

Curriculum Vitae  
**LUIS MATÍAS**

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**Educación**

Doctor en Biología, Universidad de Granada, 2010

D.E.A., Biología Ambiental, Universidad de Granada, 2006

Licenciado en Biología, Universidad de Granada, 2003

• **PRINCIPALES LÍNEAS DE INVESTIGACIÓN**

- Efectos del cambio global en la dinámica de comunidades.
- Interacciones planta-planta, planta-animal y planta-suelo.
- Regeneración forestal.
- Biología de la conservación.

• **PUESTOS OCUPADOS**

- 2023- Profesor Titular de Universidad. Departamento de Biología Vegetal y Ecología. Universidad de Sevilla
- 2019-2023 Contrato de Acceso I+D+i. Departamento de Biología Vegetal y Ecología. Universidad de Sevilla
- 2018-2019 Investigador contratado. Departamento de Biología Animal, Biología Vegetal y Ecología. Universidad de Jaén.
- 2016-2017 Investigador contratado. Instituto de Recursos Naturales y Agrobiología, Consejo Superior de Investigaciones Científicas (IRNAS-CSIC).
- 2014-2016 Investigador **Juan de la Cierva**. Instituto de Recursos Naturales y Agrobiología, Consejo Superior de Investigaciones Científicas (IRNAS-CSIC).
- 2012-2014 Investigador postdoctoral **Marie Curie**. Biological & Environmental Sciences, University of Stirling (Stirling, Reino Unido).
- 2011-2012 Research Fellow. Biological & Environmental Sciences, University of Stirling (UK). Financiado por P-8 Fellowship-UGR.
- 2010-2011 Investigador post-doctoral. Departamento de Ecología, Universidad de Granada. Financiado por P-7 Fellowship-UGR.
- 2008 Investigador visitante. Resource Ecology Group, Wageningen University, Países Bajos (4 meses).
- 2006-2010 Estudiante predoctoral **FPI**. Departamento de Ecología, Universidad de Granada.
- 2006 Técnico de investigación. Departamento de Ecología, Universidad de Granada.
- 2005 Técnico de campo. Grupo TRAGSA.
- 2003-2005 Técnico de investigación. Departamento de Ecología, Universidad de Granada.

• **PUBLICACIONES**

1. *Publicaciones ISI*

- (1) González-Díaz, P., Cavers, S., **Matías, L.**, Ennos, R.A., Cottrell, J.E., Jump, A.S. 2023. Neighbouring Scots pine populations from contrasting climates show substantial population variability but consistent response to warming. *Environmental and Experimental Botany* (In press)
- (2) Martins-Noguerol R., Moreno-Pérez, A.J., Pedroche, J., Gallego-Tévar, B., Cambrollé, J., **Matías, L.**, Fernández-Rebollo, P., Martínez-Force, F., Pérez-

- Ramos, I.M. 2023. Climate change alters pasture productivity and quality: Impact on fatty acids and amino acids in Mediterranean silvopastoral ecosystems. *Agriculture, Ecosystems and Environment* 358: 108703.
- (3) Homet, P., **Matías, L.**, Godoy, O., Gómez-Aparicio, L. 2023. Evidence for additive and antagonistic effects of climate change and exotic pathogens on regeneration of Mediterranean forests. *Journal of Ecology* (Early view)
  - (4) Morillas, L., Leiva, M.J., Pérez-Ramos, I.M., Cambrollé, J., **Matías, L.** 2023. Latitudinal variation in the functional response of *Quercus suber* seedlings to extreme drought. *Science of the Total Environment* 887: 164122.
  - (5) Hidalgo-Gálvez, M.D., **Matías, L.**, Cambrollé, J., Gutiérrez, E., Pérez-Ramos, I.M. 2023. Impact of climate change on pasture quality in mediterranean dehesas subjected to different grazing histories. *Plant and Soil* 488: 465-483.
  - (6) Homet, P., Ourcival, J.-M., Gutiérrez, E., Domínguez-Begines, J., **Matías, L.**, Godoy, O., Gómez-Aparicio, L. 2023. Short- and long-term responses of nematode communities to predicted rainfall reduction in Mediterranean forests. *Soil Biology and Biochemistry* 179: 108974.
  - (7) Martins-Noguerol, R., **Matías, L.**, Pérez-Ramos, I.M., Moreira, X., Francisco, M., Pedroche, J., DeAndrés-Gil, C., Gutiérrez, E., Salas Liñán, J.J., Moreno-Pérez, A.J., Davy, A.J., Figueroa, E., Cambrollé, J. 2023. Soil physicochemical properties associated with the yield and phytochemical composition of the edible halophyte *Crithmum maritimum*. *Science of the Total Environment* 869: 161806
  - (8) Rodríguez-Calcerrada, J., Chano, V., **Matías, L.**, Hidalgo-Gálvez, M.D., Cambrollé, J., Pérez-Ramos, I.M. 2022. Three-year warming and rainfall reduction alter leaf physiology but not relative abundance of an annual species in a Mediterranean savanna. *Journal of Plant Physiology* 275: 153761.
  - (9) Hidalgo-Gálvez, M.D., Barkaoui, K., Volaire, F., **Matías, L.**, Cambrollé, J., Fernández-Rebollo, P., Carbonero, M.D., Pérez-Ramos, I.M. 2022. Can trees buffer the impact of increasing aridity on pastures of Mediterranean dehesas? *Science of the Total Environment* 835: 155535.
  - (10) Jurado-Doña, V., López-Jurado, J., González-Román, A., Sánchez-Salguero, R., Matías, L., Díaz-Del Olmo, F. 2022. Influence of site conditions and land management on *Quercus suber* L. population dynamics in the southern Iberian Peninsula. *iForest* 15: 77-84.
  - (11) Martins-Noguerol, R., Pérez-Ramos, I.M., Matías, L., Moreira, X., Francisco, M., García-González, A., Troncoso-Ponce, A.M., Thomasset, B., Martínez-Force, E., Moreno-Pérez, A.J., Cambrollé, J. 2022. *Crithmum maritimum* seeds, a potential source for high-quality oil and phenolic compounds in soils with no agronomical relevance. *Journal of Food Composition and Analysis* 108: 104413.
  - (12) Martins-Noguerol, R., **Matías, L.**, Pérez-Ramos, I.M., Moreira, X., Muñoz-Vallés, S., Mancilla-Leytón, J.M., Francisco, M., García-González, A., DeAndrés-Gil, C., Martínez-Force, E., Millán-Linares, M.C., Pedroche, J., Figueroa, M.E., Moreno-Pérez, A.J., Cambrollé, J. 2022. Differences in nutrient composition of sea fennel (*Crithmum maritimum*) grown in different habitats and optimally controlled growing conditions. *Journal of Food Composition and Analysis* 106: 104266.
  - (13) Pérez-Ramos, I.M., Álvarez-Méndez, A., Wald, K., **Matías, L.**, Hidalgo Gálvez, M.D., Navarro-Fernández, C.M. 2021. Direct and indirect effects of global change on mycorrhizal associations of savanna plant communities. *Oikos* 130: 1370–1384.

- (14) Homet, P., Gómez-Aparicio, L., **Matías, L.**, Godoy, O. 2021. Soil fauna modulates the effect of experimental drought on litter decomposition in forests invaded by an exotic pathogen. *Journal of Ecology* 109, 2963-2980.
- (15) Moreira, X., Pérez-Ramos, I.M., **Matías, L.**, Francisco, M., García-González, A., Martins-Noguerol, R., Vázquez-González, C., Abdala-Roberts, L., Cambrollé, J. 2021. Effects of soil abiotic factors and plant chemical defences on seed predation on sea fennel (*Crithmum maritimum*). *Plant and Soil* 465: 289–300
- (16) **Matías, L.**, Hidalgo-Gálvez, M.D., Cambrollé, J., Domínguez, M.T., Pérez-Ramos, I.M. 2021. How will forecasted warming and drought affect soil respiration in savannah ecosystems? The role of tree canopy and grazing legacy. *Agricultural and Forest Meteorology* 304-305 -108425.
- (17) Godoy, O., Gómez-Aparicio, L., **Matías, L.**, Pérez-Ramos, I.M., Allan, E. 2020. An excess of niche differences maximizes ecosystem functioning. *Nature Communications* 11, 4180.
- (18) Sánchez-Salguero, R., Colangelo, M., **Matías, L.**, Ripullone, F., Camarero, J.J. 2020. Shifts in growth responses to climate and surpassed vulnerability thresholds characterize drought-dieback in two Mediterranean deciduous oaks. *Forests* 11(7), 714.
- (19) Pérez-Ramos, I.M., Cambrollé, J., Hidalgo-Gálvez, M.D., **Matías, L.**, Montero-Ramírez, A., Santolaya, S., Godoy, O. 2020. Phenological responses to climate change in communities of plants species with contrasting functional strategies. *Environmental and Experimental Botany*. 170: 103852 doi: 10.1016/j.envexpbot.2019.103852. [Factor de impacto: 3.712, 18/212 Plant Sciences, D1].
- (20) Bose, A., Gessler, A., Bolte, A., Bottero, A., Buras, A., Cailleret, M., Camarero, J.J., Häni, M., Heres, A.M., Hevia, A., Levesque, M., Linares, J.C., Martínez-Vilalta, J., **Matías, L.**, Menzel, A., Sánchez-Salguero, R., Sanders, T., Saurer, M., Venetier, M., Ziche, D., Rigling, A. 2020. Growth and resilience responses of Scots pine to extreme droughts across Europe depend on pre-drought growth conditions. *Global Change Biology* 26: 4521-4537.
- (21) **Matías, L.**, Abdelaziz, M., Godoy, O., Gómez-Aparicio, L. 2019. Disentangling the climatic and biotic factors driving changes in the dynamics of *Quercus suber* populations across the species' latitudinal range. *Diversity and Distributions* 25: 524-535.
- (22) Pérez-Ramos, I.M., **Matías, L.**, Gómez-Aparicio, L., Godoy, O. 2019. The role of functional traits as drivers of plant competitive dynamics changes with climatic conditions. *Nature Communications* 10:2555 doi:10.1038/s41467-019-10453-0. [Factor de impacto: 12.353, 3/64 Multidisciplinary Sciences, D1].
- (23) Homet, P., González, M., **Matías, L.**, Godoy, O., Pérez-Ramos, I.M., García, L.V., Gómez-Aparicio, L. 2019. Interactive effects of global change drivers on *Q. suber* performance: pathogen damage depend on soil water content. *Agricultural and Forest Meteorology*. [Factor de impacto: 4.039, 1/66 Forestry, D1].
- (24) **Matías, L.**, Pérez-Ramos, I.M., Gómez-Aparicio, L. 2019. Are northern-edge populations of cork oak more sensitive to drought than those of the southern-edge? *Environmental and Experimental Botany* 163: 78-85. [Factor de impacto: 3.666, 18/212 Plant Sciences, D1].
- (25) **Matías, L.**, Abdelaziz, M., Godoy, O., Gómez-Aparicio, L. 2018. Disentangling the climatic and biotic factors driving changes in the dynamics of *Quercus suber* populations across the species' latitudinal range. *Diversity and Distributions* 25: 524-535. [Factor de impacto: 4.614, 5/57 Biodiversity Conservation, D1].

- (26) Camarero, J.J., Sánchez-Salguero, R., Sangüesa-Barreda, G., **Matías, L.** 2018. Tree species from contrasting hydrological niches show divergent growth and water-use efficiency. *Dendrochronologia* 52: 87-95. [Factor de impacto: 2.259, 7/64 Forestry, Q1].
- (27) Salazar-Tortosa, D., Castro, J., Villar-Salvador, P., Viñegla, B., **Matías, L.**, Michelsen, A., de Casas, R-R., Querejeta, J.I. 2018. The “isohydric trap”: a detrimental feedback between water shortage and nutrient acquisition drives differential response of European pines under climatic dryness. *Global Change Biology* 24: 4069-4083. [Factor de impacto: 8.997, 1/57 Biodiversity Conservation, D1].
- (28) Jiménez-Chacón, A., Homet, P., **Matías, L.**, Gómez-Aparicio, L., Godoy, O. 2018. Fine scale determinants of soil litter fauna on a Mediterranean mixed forest invaded by the exotic soil-borne pathogen *Phytophthora cinnamomi*. *Forests* 9: 218. [Factor de impacto: 1.951, 13/64 Forestry, Q1].
- (29) **Matías, L.**, Godoy, O., Gómez-Aparicio, L., Pérez-Ramos, I.M. 2018. An experimental extreme drought reduces the likelihood of species to coexist despite increasing intransitivity in competitive networks. *Journal of Ecology* 106: 826-837. [Factor de impacto: 5.813, 11/153 Ecology, D1].
- (30) de la Riva, E., Villar, R., Pérez-Ramos, I.M., Quero, J.L., **Matías, L.**, Poorter, L., Marañón, T. 2018. Relationships between leaf mass per area and nutrient traits in 98 Mediterranean woody species are determined by phylogeny, habitat and leaf life-span. *Trees: Structure and Function* 32: 497–510. [Factor de impacto: 1.842, 15/64 Forestry, Q1].
- (31) **Matías, L.**, Linares, J.C., Sánchez-Miranda, A., Jump, A.S. 2017. Contrasting growth forecasts across the geographical range of Scots pine due altitudinal and latitudinal differences in climatic sensitivity. *Global Change Biology* 23: 4106-4116. [Factor de impacto: 8.997, 3/241 Environmental Sciences, D1].
- (32) **Matías, L.**, Castro, J., Villar-Salvador, P., Quero, J.L., Jump, A.S. 2017. Differential impact of hotter drought on seedling performance of five ecologically distinct pine species. *Plant Ecology* 218: 201-212. [Factor de impacto: 1.49, 23/64 Forestry, Q2].
- (33) Caballero, M.C., Pérez-Ramos, I.M., **Matías, L.**, Serrano, M. 2017. Simulation of the potential infectivity of *Phytophthora cinnamomi* under climate change. *Phytopathologia Mediterranea* 56: 372-373. [Factor de impacto: 1.442, 32/83 Agronomy, Q2].
- (34) **Matías, L.**, González-Díaz, P., Quero, J.L., Camarero, J.J., Lloret, F., Jump, A.S. 2016. Role of geographical provenance on the response of silver fir seedlings to experimental warming and drought. *Tree Physiology* 36: 1236-1246. [Factor de impacto: 3.587, 2/66 Forestry, D1].
- (35) **Matías, L.**, Jump, A.S. 2015. Asymmetric changes of growth and reproductive investment herald altitudinal and latitudinal range shifts of two woody species. *Global Change Biology* 21:882-896. [Factor de impacto: 8.44, 4/225 Environmental Sciences, D1].
- (36) Zamora, R., **Matías, L.** 2014. Seed dispersers, seeds predators and herbivores act synergistically as habitat shapers in Mediterranean mountains. *PLoS ONE* 9(9): e107385. [Factor de impacto: 3.530, 8/55 Multidisciplinary Sciences, Q1].
- (37) **Matías, L.**, Gonzalez-Diaz, P., Jump, A.S. 2014. Larger investment in roots in southern range-edge populations of Scots pine is associated with increased growth and seedling resistance to extreme drought in response to simulated climate change. *Environmental & Experimental Botany* 105: 32-38. [Factor de impacto: 3.712, 23/209 Plant Sciences, Q1].

- (38) Aponte, C., **Matías, L.**, González-Rodríguez, V., Castro, J., García, L.V., Villar, R., Marañón, T. 2014. Soil nutrients and soil microbial biomass in Mediterranean forests: a region-wide comparative study. *Plant and Soil* (In press). [Factor de impacto: 2.969, 5/34 Soil Sciences, Q1].
- (39) **Matías, L.**, Jump, A.S. Impacts of predicted climate change on recruitment at the geographical limits of Scots pine. *Journal of Experimental Botany* 65: 299-310. [Factor de impacto: 5.677, 12/209 Plant Sciences, D1].
- (40) **Matías, L.**, Jump, A.S. 2012. Interactions between growth, demography and biotic interactions in determining species range limits in a warming world: the case of *Pinus sylvestris*. *Forest Ecology and Management* 282: 10-22. [Factor de impacto: 2.826, 4/66 Forestry, D1].
- (41) **Matías, L.**, Zamora, R., Castro, J. 2012. Rare rainy events are more critical than drought intensification for woody recruitment in Mediterranean mountains: a field experiment simulating climate change. *Oecologia* 169: 833-844. [Factor de impacto: 3.412, 31/134 Ecology, Q1].
- (42) **Matías, L.**, Quero, J.L., Zamora, R., Castro, J. 2012. Evidence for plant traits driving specific drought resistance. A community field experiment. *Environmental and Experimental Botany* 81: 55-61. [Factor de impacto: 3.712, 23/209 Plant Sciences, Q1].
- (43) **Matías, L.**, Castro, J., Zamora, R. 2012. Effect of simulated climate-change on soil respiration in a Mediterranean-type ecosystem: rainfall and habitat-type are more important than temperature or the soil carbon pool. *Ecosystems* 15: 299-130. [Factor de impacto: 3.751, 30/150 Ecology, Q1].
- (44) **Matías, L.**, Gómez-Aparicio, L., Zamora, R., Castro, J. 2011. Effects of resource availability on plant recruitment at community level: an integrated analysis using structural equation modelling. *Perspectives in Plant Ecology, Evolution and Systematics* 13: 277-285. [Factor de impacto: 4.158, 18/197 Plant Sciences, D1].
- (45) **Matías, L.**, Zamora, R., Castro, J. 2011. Repercussions of simulated climate change on the diversity of woody-recruit bank in a Mediterranean-type ecosystem. *Ecosystems* 14: 672-682. [Factor de impacto: 3.751, 30/150 Ecology, Q1].
- (46) **Matías, L.**, Castro, J., Zamora, R. 2011. Soil nutrient availability under a global change scenario in a Mediterranean mountain ecosystem. *Global Change Biology* 17: 1646-1657. [Factor de impacto: 6.910, 5/210 Environmental Sciences, D1].
- (47) **Matías, L.**, Zamora, R., Mendoza, I., Hódar, J.A. 2010. Seed dispersal pattern by large frugivorous mammals in a degraded mosaic landscape. *Restoration Ecology* 18: 619-627. [Factor de impacto: 1.927, 58/130 Ecology, Q2].
- (48) Zamora, R., Hódar, J.A., **Matías, L.**, Mendoza, I. 2010. Positive adjacency effects mediated by seed disperser birds in pine plantations. *Ecological Applications* 20: 1053-1060. [Factor de impacto: 4.276, 10/205 Environmental Sciences, D1].
- (49) **Matías, L.**, Mendoza, I., Zamora, R. 2009. Consistent pattern of habitat and species selection by post-dispersal seed predators in a Mediterranean mosaic landscape. *Plant Ecology* 203: 137-147. [Factor de impacto: 1.880, 8/54 Forestry, Q1].
- (50) Mendoza, I., Gómez-Aparicio, L., Zamora, R., **Matías, L.** 2009. Recruitment limitation of forest communities in a degraded Mediterranean landscape. *Journal of Vegetation Science* 20: 367-376. [Factor de impacto: 2.376, 8/54 Forestry, Q1].
- (51) Gómez-Aparicio, L., Pérez-Ramos, I.M., Mendoza, I., **Matías, L.**, Quero, J.L., Castro, J., Zamora, R., Marañón, T. 2008. Oak seedling survival and growth along resource gradients in Mediterranean forest: implications for regeneration in current and future environmental scenarios. *Oikos* 117: 1683-1699. [Factor de impacto: 3.136, 24/116 Ecology, Q1].

*Resumen de las contribuciones científicas*

- Total publicaciones en ISI: 50
- Número de publicaciones en D1: 26 (52% del total)
- Número de publicaciones en Q1: 46 (92% del total)
- Publicaciones como primer autor o senior: 35 (70% del total)
- Número de citas: 2195
- Índice h: 28
- Índice i10: 38

*2. Otras publicaciones*

- (1) Mancilla-Leytón, J.M., Cambrollé, J., Fernández-Rodríguez, M.J., **Matías, L.**, Muñoz-Reinoso, J.C., Castillo, J.M., Leiva, M.J., Gallego-Fernández, J.B., Mena, Y. 2023. La gamificación como herramienta metodológica para la enseñanza universitaria en Ecología (GAMECOLOGY). En: Cabero-Almenara, J., Llorente-Cejudo, C., Palacios-Rodríguez, A., Serrano-Hodalgo, M. (Eds.) "Mejorando la enseñanza a través de la innovación educativa" Dykinson, Madrid. pp 523-532. ISBN: 978-84-1122-686-8.
- (2) Berbel-Cascales, M., Cortés-Molina, A.M., Lorite, J., **Matías, L.**, Muñoz-Pajares, A.J., Abdelaziz, M. 2022. Hibridación potencial de las especies vegetales del Parque Nacional de Aigüestortes i Estany de Sant Maurici. In: La investigació al Parc Nacinal d'Aigüestortes y Estany de Sant Maurici. Generalitat de Catalunya, Parc Nacinal d'Aigüestortes y Estany de Sant Maurici. pp75-84.
- (3) **Matías, L.**, Pérez-Luque, A.J., Zamora, R. 2022. Forest Dynamics Under Land-Use and Climate Change Scenarios. In Zamora, R. & Oliva, M. (Eds.), *The Landscape of the Sierra Nevada: A Unique Laboratory of Global Processes in Spain* (pp. 213-228). Springer. ISBN: 978-3-030-94218-2.
- (4) Zamora, R., Lorite, J., **Matías, L.**, Leverkus, A. B., Jimenez, M., Medina-Sánchez, J. M., Pérez-Martínez, C., Reche, I. 2022. Ecosystems of Sierra Nevada in the Anthropocene: A new cocktail of species and ecological interactions. In Zamora, R. & Oliva, M. (Eds.), *The Landscape of the Sierra Nevada: A Unique Laboratory of Global Processes in Spain* (pp. 305-308). Springer. ISBN: 978-3-030-94218-2.
- (5) **Matías, L.** 2021. Application and analysis of a classroom improvement cycle on the subject "Environmental Science and Technology". In: R. Porlán, E. Navarro-Medina y A. F. Villarejo-Ramos (Coords.), *Ciclos de Mejora en el Aula. Año 2021. Experiencias de Innovación docente de la Universidad de Sevilla*, (pp. 964-982). Sevilla: Editorial Universidad de Sevilla.
- (6) Hidalgo-Galvez M. D., Santolaya S., **Matías L.**, Serrano M., Cambrollé J., Pérez-Ramos I.M. 2020. Tree canopy effects on the functional structure of herbaceous communities typical of savanna-like ecosystems. *IOBC-WPRS Bulletin Vol. 152, 2020 pp. 188-190*
- (7) Homet, P., Gómez-Aparicio, L., **Matías, L.**, Godoy, O. 2020. Effects of climate change on litter decomposition in a mixed oak forest under decline. *IOBC-WPRS Bulletin Vol. 152, 2020 pp. 8-14*.
- (8) **Matías, L.**, López-Rodríguez, M-J., Abdelaziz, M. 2019. Conservación de interacciones ecológicas. In: Peñas, J. & Lorite, J. (Eds.) *Biología de la conservación de Plantas en Sierra Nevada. Principios y Retos para su Preservación*. Universidad de Granada, Granada. pp. 285-306.
- (9) Domínguez, M.T., Jiménez, C., **Matías, L.**, Gutiérrez, E., Herrador, M.B., Hidalgo, M.D., Pérez-Ramos, I.M. 2018. Interactive effects of climate change and

- grazing intensity on soil functioning in dehesa ecosystems. *VIII CICS: Soil, a sustentable resource for economy*. pp 432-464. ISBN: 978-84-09-02936-5.
- (10) **Matías, L.**, Zamora, R., Castro, J. 2015. Efectos de la variabilidad en el régimen de precipitación sobre la regeneración del bosque montano mediterráneo. In: Herrero A, Zavala MA, editores. *Los Bosques y la Biodiversidad frente al Cambio Climático: Impactos, Vulnerabilidad y Adaptación en España*. pags: 215-224. MAGRAMA, Madrid, España. ISBN: 978-84-491-0038-3.
  - (11) **Matías, L.** 2012. Cambios en los límites de distribución de especies arbóreas como consecuencia de las variaciones climáticas. *Ecosistemas* 21 (3): 91-96.
  - (12) **Matías, L.** 2010. Efectos del cambio climático sobre la regeneración del bosque mediterráneo: una aproximación experimental. PhD Thesis, University of Granada, Granada. ISBN: 978-84-693-5970-9.
  - (13) **Matías, L.**, Castro, J., Zamora, R. 2010. Dinámica de nutrientes bajo diferentes escenarios climáticos en un ecosistema de montaña mediterránea. *Actas IV Congreso Ibérico de la Ciencia del Suelo. Suelo: funciones y manejo*. Págs. 980-991. ISBN: 978 84-15026-39-6.
  - (14) **Matías, L.**, Zamora, R., Castro, J. 2009. Efectos del cambio climático sobre la regeneración del bosque mediterráneo. In: *Montes y Sociedad: saber qué hacer*. 5CFE01-036. Sociedad Española de Ciencias Forestales-Junta Castilla y León, Ávila. ISBN: 978-84-936854-6-1.
  - (15) **Matías, L.**, Castro, J., Zamora, R. 2009. Disponibilidad de nutrientes en suelo en bajo un escenario de cambio global. In: *Montes y Sociedad: saber qué hacer*. 5CFE01-037. Sociedad Española de Ciencias Forestales-Junta Castilla y León, Ávila. ISBN: 978-84-936854-6-1.
  - (16) Quero, J.L., Villar, R., Poorter, L., Marañón, T., **Matías, L.**, Aponte, C., García, L.V., Casado, R., Herrero, A., Suarez, E., Navarro-Cerrillo, R.M., Zamora, R. 2009. Espectro de variación foliar en bosques mediterráneos del sur de la Península Ibérica. In: *Montes y Sociedad: saber qué hacer*. 5CFE01-056. Sociedad Española de Ciencias Forestales-Junta Castilla y León, Ávila. ISBN: 978-84-936854-6-1.
  - (17) **Matías, L.**, García, D., Zamora, R. 2008. Efectos escala-dependientes de la abundancia de semillas y la estructura del hábitat en la depredación postdispersiva de dos especies de matorral mediterráneo. In: Maestre, F.T., Escudero, A., Bonet, A. (Eds.) *Introducción al análisis espacial de datos en Ecología y Ciencias Ambientales: Métodos y aplicaciones*. AEET-CAM-URJC, Madrid. ISBN: 978-84-9849-308-5.

#### • PARTICIPACIÓN EN PROYECTOS DE INVESTIGACIÓN

- (1)
- (2)
- (3)
- (4) Adaptación del bosque mediterráneo al cambio climático: mecanismos fisiológicos y recursos genéticos implicados la resistencia a la sequía. FEDER-UJA. IP: **Luis Matías** (2019-2021).
- (5) Physiological mechanisms and genetic resources implied in drought resistance in Mediterranean forests. Funded by the University of Sevilla. IP: **Luis Matías** (2019-2020).
- (6) Climatic and anthropic drivers as drivers of demographic changes on the distribution of Mediterranean species. Funded by the University of Jaén. IP: **Luis Matías** (2018-2019).

- (7) LIFE LiveAdapt - Adaptation to Climate Change of Extensive Livestock Production Models in Europe. Financiado por EU-Life Actions. PI: Vicente Rodríguez (2018-2022).
- (8) Drought adaptations in cork oak trees in a changing world (DRACO). Funded by the British Ecological Society. PI: **Luis Matías**.
- (9) Dehesas and global change: a multi-functional approach (DECAFUN). Funded by the Spanish Ministry of Science and Competitiveness. PI: Ignacio Pérez-Ramos.
- (10) Interaction between climate change and exotic pathogens on Mediterranean forest dynamics (INTERCAPA). Funded by the Spanish Ministry of Science and Competitiveness. PI: Lorena Gómez-Aparicio.
- (11) Early detection of Holm oak decline from the integration of hyperspectral and ecophysiological data (QUERCUSAT). Funded by the Spanish Ministry of Science and Competitiveness. PI: José Luis Quero.
- (12) Modulators of the adaptive capacity to climate change in forests (COMOREADAPT). Funded: Spanish Ministry of Science. PI: José A. Carreira.
- (13) Tolerance and ecophysiological strategies of Iberian pines at juvenile stages to drought, low temperature and nutrient availability (ECOLPIN). Funded: Spanish Ministry of Science. PI: Pedro Villar-Salvador (2013-2015).
- (14) Testing the altitude-for latitude model in predicting the impact of global climate change on the distribution of woody plant species (ALT-LAT-RANGE). Funded: FP-7 Marie Curie Actions. PI: **Luis Matias** (2012-2014).
- (15) Mistletoes as key species in mountain pine stands: exploring the ecological consequences of a new interaction cocktail (CLAVINOVA). Funded: Spanish Ministry of Science. PI: Regino Zamora (2011-2014).
- (16) Global change, altitudinal migration and colonization of degraded habitats in Mediterranean mountains (MIGRAME). Funded: Andalusian Excellence program. PI: Regino Zamora (2011-2014).
- (17) Distribution, interactions, and impacts of mistletoe on Mediterranean pine forests under a climatic change scenario (MUERDAME). Funded: Spanish Ministry of Science. PI: Regino Zamora (2008-2011).
- (18) Sustainable management of Mediterranean forest under a Global Change scenario: research, application, and transference (GESBOME). Funded: Andalusian Excellence program. PI: Regino Zamora (2007-2010).
- (19) Effect of burnt wood management on post-fire forest regeneration: development of soft techniques for ecological restoration. Funded: Spanish Ministry of Science. PI: Jorge Castro (2007-2009).
- (20) Dynamics of Mediterranean forests under a Global Change scenario (DINAMED). Funded: Spanish Ministry of Science. PI: Teodoro Marañón (2006-2009).
- (21) Conservation of plant-animal interactions on degraded habitats: a comparative geographic analysis at multiple scales. BBVA Foundation. PI: Daniel García (2004-2006).
- (22) Restoration of woody species diversity to naturalization of pine plantations of Sierra Nevada National Park: Combined effects of ecological interactions and human management. Principal investigator: Regino Zamora (2003-2006).
- (23) Heterogeneity as driver of regeneration and restoration of Mediterranean forests (HETEROMED). Funded: Spanish Ministry of Science. PI: Regino Zamora (2002-2005).



• **CONTRIBUCIONES A CONGRESOS**

- (1) Physiological functional traits as local adaptation to drought across the latitudinal distribution of *Quercus suber*. 2023. Mediterranean Geosciences Union (MedGU) Annual Meeting. Instambul (Turkey). Oral.
- (2) Cambios morfológicos y fisiológicos en la respuesta a la sequía a lo largo de la distribución geográfica de *Quercus suber*. 2023. XVI Congreso Nacional de la AEET. Almería (Spain). Oral.
- (3) Variaciones geográficas en la respuesta de especies arbóreas a eventos climáticos extremos. 2023. XVI Congreso Nacional de la AEET. Almería (Spain). Oral.
- (4) Impact of climate change on plant productivity and nutritional composition of pastures in Mediterranean silvopastoral ecosystems. 2023. XVI Congreso Nacional de la AEET. Almería (Spain). Poster.
- (5) Geographical variations in the response of Mediterranean oaks to extreme drought events. 2023. VI Congreso Internacional de Biodiversidad y Conservación de la Naturaleza. Huelva (Spain). Poster.
- (6) Assessment of changes in wood anatomical traits to forecast drought-induced dieback in Mediterranean oak forests. 2023. EGU General Assembly. Vienna (Austria). Oral.
- (7) Spatio-temporal pattern of colonization and expansion of *Retama monosperma* in a novel ecosystem. 2023. XX EcoFlor Annual Meeting. Seville (Spain). Poster.
- (8) Latitudinal variation in the functional response of *Quercus suber* seedlings to extreme drought. 2022. British Ecological Society Annual Meeting. Edimburgh (United Kingdom). Poster.
- (9) Pasture productivity and quality under a drier and warmer world: the mitigating role of scattered trees. 2022. British Ecological Society Annual Meeting. Edimburgh (United Kingdom). Poster.
- (10) Assessing the potential of coastal plant species for industrial applications through the study of plant-soil interactions. 2022. British Ecological Society Annual Meeting. Edimburgh (United Kingdom). Poster.
- (11) Carbon allocation strategies to cope with different global change drivers in Mediterranean trees. 2021. XV Congreso Nacional de la AEET. Plasencia (Spain). Oral.
- (12) Interactive effects of global change drivers on tree regeneration in Mediterranean forests. 2021. XV Congreso Nacional de la AEET. Plasencia (Spain). Oral.
- (13) Impacts of short-term and long-term experimental drought on nematode communities of Mediterranean forests. 2021. XV Congreso Nacional de la AEET. Plasencia (Spain). Oral.
- (14) Mycorrhizal associations in a warmer and drier world: the particular case of Mediterranean agroforestry systems. 2021. XV Congreso Nacional de la AEET. Plasencia (Spain). Poster.
- (15) Efecto de la variabilidad de las propiedades físico-químicas del suelo en el rendimiento de la halófito costera *Crithmum maritimum* L. 2021. XV Congreso Nacional de la AEET. Plasencia (Spain). Poster.
- (16) Phenological responses to climate change in plant communities with contrasting functional strategies. Ecoflor 2019. Granada (Spain). Poster.
- (17) Combined effects of climate and exotic pathogens increase mortality and hinder natural regeneration of an important oak species at its southern distribution. 2019. 1st SIBECOL and XIV AEET Meeting: "Ecology: An integrative Science in the Anthropocene". Barcelona (Spain). Oral communication.

- (18) Influence of global change drivers on fine scale determinants of soil fauna. 2019. 1st SIBECOL and XIV AEET Meeting: "Ecology: An integrative Science in the Anthropocene". Barcelona (Spain). Oral communication.
- (19) Interactive effects of climate change and grazing intensity on soil functioning in dehesa ecosystems. 2019. 1st SIBECOL and XIV AEET Meeting: "Ecology: An integrative Science in the Anthropocene". Barcelona (Spain). Oral communication.
- (20) Reproductive fitness of herbaceous species in a drier and warmer world: Influence of the flowering phenology. 2019. 1st SIBECOL and XIV AEET Meeting: "Ecology: An integrative Science in the Anthropocene". Barcelona (Spain). Oral communication.
- (21) The role of functional traits as drivers of plant competitive dynamics changes with climatic conditions. 2018. British Ecological Society Annual meeting. Birmingham (United Kingdom). Oral communication.
- (22) Influence of climate change on the functional structure of herbaceous communities in dehesa ecosystems. 2018. British Ecological Society Annual meeting. Birmingham (United Kingdom). Oral communication.
- (23) Climate-induced changes in net primary productivity of savannah-like ecosystems: the mitigating role of scattered trees. 2018. SER Europe: Restoration in the Era of Climate Change. Reykjavik (Iceland). Poster.
- (24) Phonological responses to climate change in plant communities with contrasting functional strategies. Ecoflor 2019. Granada. Poster.
- (25) Combined effects of climate and exotic pathogens increase mortality and hinder natural regeneration of an important oak species at its southern distribution. 2019. 1st SIBECOL and XIV AEET Meeting: "Ecology: An integrative Science in the Anthropocene". Barcelona. Comunicación oral.
- (26) Influence of global change drivers on fine scale determinants of soil fauna. 2019. 1st SIBECOL and XIV AEET Meeting: "Ecology: An integrative Science in the Anthropocene". Barcelona. Comunicación oral.
- (27) Interactive effects of climate change and grazing intensity on soil functioning in dehesa ecosystems. 2019. 1st SIBECOL and XIV AEET Meeting: "Ecology: An integrative Science in the Anthropocene". Barcelona. Comunicación oral.
- (28) Reproductive fitness of herbaceous species in a drier and warmer world: Influence of the flowering phenology. 2019. 1st SIBECOL and XIV AEET Meeting: "Ecology: An integrative Science in the Anthropocene". Barcelona. Comunicación oral.
- (29) The role of functional traits as drivers of plant competitive dynamics changes with climatic conditions. 2018. British Ecological Society Annual meeting. Birmingham (Reino Unido). Comunicación oral.
- (30) Influence of climate change on the functional structure of herbaceous communities in dehesa ecosystems. 2018. British Ecological Society Annual meeting. Birmingham (Reino Unido). Comunicación oral.
- (31) Climate-induced changes in net primary productivity of savannah-like ecosystems: the mitigating role of scattered trees. 2018. SER Europe: Restoration in the Era of Climate Change. Reykjavik (Islandia). Poster.
- (32) Interactive effects of climate change and grazing intensity on soil functioning in dehesa ecosystems. 2018. VIII Iberian Congress of Soil Science. Donostia. Poster.
- (33) Disparity in the climatic sensitivity across altitudinal and latitudinal gradients imply differential forecasted growth through Scots pine distribution range. 2017. XIV MEDECOS: Human driven scenarios for evolutionary and ecological changes. Sevilla. Comunicación oral.

- (34) Coupling coexistence theory to field experiments reveals a complex matching between the species' differences modulating diversity and functioning. 2017. XIV MEDECOS: Human driven scenarios for evolutionary and ecological changes. Sevilla. Comunicación oral.
- (35) Intraspecific variation of Scots pine under experimental increase of temperature. 2017. XIV MEDECOS: Human driven scenarios for evolutionary and ecological changes. Sevilla. Poster.
- (36) Interactive effects of global change drivers on *Q. suber* performance: pathogen damage depend on soil water content. 2017. XIV MEDECOS: Human driven scenarios for evolutionary and ecological changes. Sevilla. Poster.
- (37) SIFOMED: el suelo como parte integrante del ecosistema. 2015. El IRNAS y el suelo: Alianza y Complicidad. JORNADA DEL AÑO INTERNACIONAL DE LOS SUELOS. Sevilla. Poster.
- (38) Divergent responses on silver fir neighbouring lineages to experimental warming and drought. 2015. 4th Iberian Congress in Ecology: Ecology and Social Challenges. Coimbra (Portugal). Comunicación oral.
- (39) Reconstructing and forecasting Scots pine growth patterns across its range edges. 2015. TRACE 2015: Tree rings in Archaeology, Climatology and Ecology. Sevilla. Póster.
- (40) Can we predict latitudinal range shifts in species' distribution from altitudinal data? 2013. Adapting to Global Change in the Mediterranean hotspot. Sevilla. Poster.
- (41) Differential impacts of chronic and acute drought on populations and genotypes. 2013. Adapting to Global Change in the Mediterranean hotspot. Sevilla. **Ponencia invitada.**
- (42) Consequences of climate change at altitudinal and latitudinal range limits of species distribution. *ClimTree 2013: International conference on climate change and tree responses in Central European Forests*. Zurich (Suiza). Póster
- (43) Can we predict latitudinal range shifts in species' distribution from altitudinal data? 2013. *XI National Congress of the Spanish Association of Terrestrial Ecology (AEET)*. Pamplona. **Ponencia invitada.**
- (44) Global change, altitudinal migration and colonization of degraded habitats on Mediterranean mountains (MIGRAME). 2013. *XI National Congress of the Spanish Association of Terrestrial Ecology (AEET)*. Pamplona. Poster.
- (45) Precipitation regime exerts a stronger control on soil respiration pattern than other biotic or abiotic factors in a Mediterranean mountain ecosystem. 2011. *12<sup>th</sup> European Ecological Federation Congress*. Avila. Comunicación oral.
- (46) Biodiversity changes in Mediterranean mountains induced by experimental climatic change. 2010. *GMBA-DIVERSITAS Conference: Functional significance of mountain biodiversity*. Chandolin (Suiza). Poster.
- (47) Soil-nutrient dynamics under different climatic scenarios in a Mediterranean mountain ecosystem. 2010. *IV Iberian Congress of Soil Sciences*. Granada. Comunicación oral.
- (48) Effects of climate change on the diversity of woody-species establishment. 2009. *II National congress on Biodiversity*. Santa Susana. Comunicación oral.
- (49) Effects of climatic change on Mediterranean forest regeneration. 2009. *IX National Congress of the Spanish Association of Terrestrial Ecology (AEET)*. Úbeda. Comunicación oral.
- (50) Diversity on the establishment of Mediterranean woody species under different climatic scenarios. 2009. *IX National Congress of the Spanish Association of Terrestrial Ecology (AEET)*. Úbeda. Poster.

- (51) Importance of landscape context on diversity restoration of pine plantations: the role of seed-disperser birds. 2009. *IX National Congress of the Spanish Association of Terrestrial Ecology (AEET)*. Úbeda. Comunicación oral.
- (52) Soil-nutrient availability under a global change scenario in a Mediterranean mountain ecosystem. 2009. *5<sup>th</sup> Spanish Forestry Congress*. Ávila. Comunicación oral.
- (53) Effects of climate change on Mediterranean forest regeneration. 2009. *5<sup>th</sup> Spanish Forestry Congress*. Ávila. Poster.
- (54) Foliar variation spectrum of the south Iberian Peninsula Mediterranean forests. 2009. *5<sup>th</sup> Spanish Forestry Congress*. Ávila. Poster.
- (55) Seed predators as landscape architects in a Mediterranean mountain ecosystem. 2007. *Iberoamerican workshop on habitat degradation and plant- animal interactions functioning*. Mendoza (Argentina). Comunicación oral.
- (56) Ecological interactions as mechanisms for diversity restoration in degraded habitats. 2007. *Iberoamerican workshop on habitat degradation and plant- animal interactions functioning*. Mendoza (Argentina). Comunicación oral.
- (57) Direct measurements of soil respiration in Mediterranean mountain ecosystem under forest fire perturbations regimes. 2007. *Final conference of the ESF program: the role of soils in the terrestrial carbon balance*. Nancy (Francia). Poster.
- (58) Seed predation on a mosaic landscape. 2007. *I National congress on Global Change*. Madrid. Poster.
- (59) Forest community succession under different climatic scenarios. 2007. *I National congress on Global Change*. Madrid. Poster.
- (60) Plant-seed predator interactions at multiple spatial scales. 2006. *II Iberian Ecological Congress: crisis on biodiversity*. Lisboa (Portugal). Poster.
- (61) Scale-dependent effects of seed abundance and habitat structure on the post-dispersal seed predation of two Mediterranean shrubby species. 2006. *Spatial analysis in Ecology: methods and applications*. Alcoy. Comunicación oral.
- (62) Effect of human management in the biodiversity recuperation of reforested pine trees stands in Sierra Nevada. 2005. *Internacional Symposium Biodiversity Loss in Europe*. Almería. Poster.
- (63) Importance of seed predation on community recruitment. *Scientific-technical workshop on pine plantations management in Sierra Nevada*. 2005. Granada. Comunicación oral.
- (64) Consequences of differential seed predation on recruitment in Mediterranean forests. 2005. *Unity in diversity: A conference on Ecology after the legacy of Ramón Margalef*. Barcelona. Poster

#### • ORGANIZACIÓN DE CONGRESOS CIENTÍFICOS

- (1) Towards some new perspectives of the causes and consequences of dieback and mortality processes: current knowledge and future challenges. Symposium at the 1<sup>st</sup> Iberian Ecological Society & XIV AEET Meeting, Barcelona (2019).
- (2) Establishing linkages between species interactions and ecosystem functioning and services. Symposium at the XIV Mediterranean Ecosystems Conference (MEDECOS), Sevilla (2017).
- (3) Marie Skłodowska Curie Actions Individual Fellowships (MSCA IF) Training Workshop. University of Stirling, Stirling (2016).

#### • EVALUACIÓN Y REVISIÓN DE PROYECTOS Y ARTÍCULOS CIENTÍFICOS

- (1) Review editor para *Frontiers in Forests and Global Change* desde 2018.

- (2) Editor invitado del Special Issue “Dieback on Drought-Prone Forest Ecosystems” para la revista *Forests* (2019).
- (3) Miembro permanente del Review College de la British Ecological Society desde 2016.
- (4) Revisor de proyectos para la German Research Foundation (DFG) (2020).
- (5) Revisor de proyectos para el Earthwatch Institute (EE.UU.) (2018).
- (6) Revisor de proyectos para la Czech Science Foundation (República Checa) (2013).
- (7) Revisor habitual para más de 40 revistas científicas (revisiones verificadas por la plataforma Publons).
- (8) Outstanding Reviewer Award otorgado por la revista *Forest Ecology and Management* (2017).
- (9) Outstanding Reviewer Award otorgado por la revista *Environmental and Experimental Botany* (2019).

#### • CURSOS RECIBIDOS

- (1) *Integral Projection Models (IPMs): a trait-based approach to investigate mechanisms of population responses to environmental change*. University of Granada, 2019.
- (2) *Introduction to ggplot2 and plotly*. Universidad de Barcelona, Asociación Ibérica de Ecología (SIBECOL), 2019.
- (3) *Communicating to a non-scientific public*. Universidad de Sevilla, Asociación Española de Ecología Terrestre (AEET), 2017.
- (4) *Técnicas básicas de ArcGis*, Agencia Andaluza del Medio Ambiente, 2010.
- (5) *Análisis de datos ecológicos usando R*, Centro Andaluz de Medio Ambiente (CEAMA), 2009.

#### • EXPERIENCIA DOCENTE

- 2020 -Ecología de Cambio Global, Universidad de Sevilla  
-Ciencia y Tecnología del Medio Ambiente, Universidad de Sevilla.
- 2019 - Diseño y ejecución de proyectos y trabajos en Biología, Universidad de Jaén (30 horas).  
- Ecología II, Universidad de Jaén (50 horas).
- 2018 - Diseño y ejecución de proyectos y trabajos en Biología, Universidad de Jaén (30 horas).
- 2014 - Environmental Science ENV6T6, University of Stirling (120 horas).
- 2013 - Environmental Science ENV6T6, University of Stirling (120 horas).
- 2010 - Ecología, Universidad de Granada (40 horas).  
- Técnicas básicas de investigación en Biología Ambiental, Universidad de Granada (4 horas).
- 2009 - Ecología, Universidad de Granada (40 horas).  
- Fundamentos de Biología Aplicada, Universidad de Granada (20 horas).
- 2008 - Ecología, Universidad de Granada (40 horas).  
- Fundamentos de Biología Aplicada, Universidad de Granada (20 horas).
- 
- ✓ Acreditado por la Agencia Nacional de Evaluación y Acreditación (ANECA) para las figuras de Ayudante Doctor, Contratado Doctor y Profesor de Universidad privada (2011) y de Profesor Titular de Universidad (2023).
- ✓ Certificado I3 concedido por la Agencia Estatal de Investigación.

• **SUPERVISIÓN DE ESTUDIANTES**

1. *Estudiantes de Máster:*

- Javier Aguilar Medina, Universidad de Sevilla (2019)
- Lara Carmona García, Universidad Pablo de Olavide (2017).
- Patricia González Díaz, University of Stirling (2013).

2. *Estudiantes de Doctorado:*

- Pablo Homet Gutiérrez, IRNAS-CSIC, (2016-2019).
- M. Dolores Hidalgo Gálvez, IRNAS-CSIC, (2017-2020).

• **ASOCIACIONES CIENTÍFICAS**

- Asociación Ibérica de Ecología (SIBECOL), desde 2019.
- British Ecological Society (BES), desde 2013.
- Marie Curie Alumni Association (MCAA), desde 2013.
- Grupo de Trabajo en Ecología Espacial (ECESPA), desde 2006.
- Asociación Española de Ecología Terrestre (AEET), desde 2004.

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