

Alejandro Manuel Ferreiro

Post-doctoral fellow

Argentinean Museum of Natural Sciences (MACN)

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Education



Doctor in Biological Sciences (2017-2022)

Title: Phylogeography and species distribution models to define conservation units of the southern three-banded armadillo (*Tolypeutes matacus*) in Argentina.

National University of Cordoba, Argentina.



Biologist (2008-2014)

Title: Molecular phylogeny of the Euphractinae subfamily (Xenarthra).

GPA: 8.25/10

National University of Cordoba, Argentina.

Research positions



FONCyT Post-doctoral fellowship (2023-Present)

Title: Biogeography of the open vegetation diagonal of South America: phylogenomic and phenotypic variation in dry forest birds.

Institution: Argentinean Museum of Natural Sciences "Bernardino Rivadavia" (MACN, CONICET, Argentina).

Tutor: Gustavo Sebastián Cabanne.

Funder: Fund for Scientific and Technological Research (FONCYT, Argentina).



CONICET DOCTORAL Fellowship (2016-2022)

Title: Phylogeography and species distribution modelling to define Conservation Units for the southern three-banded armadillo (*Tolypeutes matacus*).

Institution: Institute of Animal Diversity and Ecology (IDEA, Argentina)

Tutors: Marina B. Chiappero and Esteban Soibelzon.

Funder: National Council of Scientific and Technical Research (CONICET, Argentina)



ESTÍMULO A LAS VOCACIONES CIENTÍFICAS Undergraduate scholarship (2013)

Institution: Academic chair of population genetics and evolution; Exact, Physics and Natural Sciences Faculty; National University of Cordoba (Argentina).

Title: Molecular phylogeny of the Euphractinae subfamily (Xenarthra, Mammalia).

Tutors: Sebastian Poljak and Raúl González Ittig.

Funder: National Interuniversity Council (CIN, Argentina)

Journal articles

Ferreiro AM, Soibelzon E, Pinotti JD, Poljak S, Chiappero MB. 2022. Reconstructing the distribution of Chacoan biota from current and past evidence: the case of the southern three-banded armadillo *Tolypeutes matacus* (Desmarest, 1804). *Journal of Mammalian Evolution*. 1–13. DOI: 10.1007/S10914-022-09627-3

Pinotti JD, Ferreiro AM, Martin ML, Levis S, Chiappero M, Andreo V, González-Ittig RE. 2020. Multiple refugia and glacial expansions in the Tucumane–Bolivian Yungas: The phylogeography and potential distribution modeling of *Calomys fecundus* (Thomas,

1926) (Rodentia: Cricetidae). *Journal of Zoological Systematics and Evolutionary Research* 58: 1359–1373.

Poljak S, Ferreiro AM, Chiappero MB, Sánchez J, Gabrielli M, Lizarralde MS. 2018. Phylogeography of screaming hairy armadillo *Chaetophractus vellerosus*: Successive disjunctions and extinctions due to cyclical climatic changes in southern South America. PLOS ONE 13: e0190944.

Other publications

Ferreiro AM, Abba A, Camino M, Tamburini DM, Decarre J, Soibelzon E, Castro LB, Rogel TG, Agüero AJ, Albretch CD, Superina M. 2019. *Tolypeutes matacus*. In: SAYDS–SAREM (eds) Categorización 2019 de los mamíferos de Argentina según su riesgo de extinción. Lista Roja de los mamíferos de Argentina. URL: <http://cma.sarem.org.ar/index.php/es/especie-nativa/tolypeutes-matacus>

Abba AM, Camino M, Torres R, Ferreiro AM, Tamburini DM, Decarre J, Soibelzon E, Castro LB, Rogel TG, Agüero AJ, Albretch CD, Superina M. 2019. *Chaetophractus vellerosus*. In: SAYDS–SAREM (eds) Categorización 2019 de los mamíferos de Argentina según su riesgo de extinción. Lista Roja de los mamíferos de Argentina. URL: <http://cma.sarem.org.ar/index.php/es/especie-nativa/chaetophractus-vellerosus>

Manuscripts submitted

Ferreiro AM, Pinotti JD, Poljak S, Soibelzon E, Chiappero MB. Effects of Quaternary climatic oscillations over the Chacoan fauna: the phylogeographic patterns of the southern three-banded armadillo *Tolypeutes matacus* (Cingulata: Chlamyphoridae). *Zoological Journal of the Linnean Society*.

Issaly EA, Baranzelli M, Rocamundi N, Ferreiro AM, Johnson LA, Sersic A; Paiaro V. Too much water under the bridge: unraveling the worldwide invasion of the tree tobacco through genetic and ecological approaches. *Biological Invasions*.

Manuscripts in preparation

Ferreiro AM, Chiappero MB, Romero-Muñoz A, Soibelzon E. Spatial appraisal of threats in the highly perturbed South American Chaco: the case of the southern three-banded armadillo (*Tolypeutes matacus*). Sending soon to *Biodiversity and Conservation*.

Funding and awards

📄 PICT project funding (2022-2023)

Funder: Fund for Scientific and Technological Research (FONCYT, Argentina).

Title: Biodiversity richness of non-flying mammals from central Argentina (La Pampa): changes in their distribution, dispersal pathways and extinctions during the Holocene.

Role: Research fellow.

📄 PICT project funding (2021-2022)

Funder: Fund for Scientific and Technological Research (FONCYT, Argentina).

Title: Evolutionary processes in mammals from the plains of Chaco, Espinal and the Pampean region: an approach from comparative phylogeography and ecological niche modeling.

Role: Research fellow.

- \$= IDEA WILD project funding (2019)**
Funder: IDEA WILD Foundation (US).
Title: Conservation of Southern three-banded Armadillo on its southernmost distribution range.
Role: Project leader.
- \$= PICT project funding (2017-2019)**
Funder: Fund for Scientific and Technological Research (FONCYT, Argentina).
Title: Distribution areas and dispersal routes of medium and small mammals during the Quaternary. The Arid South American Diagonal.
Role: Research fellow.
- \$= SECyT project funding (2016-2017)**
Funder: National University of Cordoba (Argentina).
Title: Distribution areas and dispersal routes of medium and small mammals during the Quaternary. The Arid South American Diagonal.
Role: Research fellow.
- 🏆 SAREM Awards (2018)**
Funder: Argentinean Society for the Study of Mammals (SAREM).
Title: Phylogeography and species distribution modelling to define conservation units for the southern three-banded armadillo (*Tolypeutes matacus*).

Courses

- ✓ **Introduction to bioinformatics analysis of RAD-seq sequences (2023)**
Institution: National University of Tierra del Fuego (Argentina), In-person course (+40hs).
Score: 10/10.
- ✓ **ENM 2020: Advanced course in Ecological Niche Modeling. (2020)**
Institution: University of Kansas (US), Online course (+100hs).
Score: Scoreless.
- ✓ **Cladistic. (2020)**
Institution: National University of Cordoba (Argentina), Online course (40hs)
Score: 9/10.
- ✓ **Cladistic, philosophy, theory and methods. (2020)**
Institution: Federal University of Paraná (Brazil), Online course (45hs).
Score: B.
- ✓ **Statistics. (2019)**
Institution: National University of Cordoba (Argentina), In-person course (40hs)
Score: 9/10.
- ✓ **Theoretical-practical advanced course in modeling of species niches, an approach to correlative and process-based models. (2019)**
Institution: National University of Tucuman (Argentina), In-person course (40hs)
Score: 10/10.
- ✓ **Extending and Enhancing DNA Barcoding Research in Argentina and Neighboring Countries: Tenth Leading Labs Training Workshop. (2019)**
Institution: Argentinean Museum of Natural Sciences "Bernardino Rivadavia" (MACN, Argentina), In-person course (40hs).
Score: Scoreless.
- ✓ **IUCN Red List Assessment modules. (2018)**
Institution: www.conservationtraining.org, Online course.
Score: Scoreless.
- ✓ **Niche and distribution modeling, with an emphasis on the use of MAXENT. (2017)**
Institution: National University of Tucuman (Argentina), In-person course (40hs)
Score: 7/10.

- ✓ **XI Conservation Genetics Workshop. (2017)**
Institution: Red de Genética para la Conservación (ReGeneC) and the National University of Misiones (Argentina), In-person course (100hs).
Score: 83/100.
- ✓ **Genetic data analysis with R. (2016)**
Institution: University of Buenos Aires (Argentina), In-person course (60hs)
Score: 9/10.
- ✓ **Conservation biology. (2016)**
Institution: National University of Cuyo (Argentina), In-person course (45hs)
Score: 9/10.
- ✓ **Introduction to phylogeography and niche modelling. (2016)**
Institution: National University of Cordoba (Argentina), In-person course (45hs)
Score: 10/10.
- ✓ **Analysis of the genetic structure of natural populations. (2016)**
Institution: National University of Cordoba (Argentina), In-person course (45hs)
Score: 10/10.
- ✓ **Introductory course to GIS and remote sensing. (2015)**
Institution: National University of Cordoba (Argentina), In-person course (10hs)
Score: Scoreless.
- ✓ **Biotechnology. (2013)**
Institution: National University of Cordoba (Argentina), In-person course (40hs)
Score: 8/10.


Other capacitation

- **i-Teams. Entrepreneurial training program and scientific-technological link. (2019)**
Institution: Ministry of Science and Technology, Government of Cordoba Province (Argentina)

Teaching experience

-  **Head of Practical Assignments. (2022-2023)**
Institution: National University of Santiago del Estero (Argentina).
Course: Introduction to Biology.
-  **Fellow collaboration. (2016-2018)**
Institution: National University of Cordoba (Argentina).
Course: Population Genetics and Evolution.
-  **Undergraduate assistant. (2011-2012)**
Institution: National University of Santiago del Estero (Argentina).
Course: Animal Diversity 1.









Outreach activities

-  **What we talk about when we talk about Conservation Genetics? (2023)**
Type of activity: Webinar.
Institution: Universidad Libre del Ambiente, Cordoba, Argentina (organized by the Secretariat of Environment and the Municipality of Cordoba).

Scientific management positions

-  **Representative of Fellows on the Boards of Directors. (2019-2021)**
Institution: Institute of Animal Diversity and Ecology (IDEA, Argentina)

Other skills

Advanced	Intermediate	Junior
 R programming	 Python programming	 JavaScript
 Github (aleferreiro)	 Bash programming	 CSS
 QGIS	 Jupyter notebook	

References

Prof. Marina B. Chiappero

Institution: Institute of Animal Diversity and Ecology (IDEA, Argentina)

Contact: marina.chiappero@gmail.com

Prof. Esteban Soibelzon

Institution: Vertebrate Paleontology Division, La Plata Museum (UNLP-CONICET)

Contact: esoibel@gmail.com

Prof. Sebastian Poljak

Institution: Southern Center for scientific research (CADIC; UNTDF-CONICET)

Contact: sebapoljak@hotmail.com