

Pablo García-Palacios

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1. Education

- 2010. **PhD** in Environmental Sciences (Universidad Rey Juan Carlos-URJC, Madrid, Spain). Thesis title: *Plant-soil interactions in emerging ecosystems: implications for the restoration of roadside slopes*.
- 2008. **MSc** in Science and Environmental Technology (URJC, Madrid, Spain).
- 2006. **MSc** in Protected Areas Management (Universidad Autónoma de Madrid, Complutense de Madrid, de Alcalá, Fernando González Bernáldez Foundation and EUROPARC-Spain).
- 2005. **BSc** in Environmental Sciences (URJC, Madrid, Spain).

2. Professional / Research experience

- Jan 2012 – actually Fulbright Postdoctoral Fellow (Colorado State University, Fort Collins, USA)
- Dec 2010 – Dec 2011 Postdoctoral researcher (URJC, REMEDINAL contract)
- Nov 2006 – Nov 2010 Predoctoral researcher (URJC, EXPERTAL fellowship)
- Aug – Sept 2006 Research Internship: International Union for Conservation of Nature (Málaga)
- Apr – Jun. 2006 Research assistant (URJC)
- Jul – Oct. 2005 Technical assistance (Alto Tajo Natural Park)

3. Specialized training

- 2009 A brief introduction to Bayesian and hierarchical Bayesian modeling in ecology. Organized by AEET. 8 hours.

- 2009 Null model analysis with ECOSIM software. Organized by Dr. Nicholas J. Gotelli and Dr. Fernando T. Maestre. 8 hours.
- 2007 Writing and publishing scientific papers. Organized by Universidad de Alicante. 30 hours.
- 2006 Spatial analyses in ecology: methods and applications. Organized by Universidad de Alicante. 16 hours.

4. Participation in research projects

- Jan 2010 – Dic 2014: Biotic community attributes and ecosystem functioning: implications for predicting and mitigating global change impacts (BIOCOM). Funding Agency: European Research Council. Dr. Fernando Maestre. 1.463.374 €.
- Jan 2011 – Dic 2011: Collateral effects of artificial selection: non driven syndromes modified along the domestication of wild plants. F.A.: URJC. Dr. Rubén Milla. 28.404 €.
- Sep 2007 – Sept 2010: Plant-plant interactions and ecosystem functioning under global change. F.A: BBVA. Dr. Fernando Maestre. 199.943 €.
- Sep 2007 – Sept 2008: Water use efficiency, ecosystem functioning and temporal stability of herbaceous communities in artificial roadside slopes. F.A: Ministerio de Medio Ambiente. Dr. Fernando Valladares. 68.887 €.
- Nov 2006 – Nov 2010: Experimental basis for the ecological sustainability of highway roadside slopes (EXPERTAL). F.A: Spanish National Research Council, URJC, Ministry of the Environment and Cintra Ltd. Dr. Fernando Valladares. 184.804 €.
- Jun 2006 – Aug 2008: Testing the effects of biodiversity and spatial pattern on ecosystem functioning: an experimental approach using biological soil crusts. F.A: British Ecological Society. Dr. Fernando Maestre. 34.018 €.
- Jan 2006 – Jan 2010: Research Network on Ecological Restoration in Madrid (REMEDINAL). F.A: Comunidad de Madrid. Dr. Adrián Escudero. 743.000 €.
- Jan 2006 – Jan 2007: Ecosystem processes in Mediterranean steppes: relationships between composition, structure and function. F.A: Comunidad de Madrid. Dr. Fernando Maestre. 30.500 €.

5. Publications in journals of the Science Citation Index

1. Maestre, F. T., J. L. Quero, N. J. Gotelli, A. Escudero, V. Ochoa, M. Delgado-Baquerizo, M. García-Gómez, M. A. Bowker, S. Soliveres, C. Escolar, **P. García-Palacios**, M. Berdugo, E. Valencia, B. Gozalo, A. Gallardo, L. Aguilera, T. Arredondo, J. Blones, B. Boeken, D. Bran, A. Conceicao, O. Cabrera, M. Chaieb, M. Derak, D. Eldridge, C. I. Espinosa, A. Florentino, J. Gaitán, M. G. Gatica, W. Ghiloufi, S. Gómez-González, J. R. Gutiérrez, R. M. Hernández, X. Huang, E. Huber-Sannwald, M. Jankju, M. Miriti, J. Monerris, R. L. Mau, E. Morici, K. Naseri, A. Ospina, V. Polo, A. Prina, E. Pucheta, D. A. Ramírez-Collantes, R. Romão, M. Tighe, C. Torres-Díaz, J. Val, J. P. Veiga, D. Wang, E. Zaady. 2012. Plant species richness and ecosystem -multifunctionality in global drylands. *Science* 335: 214-218.
2. **García-Palacios, P.**, J. I. Querejeta, F. T. Maestre, A. Escudero & F. Valladares. *In press*. Impact of simulated changes in rainfall regime and nutrient deposition on the relative dominance and isotopic composition of ruderal plants in anthropogenic grasslands. *Plant and Soil* (doi:10.1007/s11104-011-0998-1).
3. **García-Palacios, P.**, M. A. Bowker, F. T. Maestre, S. Soliveres, F. Valladares, J. Papadopoulos & A. Escudero. 2011. Ecosystem development in roadside grasslands: biotic control, plant-soil interactions and dispersal limitations. *Ecological Applications* 21:2806-2821.
4. Castillo-Monroy, A. P., F. T. Maestre, A. Rey, S. Soliveres & **P. García-Palacios**. 2011. Biological soil crusts are the main contributor to soil CO₂ efflux and modulate its spatio-temporal variability in a semi-arid ecosystem. *Ecosystems* 14:835-847.
5. **García-Palacios, P.**, M. A. Bowker, S. J. Chapman, F. T. Maestre, S. Soliveres, A. Gallardo, F. Valladares, C. Guerrero & A. Escudero. 2011. Early-successional vegetation changes after roadside prairie restoration modify processes related with soil functioning by changing microbial functional diversity. *Soil Biology & Biochemistry* 43:1245-1253.
6. Soliveres, S., **P. García-Palacios**, A. P. Castillo-Monroy, F. T. Maestre, A. Escudero & F. Valladares. 2011. Co-occurrence of herbivory and water availability modulate the outcome of a grass-shrub interaction in a pulse-driven ecosystem. *Oikos* 120: 710-719.

7. **García-Palacios, P.**, F. T. Maestre & A. Gallardo. 2011. Soil nutrient heterogeneity modulates ecosystem responses to changes in the identity and richness of plant functional groups. *Journal of Ecology* 99: 551-562.
8. **García-Palacios, P.**, S. Soliveres, F. T. Maestre, A. Escudero, F. Valladares & A. P. Castillo-Monroy. 2010. Dominant plant species modulates responses to hydroseeding, irrigation and fertilization during the restoration of semiarid motorway slope. *Ecological Engineering* 36: 1290-1298.
9. Maestre, F. T., M. A. Bowker, C. Escolar, M. D. Puche, S. Soliveres, S. Mouro, **P. García-Palacios**, A. P. Castillo-Monroy, I. Martínez, & A. Escudero. 2010. Do biotic interactions modulate ecosystem functioning along abiotic stress gradients? Insights from semi-arid Mediterranean plant and biological soil crust communities. *Philosophical Transactions of the Royal Society B* 365: 2057-2070.
10. Maestre, F. T., M. A. Bowker, M. D. Puche, M. B. Hinojosa, I. Martínez, **P. García-Palacios**, A. P. Castillo, S. Soliveres, A. L. Luzuriaga, A. M. Sánchez, J. A. Carreira, A. Gallardo & A. Escudero. 2009. Shrub encroachment can reverse desertification in semi-arid Mediterranean grasslands. *Ecology Letters* 12: 930-941.

Publications in preparation / under review:

1. **García-Palacios, P.**, F. T. Maestre & M. Delgado-Baquerizo. Changes in soil microbial functional diversity and microbial community structure along a secondary successional gradient (manuscript in preparation for *Soil Biology & Biochemistry*).
2. **García-Palacios, P.** & R. Milla. Plant domestication increases litter decomposition in crop species vs. wild relatives (manuscript in preparation for *Functional Ecology*).
3. **García-Palacios, P.** & F. T. Maestre. Soil nutrient heterogeneity modulates the effects of community-aggregated plant functional traits on soil functioning (under review in *Plant and Soil*).
4. **García-Palacios, P.**, F. T. Maestre, R. Bardgett & H. de Kroon. Plant responses to soil heterogeneity and global environmental change (manuscript in preparation for *Journal of Ecology*).

5. Soliveres, S., F. T. Maestre, A. Escudero, **P. García-Palacios**, F. Valladares & A. P. Castillo-Monroy. Predicted climate change effects on water availability and rainfall frequency modulate the outcome of grass-shrub interactions in semi-arid communities (under review in *Annals of Botany*).

6. Book chapters and publications in other journals

1. **García-Palacios, P.** 2011. Importancia del suelo para la restauración de la cubierta vegetal. In Valladares, F., L. Balaguer, I. Mola, A. Escudero & V. Alfaya (eds.) *Restauración ecológica de áreas afectadas por infraestructuras de transporte. Bases científicas para soluciones técnicas*. Fundación Biodiversidad, Madrid, España. pp 85-100.
2. Bochet, E., **P. García-Palacios**, B. Peco, J. Tormo & García-Fayos P. 2011. Procesos ecológicos y restauración de la cubierta vegetal. In Valladares, F., L. Balaguer, I. Mola, A. Escudero & V. Alfaya (eds.) *Restauración ecológica de áreas afectadas por infraestructuras de transporte. Bases científicas para soluciones técnicas*. Fundación Biodiversidad, Madrid, España. pp 101-142.
3. Soliveres, S., V. Contreras, J. Paulo-Fernandes, J. Cortina, **P. García-Palacios**, M. Martínez & J. Fort. 2011. Ecotecnología aplicada a la restauración de infraestructuras de transporte. In Valladares, F., L. Balaguer, I. Mola, A. Escudero & V. Alfaya (eds.) *Restauración ecológica de áreas afectadas por infraestructuras de transporte. Bases científicas para soluciones técnicas*. Fundación Biodiversidad, Madrid, España. pp 177-212.
4. Castillo-Monroy, A. P., F. T. Maestre, I. Martínez, A. Escudero & **P. García-Palacios**. 2008. Evaluando el papel funcional de la biodiversidad y el patrón espacial: una aproximación experimental usando costra biológica. In: Maestre, F. T., A. Escudero & A. Bonet (eds.). *Introducción al análisis espacial de datos en ecología y ciencias ambientales: métodos y aplicaciones*. URJC, AEET y CAM, Madrid (pages 617-635).
5. Soliveres-Codina, S., **P. García-Palacios**, A. P. Castillo-Monroy, A. Escudero, F. Valladares & F. T Maestre. 2008. Las interacciones planta-planta varían con el nivel de estrés abiótico: Dos estudios de caso en clima semiárido. *Cuadernos de la Sociedad Española de Ciencias Forestales* 28: 271-276.

7. Congresses and meetings (Oral contributions (O); Posters (P))

1. **García-Palacios, P.**, M. A., Bowker, F. T. Maestre, S. Soliveres, J. Papadopoulos, A. Escudero & F. Valladares. 2010. Secondary succession in roadside slopes: the role of plant-soil interactions to improve ecosystem restoration. *VII SER European Conference on Restoration Ecology*. Avignon, France (O).
2. **García-Palacios, P.**, S. Soliveres, F. T. Maestre, J. Papadopoulos, A. Escudero & F. Valladares 2009. Sucesión secundaria en taludes de carretera: cambios en la estructura y el funcionamiento del ecosistema para mejorar la restauración. *IX Congreso de la AEET*. Úbeda, Spain (O).
3. Soliveres, S., **P. García-Palacios**, A. P. Castillo, F. T. Maestre, F. Valladares, & A. Escudero. 2009. Efecto de distintos niveles de estrés biótico y abiótico sobre la interacción entre *Stipa tenacissima* y *Retama sphaerocarpa*. *IX Congreso de la AEET*. Úbeda, Spain (O).
4. **García-Palacios, P.** S. Chapman, F. T. Maestre, M. A. Bowker, S. Soliveres, A. Gallardo, F. Valladares, C. Guerrero, Castillo & A. Escudero. 2009. Links between vegetation, microbial functional diversity and soil functioning during restoration of semi-arid motorway slopes. *Annual Meeting of the BES*. Hertfordshire, U.K (O).
5. Maestre, F. T., M. A. Bowker, C. Escolar, S. Soliveres, **P. García-Palacios**, Castillo, I. Martínez & A. Escudero. 2009. Potential climate change impacts on competition, facilitation, and contributions to ecosystem function of Mediterranean plant and biological soil crust communities. *Annual Meeting of the BES*. London, U.K. (O).
6. Castillo-Monroy, M. P., F. T. Maestre, **P. García-Palacios**, S. Soliveres, I. Martínez, & A. Escudero. 2008. Variación espacio temporal de la respiración del suelo en ambientes semiáridos del sudeste de Madrid-España. *III Congreso Internacional de Ecosistemas Secos*. Santa Marta, Colombia (O).
7. **García-Palacios, P.**, F. T. Maestre, S. Soliveres, A. P. Castillo-Monroy, F. Valladares & A. Escudero. 2008. Does soil resource availability influence plant community responses to hydroseedings? Results from an experimental study on motorway slopes. *Annual Meeting of the BES*. London, UK (P).
8. Maestre, F. T., A. P. Castillo-Monroy, **P. García-Palacios**, S. Soliveres, I. Martínez & A. Escudero. 2008. Testing the effects of biodiversity and spatial

pattern on ecosystem functioning: An experimental approach using biological soil crusts. *Annual Meeting of the BES*. London, U.K (O).

9. Teaching and tutoring

- 2010 Co-supervisor of the MSc thesis of Jorge Papadopoulos Izquierdo. *Vegetation and root dynamics along a chronosequence of roadside slopes*. Universities of Alcalá, Complutense de Madrid, Politécnica de Madrid and URJC.
- 2009 Lecture: Biology. Environmental Sciences BSc. URJC. Madrid. 10 hours.
- 2008 Lecture: Biology. Environmental Sciences BSc. URJC. Madrid. 20 hours.
- 2007 Lecture: Biology. Environmental Sciences BSc. URJC. Madrid. 20 hours.

10. Miscellaneous

- Languages: Spanish: Mother tongue; English: Advanced level; Italian: Advanced level.
- Referee activities: Ecological Engineering, Journal of Ecology.
- Membership in scientific societies: British Ecological Society (BES), Ecological Society of America (ESA) and Spanish Society for Terrestrial Ecology (AEET).