

## CURRICULUM VITAE

<b>Parte A. DATOS PERSONALES</b>			<b>Fecha del CVA</b>	18/01/2025
Nombre	Mario José			
Apellidos	Mairal Pisa			
Sexo (*)	Male	Fecha de nacimiento (dd/mm/yyyy)	18/09/1983	
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### A.1. Situación profesional actual

Puesto	Profesor Ayudante Doctor		
Fecha inicio	1 March 2022		
Organismo/ Institución	Universidad Complutense de Madrid		
Departamento/ Centro	Dept. Biodiversidad, Ecología y Evolución. Facultad de Ciencias Biológicas		
País	Spain	Teléfono	913945055
Palabras clave	Biodiversity, evolution, bio/phylogeography, plant population genetics, island biology, conservation, ecology, systematics.		

### A.2. Situación profesional anterior

Periodo	Puesto/ Institución/ País / Motivo interrupción
2020 – 2022	Visiting Professor, UCM, Spain.
2018 – 2020	Postdoctoral Fellow. Stellenbosch University
2017 - 2018	Postdoctoral Fellow. Charles University, Czech Republic
2016	Project Manager for recovery plans of threatened species (Cabildo de Gran Canaria) & Conservation Assistant, National Avian Research Centre (United Arab Emirates)
2010 - 2015	Predocctoral Researcher, Real Jardín Botánico (RJB), Spain

### A.3. Formación Académica

Titulación (Grado/Master/Tesis/...)	Institución/Pais	Año
PhD	RJB, Universidad Rey Juan Carlos	2015
Master's degree	Universidad Complutense de Madrid	2010
Licensed	Universidad Complutense de Madrid	2008

## Parte B. RESUMEN DEL CV

I am an evolutionary botanist focused on the study of biogeography, phylogeography, island biology and conservation, from an evolutionary and ecological perspective. I have acquired this experience throughout my years of graduate research, PhD, postdoc and now as an assistant professor at UCM. I obtained an M. Sc. in conservation biology (2010) and a Ph.D. in Ecology and Evolution (Nov. 2015). I performed postdoctoral research at Charles University (Prague, Czech Republic) in 2017 and Stellenbosch University (South Africa) from 2018 to 2020. I have worked at multiple research centers—four in Spain, four across Europe, two in Africa, one in the sub-Antarctic region, and one in Asia—and have led field expeditions (>10) across five continents. This has allowed me to build an extensive international network of collaborators, with whom I actively work and publish, contributing to a strong record of international scientific output.

Over the years, I have achieved high-level **scientific contributions**, focusing my work on rigorous and internationally recognized journals. I have published 22 JCR articles in Q1 journals within my field over the past 10 years, serving as first, senior and corresponding author (leader) in 10 of them. All these publications have an Impact Factor greater than 3.4. Additionally, I have

contributed to 3 book chapters and authored 5 conservation, scientific and technical reports. My publication standards have gained recognition, with approximately 684 citations (511 in the last 5 years), over 40% of which are for works where I am the first author. I hold an h-index of 13 and an i-index of 16. My scientific contributions have been recognized (9 awards, e.g. Postdoctoral Fellow Award for Exceptional Achievement (2019), National Conservation Award César Gómez Campo (2019). I have reviewed 95 articles for 27 JCR journals and contributed to four panels and two Public Agencies.

I have participated in 22 **research projects**, including 15 competitive projects lasting 3 years or more, and 7 competitive projects lasting 1 to 3 years. In 2016, I managed two research projects through competitive calls, focused on endangered plant species. I have served as Principal Investigator for four outreach and teaching projects: a FECYT Project (2023–2024; Convocatoria de Ayudas para el Fomento de la Cultura Científica, Tecnológica y de la Innovación), two UCM Teaching Innovation Project (2023–2024 and 2024–2025), and a UCM Service-Learning Project (2023–2024).

My **teaching background** has focused on teaching plant biodiversity, with special emphasis on evolutionary biology, conservation biology and bio/phylogeography. Throughout my career I have taught at 6 universities (Charles U., Stellenbosch U., UCM, Menéndez Pelayo U., U. Politécnica de Madrid, U. of Helsinki) across 12 different courses (e.g. Botany, Evolution, Plant Biodiversity), for a total of 975 hours as the lead professor. From 2020 to 2024, my teaching has been rated with the highest qualification (Excelente) in the DOCENTIA Program. I have a strong ability to engage and mentor students; over the past four years, I have successfully supervised 23 student projects, including 3 Ms. C. theses, 12 Bs. C. theses, 7 *Iniciación a la Investigación*, and 1 remote internship. I have developed my own course, the Island Phylogeography Course (IPC) which I taught at Charles University and Stellenbosch University (rated 4.9/5).

I am passionate about **scientific outreach** and possess strong communication skills, having received 2 communication Awards. I have contributed to 30 scientific meetings (14 international), delivering 23 oral presentations. I have been invited to give 6 lectures, including 2 plenary talks, and to lead 4 invited workshops. I am deeply committed to the university's commitment of disseminating and transferring knowledge to society. I am actively involved in organizing outreach events and botany seminars, and I lead several biodiversity awareness and conservation projects through citizen science initiatives. I serve as an editor for *Conservación Vegetal*, the only plant conservation journal in Spanish, and have published 9 outreach articles. I oversee the Outreach Working Group of SEBICOP (Spanish Society of Plant Conservation Biology), and I am the coordinator of *Divulgación y Transferencia* course for the M. Sc. in botany at UCM, starting in 2025. I am the creator and national coordinator of the *Biomaratón de Flora Española*, an activity that has been recognized as the largest botany-focused citizen participation event in Spain, with over 7,000 participants across its 4 editions.

## Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES

### C.1. Publicaciones más importantes en libros y revistas con “peer review” y conferencias.

The position of the applicant is marked in **bold**. \* = corresponding author. ‡ = mentored student.

- ‡Aguado-Lara, A., Sanmartín, I. Le Roux, J., García-Verdugo, C., Molino, S., Convey, P., van Vuuren, B., **Mairal, M.** \* 2025. Tracing the biogeographic history of the world's most isolated insular floras. *J. Syst. Evol.* (in press). Plant Sciences Q1 (60/265), IF = 3.4.
- Mairal, M.\***, García-Verdugo, C., Le Roux, J ... Shaw, J. (1/9). 2023. Multiple introductions, polyploidy, and mixed reproductive strategies are linked to genetic diversity and structure in the most widespread invasive plant across Southern Ocean archipelagos. *Mol. Ecol.* 32(4). 756-771. Evolutionary Biology Q1 (7/51), IF=5.163.
- Mairal, M.\***, Chown, S., Shaw, J. ... Le Roux, J (1/11). 2021. Human activity strongly influences genetic dynamics of the most widespread invasive plant in the sub-Antarctic. *Mol. Ecol.* 31(6): 1649-1665. Evolutionary Biology Q1 (7/51), IF=5.163.

4. **Mairal, M.\***, Namaganda, M., Gizaw, A., Chala, D., Brochmann, C., Catalán, P. 2021. Multiple mountain-hopping colonization of sky-islands on the two sides of Tropical Africa during the Pleistocene: the Afroalpine *Festuca* grasses. *J. Biogeogr.* 48(8): 1858-1874. Geography, physical Q1 (7/49), IF=3.72.
5. **Mairal, M\***, Šurinová, M., Castro, S., Münzbergová, Z. 2018. Unmasking cryptic biodiversity in autopolyploids: origin and ongoing diversification of cytotypes in the *Aster amellus* aggregate. *Ann. Bot.* 122: 1047-1059. Plant Sciences Q1 (22/211), IF=4.04.
6. **Mairal, M.\***, Caujapé, J., Pellissier, L., Heuertz, M., Jaén Molina, R., Álvarez, N., Sanmartín, I. 2018. A tale of two forests: ongoing aridification drives population decline and genetic diversity loss at continental scale in Afro-Macaronesian evergreen-forest archipelago endemics. *Ann. Bot.* 122: 1005–1017. Plant Sciences Q1 (22/211), IF=4.04.
7. **Mairal, M.\***, Sanmartín, I., Pellissier, L. 2017. Lineage-specific climatic niche drives the tempo of vicariance in the Rand Flora. *J. Biogeogr.* 44: 911–923. Geography, physical Q1 (5/49), IF = 4.154.
8. **Mairal, M.\***, Aldasoro, J.J., Sanmartín, I., Vargas, P., Alarcón, M. 2017. Geographic barriers and Pleistocene climate change shaped patterns of genetic variation in the Eastern Afromontane biodiversity hotspot. *Sci. Rep.* 7(1): 45749. Multidisciplinary Sciences, Q1 (7/61), IF=5.228.
9. **Mairal, M\***, Sanmartín, I. Aldasoro, J.J., Manolopoulou, I., Culshaw, V., Alarcón, M. 2015. Palaeo-islands as refugia and cradles of diversity in volcanic archipelagos: the case of the widespread endemic *Canarina canariensis*. *Mol. Ecol.* 24: 3944-3963. Evolutionary Biology, Q1 (5/46), IF=6.494.
10. **Mairal, M\***, Pokorny, L., Aldasoro, J.J., Alarcón, M., Sanmartín, I. 2015. Ancient vicariance and climate-driven extinction explain continental-wide disjunctions in Africa: the case of the Rand Flora genus *Canarina* (Campanulaceae). *Mol. Ecol.* 24: 1335-1354. Evolutionary Biology, Q1 (5/46), IF=6.494.

**C.2. Congresos.** The position of the applicant is marked in **bold**. ‡ = mentored student.

**Plenary talks & invited conferences:**

2021. **M. Mairal**. Multi-trophic cascades in island systems. Invited Conference at University of Southampton, United Kingdom.
2020. **M. Mairal**. 2020. El ocaso invisible de la laurisilva: biogeografía, declive, propuestas de conservación y gestión. Plenary talk in XXVII Jornadas Forestales de Gran Canaria. Spain.
2020. **M. Mairal**. Extinction Debt & Biodiversity collapses in island Systems. Invited Conference at Charles University, Czech Republic.
2019. **M. Mairal**. Island Biology 2019. What do wind-dispersed species tell us about loss of dispersal. Invited Conference at III Island Biology Conference. Reunion Island (France).

**Oral presentation:**

2024. **M. Mairal**, JM Rubiales, G. Santos, et al.. Experiences of using citizen participation as a teaching tool for botany. XX International Botanical Congress, Madrid.
2024. ‡Ángela Aguado-Lara, Isabel Sanmartín, Johannes Le Roux, C. García-Verdugo, S. Molino, Bettine J. van Vuuren, **M. Mairal**. Unraveling the evolutionary history of island floras on the world's most isolated archipelagos. XX International Botanical Congress, Madrid.
2023. **M. Mairal**. Climate driven plant invasions in the Sub-Antarctic boosted by the interplay of multiple introductions and convergent reproductive strategies. XI Congreso de Biología de la Conservación de Plantas, Gran Canaria, Spain.
2023. **M. Mairal**, S.L. Chown, B.J. van Vuuren, C. Hui, C. García-Verdugo, D. Chala, J. M. Kalwij, J.H. Chau, Z. Münzbergová, J. Shaw, J.J. Le Roux. The interplay between multiple introductions and convergent reproductive strategies drives genetic diversity and structure in the most invasive plant in the Sub-Antarctic. Island Biology 2023, Lipari, Italy.
2019. **M. Mairal**, M. Namaganda, C. Brochmann, P. Catalán. Colonization and diversification of wind-dispersed *Festuca* grasses in Afroalpine sky-islands. International Biogeography Society, 9th biennial conference. Málaga, Spain.

2018. **M. Mairal**, B. van Vuuren, J. Le Roux. The origin of recent biological invasions in sub-Antarctic islands: the case of *Poa annua*. 5th Symposium ANTARCTIC SANAP. Hermanus, South Africa.

### C.3. Proyectos o líneas de investigación en los que ha participado

#### As principal investigator

1. 2023-2024. Biomaratón de Flora Española: hacia el fin de la ceguera vegetal. Convocatoria de proyectos FECYT de Cultura Científica. Ref. 17747. 35,000€.

#### As work team

1. 2022-2025. Diversification and hybridization across Gondwana in the youngest fern family: a phylogenomic approach to *Parablechnum* (Blechnaceae). Proyectos de Generación de Conocimiento (PGC), Spanish Government. PID2021-127118NA-I00. PI: Rafael Medina (UCM). 119,790€.

2. 2022-2025. De la filogenia espacial a la filogenómica espacial: patrones biogeográficos de diversidad y endemismo evolutivos en la flora ibérica (HISPAPHYLO). Proyectos de Generación de Conocimiento, Spanish Government. PID2021-124234NA-I00. PI: Mario Fernández-Mazuecos (Universidad Autónoma de Madrid). 162,140€.

3. 2021-2024. Exploring plant evolutionary radiations. A comparative approach using the Gondwanan Disjunction America-New Zealand in *Carex* (DANZ). PGC, Spanish Government. PID2020-113897GB-I00. PI: Pedro Jiménez-Mejías & Santiago Martín-Bravo (Universidad Pablo de Olavide). 183,073€.

4. 2020-2024. ODDMANOUT: Desentrañando la incógnita de la baja diversidad de especies vegetales en África tropical. Proyectos de Generación de Conocimiento, Spanish Government. PID2019-108109GB-I00. PI: Isabel Sanmartín & Ricarda Riina (RJB). 151,250 €.

5. 2018-2020. A Functional Biogeography of Antarctic (AFBA). Antarctic Circumnavigation Expedition (ACE). Private funding. PI: Steven L. Chown (Monash University).

6. 2017-2020. Biocomplexity: Understanding biological patterns in space and time. South African National Antarctic Program (SANAP). Ref: 110728. PI: Bettine van Vuuren (Johannesburg University).

7. 2017-2019. Consequences of polyploidization: from single traits to population dynamics. Grant Agency Czech Republic (GAČR). P505-13-32048S. PI: Zuzana Munzbergová (Charles University).

8. 2013-2016. The assembly of African floras from lineages to populations: effects of historical climate changes and species ecology (AFFLORA). Proyectos de Investigación Fundamental, Spanish Government. CGL2012-40129-C02-01. PI: Isabel Sanmartín (RJB). 197,730€.

9. 2010-2013. Tracing the origin of the Afro-Mediterranean Rand Flora with dating phylogenetic and biogeographic inference. Proyectos de Investigación Fundamental, Spanish Government. N° CGL2009-1332-C03-01. PI: Isabel Sanmartín (RJB). 121,000€.

### C.4. Participación en actividades de transferencia de tecnología/conocimiento y explotación de resultados

- Secretary of the SEBICOP Board of Directors (Junta Directiva, since 2023).
- Main organiser of the Biomaratón & Datablitz de Flora Española <https://www.biomaratonflora.com/> (2021-present)
- Editor of the journal *Conservación Vegetal* (2019-present)
- Organizer of two symposia and a field trip within the International Botanical Congress (IBC), Madrid (2024).
- Organiser and speaker in scientific seminars at RJB (2010-2015, Charles University (2017) and UCM (2020-2024).
- Teaching material for the course Biodiversity Now. University of Helsinki (2023).
- Teaching and dissemination materials on biodiversity awareness: e.g. <https://mariomairal.com/portfolio/sub-antarctic-flora/>; <https://mariomairal.com/portfolio/sub-antarctic/>
- Creator of the *Island Phylogeography Course* (IPC) (2017)