talk.

15th Argentine Ornithology Meeting, Santa Rosa, La Pampa, Argentina, 18-21 September 2013.

12. **Campagna L**, Kopuchian C, Tubaro PL, Loughheed SC. Estudio filogeográfico de uno de los passeriformes más abundantes del Neotrópico: el chingolo (*Zonotrichia capensis*). Talk.

14th International Behavioral Ecology Congress, Lund, Sweden, August 12 -17, 2012.

13. Facchinetti C, DiGiacomo AG, **Campagna L**, Mahler B, Reboreda JC. Evidence of extra-pair paternity in the Tawny-bellied Seedeater (*Sporophila hypoxantha*). Poster.

1st Joint Congress on Evolutionary Biology, Ottawa, Ontario, Canada, July 6 – 10, 2012.

14. **Campagna L**, Benites P, Loughheed SC, Lijtmaer DA, Di Giacomo AS, Eaton MD, Tubaro PL. Rapid phenotypic evolution during incipient speciation in a continental avian radiation. Talk.

MACN 200. Two Centuries of Natural Science Exploration and Discovery in Argentina, Argentine Museum of Natural History, Buenos Aires, Argentina, June 26 – 28, 2012.

15. Campagna C, Campagna L. Museos en el Antropoceno: Nuevas buenas prácticas ante la crisis de la biodiversidad. Talk.

Speciation Day Symposium, Cornell Lab of Ornithology, Ithaca, USA, May 7th, 2012.

16. **Campagna L**, Benites P, Loughheed SC, Lijtmaer DA, Di Giacomo AS, Eaton MD, Tubaro PL. Rapid phenotypic evolution during incipient speciation in a continental avian radiation. Poster.

4th International Barcode of Life Conference, Adelaide, Australia, 28 November – 3 December, 2011.

17. Kopuchian C, Barreira AS, Benites P, Cabanne GS, Calderón PL, **Campagna L**, Gómez I, Naoki K, Lijtmaer DA, Tubaro PL. Barcoding the birds of southern South America: A progress report from Argentina and Bolivia. Talk.

18. **Campagna L**, Lougheed SC, Lijtmaer DA, Tubaro PL. DNA Barcoding reveals recent speciation, extreme genus-level polyphyly and cryptic species in Neotropical birds. Talk and poster.

9th Neotropical Ornithology Congress and VIII Peruvian Ornithology Congress, Cusco, Peru, 8-14 November 2011.

19. Kopuchian C, **Campagna L**, Cabanne GS, Tubaro PL. The effect of the Paraná-Paraguay Rivers as a geographical barrier for Passerines. Poster.

14th Argentine Ornithology Meeting, Ciudad de Formosa, Formosa, Argentina, 3-6 August 2011.

20. **Campagna L**, St. Clair JJH, Lougheed SC, Woods RW, Imberti S, Tubaro PL. Divergencia genética entre passeriformes de Patagonia e Islas del Atlántico Sur. Poster.
21. Kopuchian C, **Campagna L**, Cabanne GS, Tubaro PL. Evidencias de alta variación genética intraespecífica en el juan chiviro (*Cyclarhis gujanensis*) (Vireonidae: Passeriformes). Poster.
22. Benites P, **Campagna L**, Tubaro PL. Discriminación vocal homoespecífica y heteroespecífica en dos especies de capuchinos (*Sporophila*). Talk.
23. **Campagna L**, Geale K, Handford P, Lijtmaer DA, Tubaro PL, Lougheed SC. Filogenia molecular del género *Phrygilus*: polifilia en un grupo de especialistas Andinos. Talk.
24. **Campagna L**, Benites P, Lougheed SC, Lijtmaer DA, Di Giacomo AS, Eaton MD, Tubaro PL. Alta variabilidad fenotípica y baja divergencia genética: la radiación reciente de los capuchinos (género *Sporophila*). Talk. **"Emu - Austral Ornithology" award** to the best graduate student presentation.

3rd International Barcode of Life Conference, Mexico City, Mexico, 9-13 November 2009.

25. **Campagna L**, Lijtmaer DA, Lougheed SC, Tubaro PL. COI flags a recent radiation in passerine birds. Talk. **Full travel award.**

13th Argentine Ornithology Meeting, Taí del Valle, Tucumán, Argentina, 3-6 June 2009.

26. **Campagna L**, Lijtmaer DA, Lougheed SC, Tubaro PL. Evidencia genética de una radiación reciente en el género *Sporophila*. Talk.

12th Argentine Ornithology Meeting, San Martín de los Andes, Neuquén, Argentina, 5-8 March 2008.

27. **Campagna L**, Lijtmaer DA, Kerr KCR, Barreira AS, Hebert PDN, Tubaro PL. Filogenia molecular de un enjambre de especies en formación del género *Sporophila* (Aves, Passeriformes). Poster.

13th International Immunology Meeting, Río de Janeiro, Brazil, 21-25 August 2007.

28. Toscano MA, Bianco GA, Ilarregui JM, **Campagna L**, Croci DO, Zwirner NW, Poirier F, Riley EM, Correale J, Baum LG, Rabinovich GA. Differential glycosylation of T helper cell subsets selectively regulates susceptibility to galectin-1-induced cell death. Poster.

29. **Campagna L**, Toscano MA, Ilarregui JM, Bianco GA, Croci DO, Salatino M, Fededa JP, Maldonado C, Kornblihtt AR, Rabinovich GA. Reciprocal regulation of galectin-1 and galectin-3, glycan-binding proteins with pro-apoptotic activity, in human and murine T helper cell subsets. Poster.

7th International Congress on Trauma, Shock, Inflammation and Sepsis (TSIS), Munich, Germany, March 2007.

30. Toscano MA, Bianco GA, Ilarregui JM, **Campagna L**, Croci D, Zwirner N, Correale J, Rabinovich GA. Dissecting the role of protein-glycan interactions in negative regulation of Th1 responses. Poster. **A.E. Baue Best Research Poster Award.**

54th Annual Scientific Meeting from the Argentine Society of Immunology (SAI), Mar del Plata, Buenos Aires, Argentina, 8-11 November 2006.

31. Toscano MA, **Campagna L**, Bianco GA, Ilarregui JM, Zwirner NW y Rabinovich GA. Papel crítico de Galectina-1 (Gal-1) en la regulación negativa de la respuesta T helper (Th) 1: Mecanismos involucrados. Talk.
32. Bianco GA, Toscano MA, Ilarregui JM, **Campagna L**, Correale J, Rabinovich GA. Impacto de la deficiencia de Galectina-1 en la severidad de la enfermedad autoinmune desmielinizante. Talk.
33. Croci DO, Salatino M, Rubinstein N, Toscano MA, Ilarregui JM, Bianco GA, **Campagna L**, Rabinovich GA. Estudio de Galectina-1 como nuevo factor pro-angiogénico: Mecanismos celulares y moleculares involucrados. Talk.
34. **Campagna L**, Toscano MA, Ilarregui JM, Bianco GA, Croci DO, Salatino M, Fededa JP, Leimgrüber C, Kornblihtt AR, Rabinovich GA. Regulación diferencial de la expresión de Galectinas-1 y -3 en linfocitos Th1 y Th2. Poster.

INVITED PRESENTATIONS

1. Speciation on a remote archipelago in the southern Atlantic. Ornithology seminar. Cornell Lab of Ornithology. Cornell University, Ithaca, New York, USA. September 22nd 2015.
2. Alta diferenciación fenotípica con baja divergencia genómica en la radiación reciente de los capuchinos del sur (Aves: *Sporophila*). Universidad Nacional Autónoma de Mexico, Mexico. May 19th 2015.
3. Divergent phenotypes despite (mostly) homogeneous genomes: insights from a continental avian radiation. Center for Vertebrate Genomics scholars group. Cornell University, Ithaca, New York, USA. January 23rd 2015.
4. Estrategias genómicas para el estudio de la especiación en aves. Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", Buenos Aires, Argentina. December 12th 2014.
5. Divergent phenotypes despite (mostly) homogeneous genomes: insights from a continental avian radiation. Ornithology seminar. Cornell Lab of Ornithology. Cornell University, Ithaca, New York, USA. September 2nd 2014.
6. Divergent phenotypes despite (mostly) homogeneous genomes: insights from a continental avian radiation. Department of Ecology and Evolutionary Biology Evogroup seminar series. Cornell University, Ithaca, New York, USA. March 6th 2014.

September 2015

7. Exploring the origins of Neotropical avian biodiversity. The Cayuga Bird Club Meeting/Monday Night Seminar. Cornell Lab of Ornithology. Cornell University, Ithaca, New York, USA. February 10th 2014.
8. A case of rapidly radiating seedeaters from the grasslands of South America. Ornithology seminar. Cornell Lab of Ornithology. Cornell University, Ithaca, New York, USA. November 19th 2013.
9. Exploring the origins of Neotropical avian biodiversity. Queen's University Biological Station seminar series. Queen's University, Kingston, Ontario, Canada. June 12th 2013.
10. A case of rapidly radiating seedeaters from the grasslands of South America. Ecology and Evolutionary Biology seminar series. Queen's University, Kingston, Ontario, Canada. March 28th 2013.

SCHOLARSHIPS, FELLOWSHIPS and AWARDS

1. Center for Vertebrate Genomics Postdoctoral Fellowship, Cornell University. 2015.
2. Senate Advisory Research Committee (SARC) Postdoctoral Fellowship, Queen's University (Canada). May 2012 – May 2013.
3. Type II Scholarship, Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET, Argentina). June 2010 – April 2012.
4. Ph.D. initiation scholarship, Agencia de Promoción Científica y Tecnológica (ANPCyT, Argentina). June 2007 - June 2010.
5. Houssay 2006 award from the Argentine Biology Society. Toscano MA, Bianco GA, Ilarregui JM, Campagna L, Rabinovich GA.
6. Scholarship from the SALES foundation for cancer research (Argentina). August 2005 – February 2007.

RESEARCH GRANTS

1. ANPCyT, Argentina: PICT-2014-2154. 2015. Análisis filogenómico de especies incipientes de aves neotropicales: Estudio de la contribución de la selección en el proceso de especiación. Ornithology Division working group, Argentine Museum of Natural History.
2. Internationalizing the Cornell Curriculum grant, Mario Einaudi Center for International Studies, Cornell University. 2015. Campagna L, Lovette I.
3. Athena grant, Cornell Lab of Ornithology. 2014. Berv J, Campagna L, Lovette I, Prum R.
4. Julia Marsden grant 2014, Neotropical Grassland Conservancy. Campagna L.
5. PIP CONICET, Argentina. 2012-2014. Ecología y Evolución de los sistemas de comunicación visual y acústico en aves neotropicales. Ornithology Division working group, Argentine Museum of Natural History.
6. ANPCyT, Argentina: PICT bicentenario 2010-0805. 2011. Estudio de los patrones de variación genética y fenotípica en aves sudamericanas: evaluando hipótesis sobre el contacto histórico entre la

Selva Atlántica y las Yungas. Ornithology Division working group, Argentine Museum of Natural History.

7. UBACyT, Argentina. 2010-2012. Patrones de variación genética y fenotípica en el Cono Sur de Sudamérica. Evaluando hipótesis sobre el papel de las barreras geográficas y los cambios climáticos en la diversidad de aves y arañas en selvas subtropicales y templadas. Ornithology Division working group, Argentine Museum of Natural History.
8. PIP CONICET, Argentina. 2009-2011. Ecología y Evolución de los sistemas de comunicación visual y acústico de las Aves Neotropicales. Ornithology Division working group, Argentine Museum of Natural History.

NON REFEREED REPORTS

1. Van Coeverden de Groot PJ, **Campagna L**, Boag P. 2013. Population genetic analysis of contemporary M'Clintock Channel and Gulf of Boothia Polar bears. Department of Environment, Government of Nunavut, Canada.

TEACHING EXPIRENCE

1. Ecology and Conservation of Wildlife in the Neotropics –BioEE2525. Fall 2015/Spring2016. Cornell University. Co-taught with Irby Lovette and developed using funding from a grant obtained form the Office of the Vice Provost of International Affairs and the Mario Einaudi Center for International Studies.
2. Introducción a los métodos de secuenciación de nueva generación y su aplicación a la Ecología Molecular. May 2015. Universidad Nacional Autónoma de Mexico (UNAM). Co-taught with Nicholas Mason and funded by a grant obtained from UNAM.
3. Invited lecture: “Understanding avian evolution”. Evolution (Writing in the majors section), Cornell University, Ithaca, New York, USA. February 12th 2015.
4. Invited lecture: “Speciation genetics”. Principles of Animal Genetics, Cornell University, Ithaca, New York, USA. April 24th 2014.
5. Diversity and conservation of Northern Patagonia. February 2012. Queen’s University, field course in Patagonia. Teaching assistant.
6. Training workshop for DNA Barcoding. April – May 2009. Museo Argentino de Ciencias Naturales, Buenos Aires, Argentina. Teaching assistant.
7. Inmunidad, tolerancia y cancer: Desde la inmunovigilancia hacia el escape tumoral. October 2006. Universidad Nacional de Río Cuarto, Córdoba, Argentina. Teaching assistant.

PROFESSIONAL SERVICE

Referee for Evolution, Current Biology, Molecular Phylogenetics and Evolution, Molecular Ecology Resources, Biological Journal of the Linnean Society, Conservation Genetics, BMC Evolutionary Biology Journal of Avian Biology, EMU - Austral Ornithology, and Ornitología Neotropical.

Referee work for grant proposals from the Facultad de Ciencias, Universidad de los Andes (Colombia), Agencia Nacional de Promoción Científica y Tecnológica (Argentina) and Sigma Xi (Cornell University, USA).

Co-organizer (with Dr. Scott Taylor) of the symposium “Genomic approaches to understanding avian speciation”; AOU, COS, SCO Joint Meeting (2014).