



Part A. PERSONAL INFORMATION

CV date

22/07/2023

First name	Carmelo		
Family name	Andújar Fernández		
Gender	Male	Date of Birth	24/07/1981
ID number	53145474H		
e-mail	candujar@ipna.csic.es	URL Web: carmeloandujar.com	
Open Researcher and Contributor ID (ORCID) (*)		0000-0001-9759-7402	

A.1. Current position

Position	Investigador contratado Ramón y Cajal		
Initial date	February 2023		
Institution	Consejo Superior de Investigaciones Científicas		
Department/Centre	Grupo de Ecología y Evolución de Islas (GEEI) / Instituto de Productos Naturales y Agrobiología		
Country	Spain	Phone number	661083576
Keywords	Biodiversity discovery; Biodiversity patterns; phylogenetics; soil		

A.2. Previous positions (research activity interruptions)

Period	Position/Institution/Country/Cause of the interruption
2021-2022	Investigador contratado / IPNA-CSIC / Spain
2017 - 2020	Investigador Principal Proyecto JIN / IPNA-CSIC / Spain
2016 -2017	Marie Curie Postdoctoral Researcher / IPNA-CSIC / Spain
2015 - 2016	Postdoctoral Researcher / Imperial College of London / UK
2015 - 2015	Senior Postdoctoral Researcher / University of East Anglia, Norwich / UK
2014 - 2015	Postdoctoral Researcher / Imperial College of London / UK
2013 - 2013	Postdoctoral Researcher / Natural History Museum of London / UK
2013 - 2013	Postdoctoral Research Assistant / Imperial College of London / UK
2012 - 2012	Research assistant / Universidad de Murcia / Spain
2006 - 2010	Pre-doctoral researcher FPU Grant program / Universidad de Murcia / Spain
2005 - 2006	Researcher / Universidad de Castilla-La Mancha / Spain

A.3. Education

PhD, Graduate Degree	University/Country	Year
Licenciado en Biología	Universidad de Murcia / Spain	2004
PhD Biodiversidad y Gestión Ambiental	Universidad de Murcia / Spain	2012

Part B. CV SUMMARY (max. 5000 characters, including spaces)

I am an **evolutionary biologist** with a research profile that unites my interests in arthropod biodiversity, phylogeny, biogeography, community ecology, conservation biology, and soil science. My research brings these elements together to **understand the eco-evolutionary processes that both generate biodiversity, and influence its structure in space and time**. My primary research line is the development and implementation of high throughput sequencing (HTS) approaches to reveal the mechanisms involved in generating biodiversity and its distribution, from the level of communities down to individual lineages, **with emphasis on the diversity, phylogenetics, and biogeography of soil biodiversity**. Throughout my scientific career, I have published 70 scientific articles, of which **54 are in SCI journals (39 Q1; 34 1st percentile; 20 1st author; 14 2nd author; 6 senior author)**. I obtained my PhD at the University of Murcia (UMU) (September 2012), working on the molecular systematics and diversification of *Carabus*. In February 2013, I moved to Imperial College London (ICL) & the Natural History Museum of London (NHML) as a postdoctoral researcher for 4 years. During this period, I developed my own research line working on novel HTS approaches to the study of biodiversity, with a focus on soil arthropods. In 2016 I moved to the IPNA-CSIC in Tenerife with a **Marie Skłodowska-Curie IE contract (90,000€)**, became a

father, and subsequently obtained a **3-year Spanish National Plan JIN project (166,000€)** to study the effects of insularity, vegetation, aridity, and introduced species on soil biodiversity across the Canary Islands. During the last 5 years, as a PI of my own projects, I have gained **experience leading a research team and have consolidated a strong network of international collaborators from more than 12 countries and 25 international institutions**. In this period I have been successful in obtaining additional funding, including 3 science transference projects (**Cabildo de Tenerife; 82,789.48€**), a soil metabarcoding dedicated project (Fundación **CajaCanarias; 53,700€**), and 2 projects for the molecular characterization of soil pest species (**Canadian Food Inspection Agency; 61,336.75€**). I have been responsible for the hiring of 5 people (young biologists that I have trained), and I am currently **co-supervising 3 PhD theses (one as principal supervisor)**. Over my career I have participated in 36 research projects (10 international), 9 of them as PI or co-PI with a total income of **404,126.23€**. I have contributed to 24 national and international conferences and workshops (5 as invited speaker). In 2018 I was awarded the prestigious **international 20th R.J.H. HINTELMANN SCIENTIFIC AWARD** for evolutionary biologists by the Zoologische Staatssammlung München (Germany). I have **reviewed grant proposals** for the Research Councils of Estonia and Czech Republic, and the "ANEP" (Spain), and **manuscripts for 25 SCI international journals**. I serve as **Associate Editor** for the journals Metabarcoding and Metagenomics and Frontiers in Ecology and Evolution. I have over **150 hours of teaching** at the UMU, ICL, and the ULL, and I have participated in **multiple outreach activities** at the NHML and the IPNA-CSIC. The key academic achievement of my research career has been to **establish my own research lines, gaining recognition as a leader in the application of metabarcoding for biodiversity genomics**, while simultaneously **establishing my independence**. I got a **Ramón & Cajal Fellowship starting February 2023**, through which I will work to consolidate my research **at the international forefront** of evolutionary ecology and soil biodiversity research.

Detail on publication record, projects, and conferences/workshops:

(1) Number of SCI publications = 54 (20 as first author, 14 as second author, 6 as senior author; 39 of them Q1, 34 first percentile), including: Molecular Biology and Evolution (x1), Ecology Letters (x1), Molecular Ecology (x14), Gigascience (x1), Global Ecology and Biogeography (x1), Cladistics (x1), Methods in Ecology and Evolution (x3), Molecular Ecology Resources (x3), Journal of Biogeography (x3); Molecular Phylogenetics and Evolution (x2), BMC Evolutionary Biology (x1), Proceedings of the Royal Society B (x2), Zoological Journal of the Linnean Society (x1), Zoologica Scripta (x1), Arthropod Systematics & Phylogeny (x2), Systematic Entomology (x1), Frontiers in zoology (x1), Mt DNA (x3), Zootaxa (x4), Acta Entomologica Musei Nationalis Pragae (x1), Zookeys (x1), Subterranean Biology (x2), Journal of Zoological systematics and Evolutionary Research (x1), PlosOne (x1); **(2) Scientific non-SCI publications = 14; (3) Book chapters = 4; (4) H-index = 24, i10-index = 35, Citations = 1710** (Google Scholar 22/07/23); **(5) Projects as PI/co-PI = 9, Income 404,126.23 Euros; (6) Projects in which I have participated = 38** (11 of them international); **(7) Conferences/workshops = 24** (5 as invited speaker).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (AC: corresponding author; (n° x / n° y): position / total authors.)

1. Scientific paper. ANDÚJAR, C. (AC); Creedy, T.J.; Arribas, ... Emerson, B.C. (1/8). 2021. Validated removal of nuclear pseudogenes and sequencing artefacts from mitochondrial metabarcode data *Molecular Ecology Resources*, 21, pp. 1772-1787. ISSN 1755098X. [Link](#). *[Perspective](#) on the paper published in the same *Molecular Ecology Resources* issue*. *Highlighted as a *From the cover* article*. Number of citations: 40
2. Scientific paper. Arribas, P.; ANDÚJAR, C.; Moraza, M.L.; Linard, B.; Emerson, B.C.; Vogler, A. (2/6). 2019. Mitochondrial metagenomics reveals the ancient origin and phylodiversity of soil mites and provides a phylogeny of the Acari. *Molecular Biology and Evolution*. 37, pp. 683-694. ISSN 0737-4038. [Link](#). Number of citations: 48
3. Scientific paper. ANDÚJAR, C. (AC); Arribas, P.; Gray, C.; Bruce, K.; Woodward, G.; Yu, W.Y.; Vogler, A. (1/7). 2018. Metabarcoding of freshwater invertebrates to detect the effects of a pesticide spill. *Molecular Ecology*. 27, pp. 146-166. ISSN 1365-294X. [Link](#). Number of citations: 65



4. Scientific paper. ANDÚJAR, C. (AC); Arribas, P.; Yy, W.Y.; Vogler, A.; Emerson, B.C. (1/5). 2018. Why the COI barcode should be the community DNA metabarcode for the Metazoa. *Molecular Ecology*. 27, pp.3968-3975. ISSN 1365-294X. [Link](#). Number of citations: 150
5. Scientific paper. ANDÚJAR, C. (AC); Pérez-González, S.; Arribas, P.; Zaballos, J.P.; Vogler, A.P.; Ribera, I. (1/6). 2017. Speciation below ground: Tempo and mode of diversification in a radiation of euedaphic ground beetles. *Molecular Ecology*. 26, pp. 6053-6070. ISSN 1365-294X. [Link](#). Number of citations: 21
6. Scientific paper. ANDÚJAR, C. (AC); Faille, A.; Pérez, S.; Zaballos, J.; Vogler, A.P.; Ribera, I. (1/6). 2016. Gondwanian relicts and oceanic dispersal in a cosmopolitan radiation of euedaphic ground beetles. *Molecular Phylogenetics and Evolution*. 99, pp. 235-246. ISSN 1055-7903. [Link](#). Number of citations: 28
7. Scientific paper. Bocak, L.; ANDÚJAR, C.; Kunderata, R.; Vogler, A.P. (2/4). 2016. The discovery of Iberobaeniidae (Coleoptera: Elateroidea), a new family of beetles from Spain with immatures detected by environmental DNA sequencing. *Proceedings of the Royal Society of London B*. ISSN 1471-2954.9. [Link](#). Number of citations: 65
8. Scientific paper. ANDÚJAR, C. (AC); Arribas, P.; Ruzicka, F.; Crampton-Platt, A.; Timmermans, M.J., A.; Vogler, A. (1/6). 2015. Phylogenetic community ecology of soil biodiversity using mitochondrial metagenomics. *Molecular Ecology*. 24, pp. 3603-3617. ISSN 1365-294X. [Link](#). *[Perspective](#) on our paper published in same *Molecular Ecology* issue*. Number of citations: 85
9. Scientific paper. ANDÚJAR, C. (AC); Arribas, P.; Ruiz, C.; Serrano, J.; Gómez-Zurita, J. (1/5). 2014. Integration of conflict into Integrative Taxonomy: Fitting hybridization in species delimitation of *Mesocarabus* (Coleoptera: Carabidae). *Molecular Ecology*. 17, pp.4344-4361. ISSN 1365-294X. [Link](#). [Perspective](#) on our paper published in same *Molecular Ecology* issue*. Number of citations: 42
10. Scientific paper. ANDÚJAR, C. (AC); Serrano, J.; Gómez-Zurita, J. (1/3). 2012. Winding up the molecular clock in the genus *Carabus* (Coleoptera: Carabidae): assessment of methodological decisions on rate and node age estimation. *BMC Evolutionary Biology*. 12, 40. ISSN 1471-2148. [Link](#). Number of citations: 132

C.2. Congresses

1. ANDÚJAR, C.; Arribas, P.; López, H.; Emerson, B. Intra-island assembly of soil biodiversity: habitat filtering and micro-endemicity across space and habitats. Island Biology 2019. University of La Reunion. 2019. France. Participatory - poster. Conference.
2. ANDÚJAR, C.; Arribas, P. Whole-community assembly from metabarcoding data reveals the structure of the soil mesofauna at multiple genetic levels and spatial scales. Island Biology 2019. University of La Reunion. 2019. France. Participatory - **invited/keynote talk**. Conference.
3. ANDÚJAR, C.; Arribas, P. The study of soil arthropod biodiversity using COI metabarcoding. Next Generation Biodiversity Monitoring Symposium. Nicosia, Cyprus. 2019. Participatory - invited/keynote talk. Symposium.
4. ANDÚJAR, C.; Arribas, P.; López, H.; Pérez-Delgado, A.; Emerson, B. Intra-island assembly of soil biodiversity: habitat filtering and micro-endemicity across space and habitats. 9th Biennial Conference of the International Biogeography Society. Universidad de Málaga. 2019. Spain. Participatory – oral communication. Conference.
5. ANDÚJAR, C.; Arribas, P.; Ruzicka, F.; Crampton-Platt, A.; Timmermans, M.; Vogler, A.P. Phylogenetic community ecology of soil biodiversity using mitochondrial metagenomics. First Global Soil Biodiversity Conference. Dijon, France. 2014. Participatory - poster. Conference.
6. Shepherd, M. J.; Spurgeon, D. A.; Griffiths, R. I.; Read, D. A.; Gweon, H. S.; Keith, A.; Vogler, A.P.; ANDÚJAR, C. Monitoring soil biodiversity in nature reserves in England and a role for metabarcoding. First Global Soil Biodiversity Conference. Dijon, France. 2014. Participatory - poster. Conference.

C.3. Research projects and contracts

1. Project. Global Survey of Edaphic Arthropod Forest Biodiversity: understanding the eco-evolutionary patterns and processes of diversification and community assembly of soil forest arthropods (EdAFoBio). MINISTERIO DE CIENCIA E INNOVACIÓN. PI: CARMELO ANDÚJAR. (IPNA-CSIC). From 01/09/2023 to 01/09/2017. 266.000 €. PI.
2. Project. Biodiversity Genomics Europe. European Commission. PI: B. Emerson (IPNA-CSIC). From 01/09/2022. 20.078.543 €. Team member.
3. Project. PID2021-126883NA-I00, Mesofauna introduction in island soils: invasion patterns, drivers and tools for insular biosecurity and conservation of soil biodiversity. MINISTERIO DE CIENCIA E INNOVACIÓN. PI: P. Arribas. (IPNA-CSIC). From 01/09/2022 to 01/09/2025. 139.150 €. Team member.
4. Project. iBioGen: Twinning for European excellence in Island Biodiversity Genomics. Comisión Europea. PI: A. Papadopoulou. (University of Cyprus). 01/09/2018-31/10/2021. 999.332 €. Team member and postdoctoral contract.
5. Project. Hacia una restauración integral de los bosques de laurisilva y su fauna invertebrada. Fundación Caja Canarias / Obra Social La Caixa. PI: B.C. Emerson; CoPI: CARMELO ANDÚJAR. (IPNA-CSIC). 01/03/2018-01/03/2021. 53.700 €. Co-PI and postdoctoral contract.
6. Project. CGL2015-74178-JIN, Biodiversidad del suelo a múltiples escalas: Nuevos procedimientos para la medición y el estudio de las comunidades de artrópodos edáficos. MINECO. PI: CARMELO ANDÚJAR. (IPNA-CSIC). 16/02/2017-15/02/2020. 166.000 €. PI.
7. Project. EQC2018-004418-P, Instalación Genética/genómica automatizada para análisis de Alto Rendimiento de la Biodiversidad (IGAR-Biodiv). Ministerio de Ciencia e Innovación. PI: B.C. Emerson. (IPNA-CSIC)). 2019-2019. 361.769,72 €. Team member.
8. Project. Biodiversity Initiative: Site-based integrative analysis of biodiversity in tropical rainforests. Natural History Museum. PI: A. Vogler. (Natural History Museum of London). 2013-2018. 328.879 €. Team member and postdoctoral contract.
9. Project. MSCA-IF-2015-705639, SOILBIODIV: Beyond the limits of scale: a novel pipeline for the measurement of soil arthropod biodiversity. European Commission. PI: CARMELO ANDÚJAR. (IPNA-CSIC)). 01/07/2016-15/02/2017. 90.000 €. PI.
10. Project. NE/L013134/1, Environmental DNA to test for the presence of endangered species. Natural Environment Research Council (NERC). IP: Vogler, A. (Imperial College London). 2014. Team member and postdoctoral contract.

C.4. Technology/Knowledge transfer

1. Project/Contract. The utility of mitogenomics and metabarcoding as molecular tools for insect identification CANADIAN FOOD INSPECTION AGENCY - CSIC. PI: CARMELO ANDÚJAR. (IPNA-CSIC). 01/04/2021-01/04/2024. 56.625 €. PI.
2. Project/Contract. Mitogenome sequencing of plant pest and pest related species. CANADIAN FOOD INSPECTION AGENCY. PI: CARMELO ANDÚJAR. (IPNA-CSIC). 23/11/2020-23/02/2021. 4.711,75 €. PI.
3. Project/Contract. Caracterización de la fauna edáfica en el termófilo de Tenerife y sus implicaciones para los planes de restauración y conservación CABILDO INSULAR DE TENERIFE. PI: CARMELO ANDÚJAR. (IPNA-CSIC). 10/11/2019-10/11/2020. 24.999,98 €. PI.
4. Project/Contract. Proyecto BERBA: Biodiversidad Edáfica de la Reserva de la Biosfera de Anaga. Fase 2. CABILDO INSULAR DE TENERIFE. PI: CARMELO ANDÚJAR. (IPNA-CSIC). 10/11/2019-10/11/2020. 41.900 €. PI.
5. Project/Contract. Biodiversidad Edáfica de la Reserva de la Biosfera de Anaga. CABILDO INSULAR DE TENERIFE. Co-PI: CARMELO ANDÚJAR. (IPNA-CSIC). 20/08/2018-20/08/2019. 15.889,5 €.